

SBK-L-10185



Attachment 2

Vol. 7



October 14, 2009

SBK-L-09225

NPDES Permit No. NH0020338

Environmental Protection Agency
NPDES Program Operation Section
P.O. Box 8127
Boston, MA 02114

Seabrook Station
September 2009 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of September 2009. The enclosed DMRs (Enclosure 1) are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A, 026A and 027A had no flow during the month of September, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 30 days in September. No visible oil sheen, foam or floating solids were noted during the month. The DMR for Outfall 001 indicates a sampling frequency of one TRO analysis per day for the month of September. One extra sample was performed on September 07. All sample results have been included in the monthly average.

Two batch discharges were made during the month of September from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfall 001B

The third quarter Whole Effluent Toxicity (WET) tests were performed in August 2009. No toxicity was observed in the effluent bioassays. The complete WET test report prepared by EnviroSystems, Inc. is provided in Enclosure 2.

Sampling for the third quarter WET testing was performed under the following discharge scenarios:

- Day 1 (August 17 – 18, 2009) included discharges from Outfalls 025A, 025C & 025D,
- Day 2 (August 19 – 20, 2009) included discharges from Outfalls 025A & 025B,
- Day 3 (August 21 – 22, 2009) included discharges from Outfalls 025C & 025D.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of September. No exceedences occurred.

Outfall 025A

Four continuous discharges occurred during the month of September. No exceedences occurred.

Outfall 025B

Three continuous discharges occurred during the month of September. No exceedences occurred.

Outfall 025C

Six batch discharges occurred during the month of September. No exceedences occurred.

Outfall 025D

Ten batch discharges occurred during the month of September. No exceedences occurred.


Outfall 027A

No discharges were made from the Cooling Tower during the month of September.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE 1 to SBK-L-09225

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

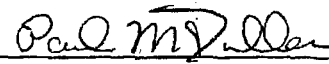
NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

001A
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Temperature, water deg. fahrenheit 00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	92	98
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV. MN	Req. Mon. DAILY MX
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.9	*****	8.0
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM
Biocides 01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX
Biocides 01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.06	0.16
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY MX
Flow, in conduit or thru treatment plant 50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	658	663	Mgal/d	*****	*****	*****
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****
Temp. diff. between intake and discharge 61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	35	36
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Gene St. Pierre / Site Vice President		
TYPED OR PRINTED		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

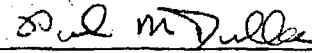
PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
FROM 09/01/2009	TO	09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Temp. diff. between intake and discharge 61576 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI	
	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MAX

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Gene St. Pierre / Site Vice President		
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	

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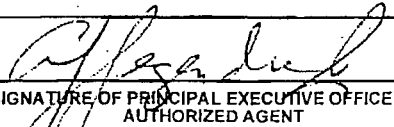
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FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

001B
DISCHARGE NUMBER

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
07/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
LC50 Static 48Hr Acute Mysid. Bahia TAA3E 10 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	> 100	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****
LC50 Static 48Hr Acute Menidia TAA6B 10 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	> 100	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****
Noel Static 1Hr Fert. Chronic Arbacia TBH3A 10 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****
Noel Statre 7Day Chronic Menidia TBP6B 10 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****
	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****

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Gene St. Pierre Vice President North TYPED OR PRINTED		

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DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)


NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

003A
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****		
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req: Mon- MO AVG	120 DAILY MX
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon- MO AVG	500000 DAILY MX	gal/d	*****	*****	*****

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Gene St. Pierre / Site Vice President		
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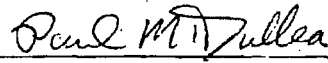
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ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
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SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

022A
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	24 646	27 853	gal/d.	*****	*****	*****
	PERMIT REQUIREMENT	Req: Mon MO AVG	122400 DAILY MX	gal/d.	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

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Gene St. Pierre / Site Vice President		
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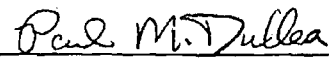
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FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

023A
DISCHARGE NUMBER

MONITORING PERIOD
FROM MM/DD/YYYY 09/01/2009 TO MM/DD/YYYY 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate	SAMPLE MEASUREMENT	1082	2210	gal/d	*****	*****	*****
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req Mon MO AVG	122400 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.9	1.8
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

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DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

024A
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	233	495	gal/d.	*****	*****	*****
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.7	1.4
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

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Gene St. Pierre / Site Vice President		
TYPED OR PRINTED		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

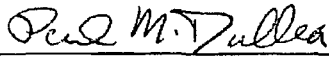
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LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025A
DISCHARGE NUMBER

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	55 603	182 560	gal/d	*****	*****	*****
	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

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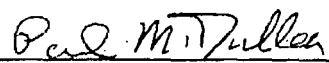
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MONITORING PERIOD
MM/DD/YYYY
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	77 119	113 516	gal/d.	*****	*****	*****
	PERMIT REQUIREMENT	Reg. Mon MO AVG	210000 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

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TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

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SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

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FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025C
DISCHARGE NUMBER

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MM/DD/YYYY
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	14 764	18 522	gal/d.	*****	*****	*****
	PERMIT REQUIREMENT	Reg. Mon MO AVG	60000 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.1	6.3
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Gene St. Pierre / Site Vice President TYPED OR PRINTED		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

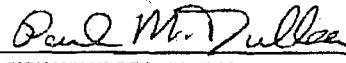
NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025D
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	16.673	19.058	gal/d.	*****	*****	*****
	PERMIT REQUIREMENT	Req: Mon MO AVG	100000 DAILY MX	gal/d	*****	*****	*****
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.9	13-8
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Gene St. Pierre / Site Vice President		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

026A
DISCHARGE NUMBER

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****
	PERMIT REQUIREMENT	Req: Mon: MO AVG	450000 DAILY MX	gal/d	*****	*****	*****
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT				6 MINIMUM		9 MAXIMUM
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT					30 MO AVG	100 DAILY MX
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT					15 MO AVG	20 DAILY MX
Copper, total (as Cu) 01042 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT					1 MO AVG	1 DAILY MX
Iron, total (as Fe) 01045 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT					1 MO AVG	1 DAILY MX

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Paul M. Dallon</i>
Gene St. Pierre / Site Vice President		
TYPED OR PRINTED		

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

027A
DISCHARGE NUMBER

MONITORING PERIOD
FROM 09/01/2009 TO 09/30/2009

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION		
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****
	PERMIT REQUIREMENT	Req: Mon MO AVG	Req: Mon DAILY MX	gal/d	*****	*****	*****
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****			
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX
Oxidants, total residual 34044 0 0 See Comments	SAMPLE MEASUREMENT				*****	*****	*****
	PERMIT REQUIREMENT	Req: Mon MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Paul M. Dullon</i>
Gene St. Pierre / Site Vice President		
TYPED OR PRINTED		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF

ENCLOSURE 2 to SBK-L-09225

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 12/13/2009
Date


Authorized Signature

Allen L. Legendre Jr. Principal Engineer
Print or Type Name and Title

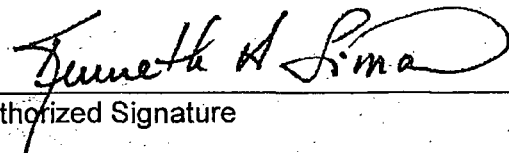
NextEra Energy Seabrook LLC
Print or Type the Permittee's Name

NH 002 0338
Print or Type the NPDES Permit No.

Laboratory Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 9/11/09
Date


Authorized Signature

Kenneth A. Simon
President - EnviroSystems, Incorporated

**TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
August 2009**

FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338

Prepared For

FPL Energy Seabrook Station
Route 1
P.O. Box 300
Seabrook, New Hampshire 03874

Purchase Order Number: 02196759

By

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

August 2009
Reference Number SeabrookStation18858-09-08

STUDY NUMBER 18858

EXECUTIVE SUMMARY

The following summarizes the results of acute and chronic exposure bioassays performed during August 2009 to support the NPDES biomonitoring requirements of FPL Energy Seabrook Station, Seabrook, New Hampshire. Acute and chronic definitive assays were completed using the marine species, *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*.

A. bahia were <5 days old at the start of the test. *M. beryllina* were 10 days old at the start of the test. *A. punctulata* were from cultures maintained by ESI. Original stock was obtained from commercial supply. Dilution water was receiving water collected off shore by Normandeau Associates, Bedford, New Hampshire.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the chronic and modified acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Exposure Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Americamysis bahia</i>	48 Hours	>100%	100%	Report	NA	Yes
<i>Menidia beryllina</i>	48 Hours	>100%	100%	Report	NA	Yes

Chronic Exposure Toxicity Evaluation

Species	Exposure	C-NOEC	LOEC	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Menidia beryllina</i>	7 Days	100%	>100%	Report	NA	Yes*
<i>Arbacia punctulata</i>	60 Minutes	100%	>100%	Report	NA	Yes

COMMENTS:

* The *M. beryllina* assay failed to meet the suggested statistical variability limit (MSDp) of 28%, although this limit is not a requirement at this time.

**TOXICOLOGICAL EVALUATION
OF TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
August 2009**

FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338

1.0 INTRODUCTION

This report presents the results of acute and chronic toxicity tests completed on a series of composite effluent samples collected from FPL Energy Seabrook Station, Seabrook, New Hampshire. Testing was based on programs and protocols developed by the US EPA (2002). A 48 hour static acute toxicity test was conducted using the mysid shrimp, *Americamysis bahia*, a 7 day modified acute and chronic toxicity test was conducted with the inland silverside, *M. beryllina*, and a 60 minute chronic fertilization assay was conducted with the purple sea urchin, *A. punctulata*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test organisms are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test organisms. Samples with high LC-50 values are less likely to cause significant environmental impacts. The no-effect concentration is also determined to provide information about the level of effluent which would have minimal acute effects in the environment. This Acute No Observed Effect Concentration (A-NOEC) is defined as the highest tested effluent concentration which causes no significant mortality. Chronic tests evaluate toxicity based on sublethal effects. Fertilization of *Arbacia punctulata* eggs or growth (weight) of *Menidia beryllina* are measured to determine effluent concentrations that have a significant impact on the organisms. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest concentration that had an effect (C-LOEC) and the highest concentration where no effect was observed (C-NOEC). *A. punctulata* fertilization data are also evaluated to determine the effluent concentration where a reduction in fertilization rates occurs. This is known as the Inhibition Concentration (IC).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

When necessary, *A. bahia* and *M. beryllina* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

Male and female *A. punctulata* are maintained in separate chambers as recommended by protocol (EPA 2002).

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. When necessary, effluent used in the *A. bahia* and *M. beryllina* assays was salinity adjusted to 25±2 ppt and the effluent used in the *A. punctulata* assay was salinity adjusted to 30±2 ppt using artificial sea salts according to protocol (EPA 2002). Effluent and receiving water samples that were received at or above a salinity of 25±2 ppt did not require salinity adjustment (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1

and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in effluent and diluent samples. Samples containing ≥ 0.02 mg/L TRC were treated with sodium thiosulfate (EPA 2002).

2.4 Bioassays

Test concentrations for the assays were 100%, 50%, 25%, 12.5%, and 6.25% effluent.

2.4.1 *Americamysis bahia* Acute Exposure Bioassay

The 48 hour static acute assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Test chambers were 250 mL glass beakers with 200 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Survival and dissolved oxygen were recorded daily in all replicates. Temperature, pH, and salinity were measured in one replicate of each test treatment daily.

2.4.2 *Menidia beryllina* Chronic Exposure Bioassay

The 7 day static renewal chronic exposure assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Fish were maintained in 600 mL beakers containing 500 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Prior to daily renewals, survival and dissolved oxygen in all replicates were recorded and pH, salinity and temperature were measured in one replicate of each test treatment. Dissolved oxygen, salinity, pH, and temperature were measured in one replicate of each new test treatment. Survival data was analyzed to assess acute toxicity after the initial 48 hours of exposure.

During the test, fish were fed ≤ 24 hour old *Artemia* nauplii twice a day. On Day 7 of the assay surviving fish were removed from test solutions, rinsed to remove any surface detritus and salts, and tranquilized using Finquel® brand tricaine methanesulfonate. Fish were placed on tared containers and dried for 24 hours at 104°C to obtain dry weight to the nearest 0.01 mg. To obtain final dry weight/fish used for statistical comparisons, the net dry weight was divided by the number of organisms introduced at the initiation of the assay.

2.4.3 *Arbacia punctulata* Chronic Fertilization Bioassay

Test chambers were 20 mL glass vials with 5 mL of test solution in each of 4 replicates. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted (see data appendix for final counts) and exposed to effluent solutions for 60 minutes. Eggs were introduced to sperm/effluent solutions and exposed for 20 minutes prior to the addition of preservative. Aliquots of preserved solution were counted to determine fertilized and unfertilized eggs.

2.5 Data Analysis

Statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are conducted on a regular basis for each test species. These results, Table 2, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS AND DISCUSSION

LC-50 and A-NOEC values from the *A. bahia* acute exposure assays are presented in Table 3. Data from the *A. punctulata* fertilization assay are summarized in Table 4. Results of the chronic exposure assay

conducted using *M. beryllina* are provided in Table 5. A summary of water quality data collected during the assays is presented in Table 6. US EPA Attachment F toxicity test summary forms are included after the tables. Support data, including copies of laboratory bench sheets, can be found in Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria require $\geq 90\%$ survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate and the MSDp for fertilization to be $<25\%$ for *Arbacia punctulata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

3.3 *Menidia beryllina* Chronic Exposure Bioassay

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.500 mg/fish based on Day 7 survival, and the MSDp for biomass to be $<28\%$ for *Menidia beryllina* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 5 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls*. US EPA Region I Offices, Boston, Massachusetts.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms*. Third Edition. EPA-821-R-02-014.

**TABLE 1. Summary of Sample Collection Information.
FPL Energy Seabrook Station Effluent Evaluation. August 2009.**

Sample Description	Type	Collection		Receipt		Arrival Temp °C
		Date	Time	Date	Time	
EFFLUENT						
Start	Comp	08/17-18/09	0900-0600	08/18/09	1300	3
1st Renewal	Comp	08/19-20/09	0900-0600	08/20/09	1100	3
2nd Renewal	Comp	08/21-22/09	0900-0600	08/22/09	1035	5
RECEIVING WATER						
Start	Grab	08/17/09	1300	08/17/09	1545	17*
1st Renewal	Grab	08/19/09	1502	08/19/09	1623	19*
2nd Renewal	Grab	08/21/09	1100	08/21/09	1205	6

COMMENTS:

* Upon receipt, the temperature was outside of the range of 4±2°C recommended by the protocol. Samples were received with ice in the sample cooler.

**TABLE 2. Summary of Reference Toxicant Data.
FPL Energy Seabrook Station Effluent Evaluation. August 2009.**

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
<i>A. bahia</i>						
07/29/09	Survival	LC-50	23.4	21.1	16.7 - 25.5	SDS (mg/L)
<i>M. beryllina</i>						
07/29/09	Survival	LC-50	5.8	7.6	4.4 - 10.8	SDS (mg/L)
07/28/09	Survival	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
07/28/09	Growth	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
<i>A. punctulata</i>						
07/16/09	Fertilization	C-NOEC	<1	5.0	1.0 - 10.0	Copper (µg/L)
07/16/09	Fertilization	IC-25	10.7	16.5	0.0 - 53.1	Copper (µg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

**TABLE 3. Summary of Acute Evaluation Results: *A. bahia*.
FPL Energy Seabrook Station Effluent Evaluation. August 2009.**

Species	Exposure	PERCENT SURVIVAL						
		Lab	RW	6.25%	12.5%	25%	50%	100%
<i>A. bahia</i>	48 hours	100%	97.5%	95%	100%	97.5%	97.5%	97.5%

LC-50 COMPUTATION TECHNIQUE

Species	Exposure	Spearman-Kärber	Linear Regression	Nonlinear Regression	A-NOEC
<i>A. bahia</i>	48 Hours	NC	NC	NC	100%

**TABLE 4. Summary of Chronic Bioassay Results: *A. punctulata*.
FPL Energy Seabrook Station Effluent Evaluation. August 2009.**

	TREATMENTS						
	Lab	RW	6.25%	12.5%	25%	50%	100%
Mean % Fertilization	89.4%	81.1%	83.3%	88.6%	87.6%	86.8%	88.0%
Significantly < Diluent	-	-	No	No	No	No	No

Chronic No Observed Effect Concentration 100%
 Lowest Observed Effect Concentration >100%
 IC-10: >100%
 MSDp: 12.5%

**TABLE 5. Summary of Chronic and Modified Acute Bioassay Results: *M. beryllina*.
FPL Energy Seabrook Station Effluent Evaluation. August 2009.**

Effluent Conc.	Mean Percent Survival		Mean Biomass (mg/fish)	Is There a Significant Difference Based on	
	Day 2	Day 7		Survival (%)	Growth (Biomass)
LAB	100.0%	97.5%	1.339	-	-
RW	100.0%	95.0%	1.232	-	-
6.25%	100.0%	97.5%	1.371	No	No
12.5%	100.0%	97.5%	1.419	No	No
25.0%	97.5%	95.0%	1.503	No	No
50.0%	100.0%	97.5%	1.531	No	No
100.0%	100.0%	95.0%	1.934	No	No

LC-50 = >100% MSDp = 47.3%* NOEC = 100.0% NOEC = 100.0%

COMMENTS:

RW = Receiving Water used as diluent.
 Difference between diluent and treatment means considered to be significant when $p < 0.05$
 Additional bioassay data and statistical analyses are provided in Appendix A.
 * The *M. beryllina* assay failed to meet the suggested statistical variability limit (MSDp) of 28%, although this limit is not a requirement at this time.

**TABLE 6. Initial Water Quality Data Summary.
FPL Energy Seabrook Station Effluent Evaluation. August 2009**

PARAMETER	UNITS	EFFLUENT	RECEIVING WATER
Salinity	ppt	31	30
pH	SU	7.55	7.97
Total Residual Chlorine	mg/L	<0.02	<0.02
Total Solids	mg/L	36000	33000
Total Suspended Solids	mg/L	20	58
Ammonia	mg/L as N	0.11	<0.1
Total Organic Carbon	mg/L	<0.4	0.4
Aluminum, total	mg/L	<0.02	-
Cadmium, total	mg/L	<0.0005	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	0.086	-
Lead, total	mg/L	<0.0005	-
Nickel, total	mg/L	0.012	-
Zinc, total	mg/L	<0.002	-

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 08/20/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/22/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input checked="" type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input checked="" type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 08/19-20/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 07/29/09 LC-50: 23.4 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS
Test Acceptability Criteria

Mean Control Survival: 97.5 %

LIMITS	RESULTS
LC-50: <u>Report</u> %	LC-50: <u>>100%</u> %
A-NOEC: <u>-</u> %	Upper Limit: <u>-</u> %
C-NOEC: <u>Report</u> %	Lower Limit: <u>-</u> %
IC- <u>-</u> %	Method: <u>Direct Observation</u>
	A-NOEC: <u>100</u> %
	C-NOEC: <u>-</u> %
	C-LOEC: <u>-</u> %
	IC- <u>-</u> %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 08/18/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/25/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input checked="" type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 08/17-18/09 08/19-20/09 08/21-22/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 07/29/09 LC-50: 5.8 mg/L Sodium Dodecyl Sulfate
07/28/09 NOEC: 5.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS
 Test Acceptability Criteria

Mean Control Survival: <u>95</u> %	Mean Dry Weight/fish <u>1.293</u> mg
	MSDp: <u>47.3</u> %

LIMITS	RESULTS
LC-50: <u>Report</u> %	LC-50 <u>>100</u> %
A-NOEC: <u>-</u> %	Upper Limit: <u>-</u> %
C-NOEC: <u>Report</u> %	Lower Limit: <u>-</u> %
	Method: <u>Direct Observation</u>
	A-NOEC: <u>100</u> %
	C-NOEC: <u>100</u> %
	C-LOEC: <u>>100</u> %
IC- <u>-</u> %	IC- <u>-</u> %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 08/20/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/20/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input checked="" type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input checked="" type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 08/19-20/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 07/16/09 NOEC: <1 mg/L Copper
07/16/09 IC-25 10.7 mg/L Copper

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Proportion Fertilized: 81.1 % **MSDp:** 12.5 %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50: - %

Upper Limit: - %

Lower Limit: - %

Method: NA

A-NOEC: - %

C-NOEC: 100 %

C-LOEC: >100 %

IC-10: >100 %

APPENDIX A

DATA SHEETS AND STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Biomonitoring Testing	1
<i>A. bahia</i> Acute Bioassay Daily Observation Bench Sheets	2
<i>A. bahia</i> Survival and Growth Statistics	0
<i>A. bahia</i> Organism Culture Data	1
<i>M. beryllina</i> - 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>M. beryllina</i> Larval Fish Dry Weight Summary Sheet	1
<i>M. beryllina</i> Survival and Growth Statistics	5
<i>M. beryllina</i> Organism Culture Data	1
<i>A. punctulata</i> Fertilization Water Quality and Sperm Dilutions	1
<i>A. punctulata</i> Egg Count Data Sheet	1
<i>A. punctulata</i> Fertilization Statistics	4
Water Quality Bench Sheets	3
Dilution Preparation Bench Sheets and Instrument Use Logs	5
Analytical Chemistry Support Data Summary Report	2
Sample Receipt Record - Effluent and Diluent Samples	1
Chain of Custody Record	6
Total Appendix Pages	35

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i>	EPA-821-R-02-012
<i>Pimephales promelas</i>	EPA-821-R-02-012
<i>Americamysis bahia</i>	EPA-821-R-02-012
<i>Menidia beryllina</i> , <i>Cyprinodon variegatus</i>	EPA-821-R-02-012
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013, 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013, 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-013, 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-013, 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-013, 1008.0
<i>Champia parvula</i>	EPA-821-R-02-013, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20 th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20 th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20 th Edition - Method 5310C
Specific Conductance	Standard Methods 20 th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20 th Edition - Method 4500NH3G
pH	Standard Methods 20 th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20 th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20 th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20 th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20 th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 18858		"AS RECEIVED" EFFLUENT		
CLIENT: FPL Energy Seabrook Station	TEST ORGANISM: <i>A. bahia</i>	TRC	AMM	TS
SAMPLE: EFFLUENT	ORGANISM SUPPLIER/BATCH/AGE: <i>See Organism Culture Sheet</i>	EFF	See M. ber	
DILUENT: Receiving Water		DIL		

SALINITY ADJUSTMENT RECORD : ML EFFLUENT + G SEA SALTS = 100% ACTUAL PERCENT

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP	
		0	24	48	0	24	48	0	24	48	0	
LAB	A	10	10	10	7.0	6.7	7.1	8.09	8.02	8.04	24	2
	B	10	10	10	7.0	6.7	7.1					
	C	10	10	10	7.0	6.7	7.1					
	D	10	10	10	7.0	6.6	7.1					
Rec' Water	A	10	10	10	7.1	6.6	7.1	7.61	8.00	7.90	24	2
	B	10	9	9	7.1	6.7	7.1					
	C	10	10	10	7.1	6.7	7.1					
	D	10	10	10	7.1	6.7	7.1					
6.25%	A	10	10	10	6.9	6.7	7.1	7.64	8.01	8.04	24	2
	B	10	9	9	6.9	5.9	7.1					
	C	10	10	10	6.9	6.6	7.1					
	D	10	10	9	6.9	6.7	7.1					
12.5%	A	10	10	10	6.9	6.7	7.1	7.69	8.00	7.96	24	2
	B	10	10	10	6.9	6.7	7.1					
	C	10	10	10	6.9	6.8	7.1					
	D	10	10	10	6.9	6.8	7.1					

DATE	8/20/09	8/21/09	8/21/09	8/20/09	8/21	8/22
TIME	1440	1425	1305	1355	1410	1250
INITIALS	DQ	WM	WM	WM	WM	WM

‡ - Temperature

ACUTE BIOASSAY DATA SUMMARY

STUDY: 18858												
CLIENT: FPL Energy Seabrook Station						TEST ORGANISM: <i>A. bahia</i>						
SAMPLE: EFFLUENT												
DILUENT: Receiving Water												
CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP	
		0	24	48	0	24	48	0	24	48	0	24
25%	A	10	10	10	7.0	6.6	7.1	7.72	8.05	8.04	74	7
	B	10	10	9	7.0	6.7	7.1					
	C	10	10	10	7.0	6.8	7.1					
	D	10	10	10	7.0	6.8	7.1					
50%	A	10	10	10	7.7	6.6	7.1	7.76	8.05	8.02	74	7
	B	10	10	10	7.7	6.7	7.1					
	C	10	9	9	7.7	6.7	7.1					
	D	10	10	10	7.7	6.7	7.1					
100%	A	10	10	10	7.2	6.7	7.1	7.80	8.09	8.07	74	7
	B	10	10	10	7.2	6.6	7.1					
	C	10	9	9	7.2	6.7	7.1					
	D	10	10	10	7.2	6.6	7.1					
DATE		8/20/09	8/21/09	8/22/09	8/20/09	8/21/09	8/22/09					
TIME		1440	1425	1305	1355	1410	1256					
INITIALS		WM	WM	WM	WM	WM	WM					

‡ - Temper



0100109

18858

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species Americamysis bahiaSource: Lab reared Hatchery reared Field collected Hatch date 8-18-09 Receipt date Lot number 081809MS Strain Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ≈25 ppt D.O. ppmpH 7.8 su Hardness ppm Alkalinity ppm

III. Culture Conditions

Freshwater Saltwater Other Recirculating Flow through Static DIET: Flake food Phytoplankton Trout chow Artemia Rotifers YCT Other ENCAP. SHRIMP DIETProphylactic treatments: Comments:

IV. Shipping Information

Client: ESI # of Organisms 640+Carrier: Date shipped 8-20-09Biologist: Mark DeAngelis

Menidia beryllina 7 DAY CHRONIC ASSAY

STUDY 18958		CLIENT FPL Energy Seabrook Station			SAMPLE EFFLUENT					DILUENT RECEIVING WATER (RW)			FISH/BATCH See Organism Culture Sheet			
CONC	REP	NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
		0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	10	10	10	10	10	10	10	10	5.7	5.4	6.9	6.7	6.1	6.7	6.6
	B	10	10	10	10	10	10	10	9	5.5	4.9	7.0	6.9	6.5	6.6	6.6
	C	10	10	10	10	10	10	10	10	5.9	5.7	7.0	6.7	6.5	6.8	6.7
	D	10	10	10	10	10	10	10	10	5.2	3.7	7.1	6.7	6.5	6.8	6.6
RW	A	10	10	10	10	10	10	10	10	5.9	4.8	7.2	6.7	6.5	6.8	6.6
	B	10	10	10	10	10	10	10	9	5.5	4.6	7.2	6.7	6.5	6.6	6.6
	C	10	10	10	10	10	10	9	9	5.9	5.1	7.2	6.7	6.1	6.6	6.6
	D	10	10	10	10	10	10	10	10	5.5	4.5	7.3	6.8	6.5	6.8	6.6
6.25%	A	10	10	10	10	10	10	10	10	5.6	5.0	7.3	6.7	6.5	6.9	6.6
	B	10	10	10	10	10	10	10	9	5.6	4.9	7.3	6.7	6.5	6.6	6.6
	C	10	10	10	10	10	10	10	10	5.3	4.7	7.3	6.7	6.5	6.7	6.7
	D	10	10	10	10	10	10	10	10	5.4	4.4	7.3	6.6	6.4	6.9	6.6
12.5%	A	10	10	10	10	10	10	10	9	5.4	4.5	7.3	6.7	6.5	6.9	6.6
	B	10	10	10	10	10	10	10	10	5.5	4.7	7.4	6.6	6.5	6.9	6.6
	C	10	10	10	10	10	10	10	10	5.4	5.0	7.4	6.7	6.5	6.9	6.7
	D	10	10	10	10	10	10	10	10	5.5	5.0	7.4	6.7	6.5	6.9	6.7
25%	A	10	10	10	10	10	10	10	10	5.3	4.8	7.3	6.6	6.4	6.9	6.5
	B	10	10	10	10	10	10	10	10	5.4	4.7	7.3	6.6	6.4	6.7	6.5
	C	10	10	9	9	9	9	9	9	5.6	5.1	7.3	6.6	6.5	6.6	6.2
	D	10	10	10	10	10	10	10	9	5.2	4.7	7.4	6.6	6.4	6.6	6.5
50%	A	10	10	10	10	10	10	10	10	5.6	4.9	7.3	6.6	6.4	6.6	6.5
	B	10	10	10	10	10	10	10	10	5.4	4.6	7.4	6.6	6.3	6.6	6.6
	C	10	10	10	10	10	10	10	9	5.9	4.9	7.4	6.6	6.5	6.6	6.5
	D	10	10	10	10	10	10	10	10	5.1	4.5	7.3	6.6	6.5	6.6	6.5
100%	A	10	10	10	10	10	10	10	9	5.1	4.2	7.3	6.5	6.4	6.6	6.5
	B	10	10	10	10	10	10	10	10	4.6	3.9	7.3	6.5	6.5	6.6	6.4
	C	10	10	10	10	10	10	10	9	5.4	4.6	7.3	6.6	6.5	6.6	6.2
	D	10	10	10	10	10	10	10	10	6.0	4.9	7.3	6.6	4.4	6.6	6.5
INC TEMP °C:		25	25	25	25	25	25	25	25	#Air d. 2 ADDITIONAL OLD WATER QUALITIES ON SEPARATE DATA SHEET.						
DATE:		8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25							
TIME:		1540	0655	1240	0655	1125	1445	1020	1005							
INITIALS:		we	wm	wm	wm	wm	je	sj	vl							

Larval Fish Dry Weight Summary Sheet

Study	18858	
Client:	Seabrook	
Date/Time/Init:	08/27/09 1145 JQ	08/25/09 0950 JQ
Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	25.66	15.64
Lab B	30.32	14.95
Lab C	25.49	15.1
Lab D	32.28	14.5
RW A	25.88	14.5
RW B	25.38	12.63
RW C	23.44	14.24
RW D	29.89	13.92
6A	25.32	14.49
6B	30.12	17.47
6C	30.78	15.55
6D	36.38	20.27
12A	30.52	17.2
12B	27.31	14.15
12C	37.52	20.88
12D	26.27	12.65
25A	30.8	15.95
25B	31.11	16.66
25C	28.73	15.29
25D	34.49	17.13
50A	28.65	15.15
50B	29.85	14.31
50C	28.17	15.58
50D	36.6	16.99
100A	34.4	14.43
100B	41.95	14.31
100C	34.26	16.73
100D	29.14	16.93

CETIS Summary Report

Report Date: 27 Aug-09 15:28 (p 1 of 2)
 Test Code: 14-8688-7330/18858 Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Batch ID: 10-8920-5233	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 18 Aug-09 15:40	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 25 Aug-09 10:05	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 18h	Source: ARO - Aquatic Research Organisms, NH	Age: 20D

Sample ID: 03-1502-0502	Code: 12C6D4D618858	Client: FLP Energy
Sample Date: 18 Aug-09 06:00	Material: Power Plant Cooling Water	Project: Third Quarter WET Compliance Test
Receive Date: 18 Aug-09 13:00	Source: Seabrook Station	
Sample Age: 10h (3 °C)	Station: NH0020338 Final Discharge	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-1278-3166	7d Proportion Survived	100	>100	N/A	9.96%	1	Steel Many-One Rank Test
15-2623-1719	Mean Dry Biomass-mg	100	>100	N/A	47.25%	1	Dunnett's Multiple Comparison Test
20-0093-6016	Mean Dry Weight-mg	100	>100	N/A	44.51%	1	Dunnett's Multiple Comparison Test

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-1278-3166	7d Proportion Survived	Control Resp	0.95	0.8 - NL	Yes	Result Within Limits
15-2623-1719	Mean Dry Biomass-mg	Control Resp	1.233	0.5 - NL	Yes	Result Within Limits
15-2623-1719	Mean Dry Biomass-mg	PMSD	0.4725	0.11 - 0.28	Yes	Result Above Limit

7d Proportion Survived Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.95	0.9284	0.9716	0.9	1	0.01054	0.05774	6.08%	0.0%
0	Lab Water	4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	-2.63%
6.25		4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	-2.63%
12.5		4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	-2.63%
25		4	0.95	0.9284	0.9716	0.9	1	0.01054	0.05774	6.08%	0.0%
50		4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	-2.63%
100		4	0.95	0.9284	0.9716	0.9	1	0.01054	0.05774	6.08%	0.0%

Mean Dry Biomass-mg Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.232	1.127	1.338	0.92	1.597	0.05177	0.2836	23.01%	0.0%
0	Lab Water	4	1.339	1.197	1.481	1.002	1.778	0.06956	0.381	28.45%	-8.64%
6.25		4	1.371	1.28	1.461	1.083	1.611	0.04408	0.2414	17.62%	-11.2%
12.5		4	1.419	1.357	1.48	1.316	1.664	0.03008	0.1648	11.62%	-15.09%
25		4	1.503	1.44	1.565	1.344	1.736	0.03042	0.1666	11.09%	-21.91%
50		4	1.531	1.414	1.648	1.259	1.961	0.05698	0.3121	20.38%	-24.22%
100		4	1.934	1.694	2.173	1.221	2.764	0.1171	0.6414	33.17%	-56.9%

Mean Dry Weight-mg Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.293	1.196	1.391	1.022	1.597	0.04773	0.2614	20.21%	0.0%
0	Lab Water	4	1.382	1.225	1.538	1.002	1.778	0.07638	0.4183	30.28%	-6.82%
6.25		4	1.406	1.319	1.492	1.083	1.611	0.04217	0.231	16.43%	-8.67%
12.5		4	1.456	1.398	1.513	1.316	1.664	0.02834	0.1552	10.66%	-12.53%
25		4	1.588	1.503	1.673	1.445	1.929	0.04166	0.2282	14.37%	-22.77%
50		4	1.566	1.462	1.67	1.35	1.961	0.05063	0.2773	17.71%	-21.07%
100		4	2.038	1.798	2.278	1.221	2.764	0.1172	0.6417	31.49%	-57.55%

CETIS Summary Report

Report Date: 27 Aug-09 15:28 (p 2 of 2)
 Test Code: 14-8688-7330/18858 Mb

Menidia beryllina 7-d Larval Survival and Growth Test						EnviroSystems, Inc.
7d Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1	0.9	0.9	1	
0	Lab Water	1	0.9	1	1	
6.25		1	0.9	1	1	
12.5		0.9	1	1	1	
25		1	1	0.9	0.9	
50		1	1	0.9	1	
100		0.9	1	0.9	1	
Mean Dry Biomass-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.138	1.275	0.92	1.597	
0	Lab Water	1.002	1.537	1.039	1.778	
6.25		1.083	1.265	1.523	1.611	
12.5		1.332	1.316	1.664	1.362	
25		1.485	1.445	1.344	1.736	
50		1.35	1.554	1.259	1.961	
100		1.997	2.764	1.753	1.221	
Mean Dry Weight-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.138	1.417	1.022	1.597	
0	Lab Water	1.002	1.708	1.039	1.778	
6.25		1.083	1.406	1.523	1.611	
12.5		1.48	1.316	1.664	1.362	
25		1.485	1.445	1.493	1.929	
50		1.35	1.554	1.399	1.961	
100		2.219	2.764	1.948	1.221	

CETIS Analytical Report

Report Date: 27 Aug-09 15:28 (p 1 of 3)
 Test Code: 14-8688-7330/18858 Mb

Menidia beryllina 7-d Larval Survival and Growth Test			EnviroSystems, Inc.		
Analysis ID: 15-2623-1719	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.7.0			
Analyzed: 27 Aug-09 15:27	Analysis: Parametric-Control vs Treatments	Official Results: Yes			
Sample ID: 03-1502-0502	Code: 12C6D4D618858	Client: FLP Energy			
Sample Date: 18 Aug-09 06:00	Material: Power Plant Cooling Water	Project: Third Quarter WET Compliance Test			
Receive Date: 18 Aug-09 13:00	Source: Seabrook Station				
Sample Age: 10h (3 °C)	Station: NH0020338 Final Discharge				

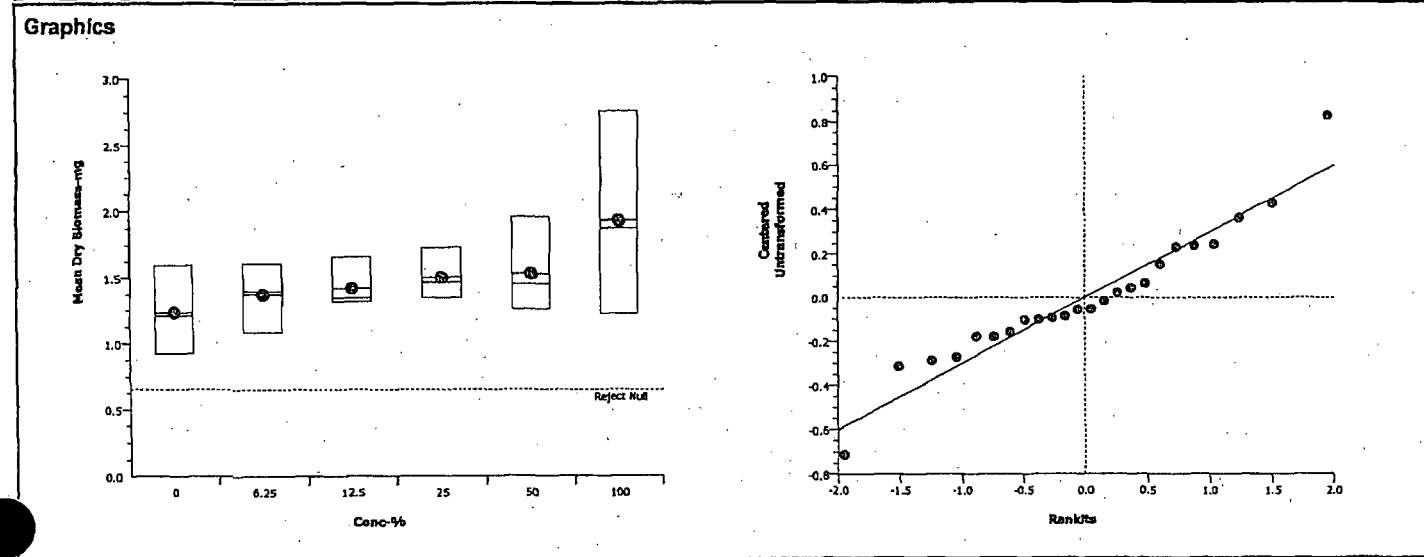
Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run	100	>100	N/A	1	47.25%

Dunnett's Multiple Comparison Test							
Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water		6.25	-0.5704	2.407	0.5823	0.9487	Non-Significant Effect
		12.5	-0.7688	2.407	0.5823	0.9684	Non-Significant Effect
		25	-1.116	2.407	0.5823	0.9874	Non-Significant Effect
		50	-1.234	2.407	0.5823	0.9910	Non-Significant Effect
		100	-2.899	2.407	0.5823	0.9999	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.136216	0.2272432	5	1.941	0.1371	Non-Significant Effect
Error	2.107017	0.1170565	18			
Total	3.243233	0.3442996	23			

ANOVA Assumptions						
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)	
Variances	Bartlett Equality of Variance	7.703	15.09	0.1734	Equal Variances	
Distribution	Shapiro-Wilk Normality	0.9489		0.2571	Normal Distribution	

Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.232	1.125	1.34	0.92	1.597	0.05266	0.2836	23.01%	0.0%
6.25		4	1.371	1.279	1.462	1.083	1.611	0.04483	0.2414	17.62%	-11.2%
12.5		4	1.419	1.356	1.481	1.316	1.664	0.0306	0.1648	11.62%	-15.09%
25		4	1.503	1.439	1.566	1.344	1.736	0.03094	0.1666	11.09%	-21.91%
50		4	1.531	1.412	1.65	1.259	1.961	0.05795	0.3121	20.38%	-24.22%
100		4	1.934	1.69	2.178	1.221	2.764	0.1191	0.6414	33.17%	-56.9%



CETIS Analytical Report

Report Date: 27 Aug-09 15:28 (p 2 of 3)

Test Code: 14-8688-7330/18858 Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 00-1278-3166 Endpoint: 7d Proportion Survived CETIS Version: CETISv1.7.0
 Analyzed: 27 Aug-09 15:27 Analysis: Nonparametric-Control vs Treatments Official Results: Yes

Sample ID: 03-1502-0502 Code: 12C6D4D618858 Client: FLP Energy
 Sample Date: 18 Aug-09 06:00 Material: Power Plant Cooling Water Project: Third Quarter WET Compliance Test
 Receive Date: 18 Aug-09 13:00 Source: Seabrook Station
 Sample Age: 10h (3 °C) Station: NH0020338 Final Discharge

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	9.96%

Steel Many-One Rank Test

Control	vs	Conc-%	Test Stat	Critical	Ties	P-Value	Decision(5%)
Receiving Water		6.25	20	10	3	0.9516	Non-Significant Effect
		12.5	20	10	3	0.9516	Non-Significant Effect
		25	18	10	3	0.8333	Non-Significant Effect
		50	20	10	3	0.9516	Non-Significant Effect
		100	18	10	3	0.8333	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009959749	0.00199195	5	0.2571	0.9306	Non-Significant Effect
Error	0.1394365	0.007746472	18			
Total	0.1493962	0.009738421	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	0.1643	15.09	0.9995	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7934		0.0002	Non-normal Distribution

7d Proportion Survived Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.95	0.928	0.972	0.9	1	0.01072	0.05773	6.08%	0.0%
6.25		4	0.975	0.956	0.994	0.9	1	0.009285	0.05	5.13%	-2.63%
12.5		4	0.975	0.956	0.994	0.9	1	0.009285	0.05	5.13%	-2.63%
25		4	0.95	0.928	0.972	0.9	1	0.01072	0.05773	6.08%	0.0%
50		4	0.975	0.956	0.994	0.9	1	0.009285	0.05	5.13%	-2.63%
100		4	0.95	0.928	0.972	0.9	1	0.01072	0.05773	6.08%	0.0%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.331	1.295	1.366	1.249	1.412	0.01747	0.09409	7.07%	0.0%
6.25		4	1.371	1.34	1.402	1.249	1.412	0.01513	0.08149	5.94%	-3.06%
12.5		4	1.371	1.34	1.402	1.249	1.412	0.01513	0.08149	5.94%	-3.06%
25		4	1.331	1.295	1.366	1.249	1.412	0.01747	0.09409	7.07%	0.0%
50		4	1.371	1.34	1.402	1.249	1.412	0.01513	0.08149	5.94%	-3.06%
100		4	1.331	1.295	1.366	1.249	1.412	0.01747	0.09409	7.07%	0.0%

Menidia beryllina 7-d Larval Survival and Growth Test

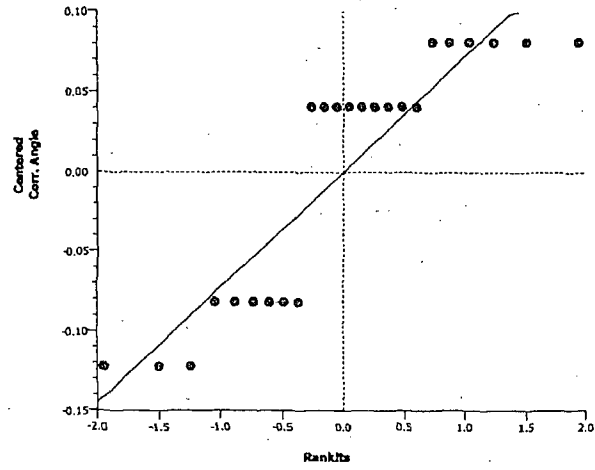
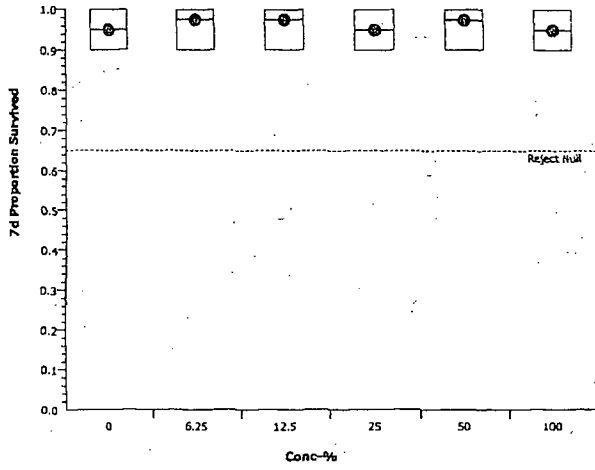
EnviroSystems, Inc.

Analysis ID: 00-1278-3166
Analyzed: 27 Aug-09 15:27

Endpoint: 7d Proportion Survived
Analysis: Nonparametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics





18858

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species MENIDIA BERYLINASource: Lab reared Hatchery reared Field collected Hatch date 8-8-09 Receipt date Lot number 080509MB Strain Brood origination CAPE COD MA

II. Water Quality

Temperature 25 °C Salinity 230 ppt D.O. — ppmpH 7.8 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater Saltwater Other Recirculating Flow through Static DIET: Flake food Phytoplankton Trout chow Artemia Rotifers YCT Other ENCAP. STRIP DIETProphylactic treatments: Comments:

IV. Shipping Information

Client: EST # of Organisms 380+Carrier: Date shipped 8-18-09Biologist: Mark Foxen

Arbacia punctulata Chronic Fertilization Assay

STUDY: 18858	CLIENT: FPL Energy Seabrook Station	SAMPLE/DILUENT: EFFLUENT / RECEIVING WATER (RW)	DATE / INITIALS: 8/20/09 LB		
SALINITY ADJUSTMENT RECORD: 1000 ml EFFLUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
SALINITY ADJUSTMENT RECORD: 1000 ml DILUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
EFFLUENT CONCENTRATION)	D.O. (mg/L)	pH (SU)	TEMPERATURE (°C)	SALINITY (ppt)	TRC (mg/L)
"AS RECEIVED" EFFLUENT	6.9	7.87		31	<0.02
"AS RECEIVED" RW DILUENT	7.0	7.67		30	<0.02
LAB CONTROL	6.9	8.16	21	29	
RW	7.0	7.67	21	30	
6.25%	7.0	7.68	21	30	
12.5%	7.1	7.69	21	30	
25%	7.1	7.73	21	30	
50%	7.0	7.78	21	31	
100%	6.9	7.87	21	31	

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 125 x 10⁴ = SPM SOLUTION E = 1.25 x 10⁶

SPERM CONCENTRATIONS: SOLUTION E X 40 = SOLUTION A = 5.00 x 10⁷ SPM
 SOLUTION E X 20 = SOLUTION B = 2.50 x 10⁷ SPM
 SOLUTION E X 5 = SOLUTION C = 6.25 x 10⁶ SPM

FINAL COUNTS:

FINAL SPERM COUNT: 5.00 x 10⁷
 FINAL EGG COUNT: 2500
 Sampling Date _____ Time _____

Bottles Pulled: EFFLUENT DILUENT
 TOC
 METALS N/A
 AMM
 TS/S

TEST TIMES:

SPERM COLLECTED: 1400
 EGGS COLLECTED: 1400
 SPERM ADDED: 1420
 EGGS ADDED: 1520
 FIXATIVE ADDED: 1540

Meters Used

DO meter # 23 DO probe # 20 pH meter # 470 pH probe # 85 S/C meter # YS130D S/C probe # YS130D
 SALINITY meter # YS130D Temp. (thermometer or probe #) YS130D

Arbacia punctulata Chronic Fertilization Assay

STUDY	CLIENT	SAMPLE/DILUENT				DATE
19858	FPL Energy Seabrook Station	EFFLUENT / RECEIVING WATER (RW)				8/21/09
EFFLUENT CONC.	REPLICATE VIAL					
	<u>1</u> FERT/TOTAL	<u>2</u> FERT/TOTAL	<u>3</u> FERT/TOTAL	<u>4</u> FERT/TOTAL		
LAB	100/114	98/100	95/104	90/105		
RW	93/105	89/121	94/114	83/104		
6.25%	83/100	80/100	90/104	98/117		
12.5%	89/104	82/100	95/100	92/100		
25%	91/100	85/100	88/107	94/102		
50%	100/114	88/105	89/109	94/100		
100%	84/100	90/100	91/103	96/107		

INITIALS: LP

CETIS Summary Report

Report Date: 01 Sep-09 13:12 (p 1 of 1)
 Test Code: 18-8450-4744/18858 Ap

Arbacia Sperm Cell Fertilization Test							EnviroSystems, Inc.				
Batch ID:	06-5831-1989	Test Type:	Fertilization	Analyst:							
Start Date:	20 Aug-09 14:20	Protocol:	EPA/821/R-02-014 (2002)	Diluent:	Receiving Water						
Ending Date:	20 Aug-09 15:20	Species:	Arbacia punctulata	Brine:	Generic commercial salts						
Duration:	60m	Source:	In-House Culture	Age:							
Sample ID:	04-8365-6690	Code:	18858	Client:	FLP Energy						
Sample Date:	20 Aug-09 06:00	Material:	Power Plant Cooling Water	Project:	Third Quarter WET Compliance Test						
Receive Date:	20 Aug-09 11:00	Source:	Seabrook Station								
Sample Age:	8h (3 °C)	Station:	NH0020338 Final Discharge								
Comparison Summary											
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method				
07-0278-9342	Proportion Fertilized	100	>100	N/A	12.52%	1	Dunnett's Multiple Comparison Test				
Point Estimate Summary											
Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method				
08-7462-1555	Proportion Fertilized	EC10	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)				
Test Acceptability											
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision					
07-0278-9342	Proportion Fertilized	Control Resp	0.811	0.7 - 1	Yes	Result Within Limits					
08-7462-1555	Proportion Fertilized	Control Resp	0.811	0.7 - 1	Yes	Result Within Limits					
07-0278-9342	Proportion Fertilized	PMSD	0.1252	NL - 0.25	No	Result Within Limits					
Proportion Fertilized Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.811	0.7877	0.8342	0.7355	0.8857	0.01137	0.06226	7.68%	0.0%
0	Lab Water	4	0.8944	0.882	0.9069	0.8571	0.93	0.006069	0.03324	3.72%	-10.29%
6.25		4	0.8332	0.8232	0.8433	0.8	0.8654	0.004908	0.02688	3.23%	-2.75%
12.5		4	0.8864	0.8643	0.9086	0.82	0.95	0.01081	0.05922	6.68%	-9.31%
25		4	0.876	0.8583	0.8937	0.8224	0.9216	0.008678	0.04753	5.43%	-8.02%
50		4	0.868	0.8477	0.8882	0.8165	0.94	0.009896	0.0542	6.25%	-7.03%
100		4	0.8802	0.8698	0.8905	0.84	0.9	0.005064	0.02774	3.15%	-8.53%
Proportion Fertilized Detail											
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Receiving Water	0.8857	0.7355	0.8246	0.7981						
0	Lab Water	0.8772	0.93	0.9135	0.8571						
6.25		0.83	0.8	0.8654	0.8376						
12.5		0.8558	0.82	0.95	0.92						
25		0.91	0.85	0.8224	0.9216						
50		0.8772	0.8381	0.8165	0.94						
100		0.84	0.9	0.8835	0.8972						

CETIS Analytical Report

Report Date: 01 Sep-09 13:12 (p 1 of 2)
 Test Code: 18-8450-4744/18858 Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 07-0278-9342 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 01 Sep-09 13:11 Analysis: Parametric-Control vs Treatments Official Results: Yes

Sample ID: 04-8365-6690 Code: 18858 Client: FLP Energy
 Sample Date: 20 Aug-09 06:00 Material: Power Plant Cooling Water Project: Third Quarter WET Compliance Test
 Receive Date: 20 Aug-09 11:00 Source: Seabrook Station
 Sample Age: 8h (3 °C) Station: NH0020338 Final Discharge

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	12.52%

Dunnnett's Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water		6.25	-0.5074	2.407	0.1235	0.9406	Non-Significant Effect
		12.5	-2.16	2.407	0.1235	0.9995	Non-Significant Effect
		25	-1.764	2.407	0.1235	0.9981	Non-Significant Effect
		50	-1.564	2.407	0.1235	0.9966	Non-Significant Effect
		100	-1.828	2.407	0.1235	0.9985	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03813145	0.00762629	5	1.448	0.2551	Non-Significant Effect
Error	0.0947823	0.005265683	18			
Total	0.1329138	0.01289197	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	3.672	15.09	0.5975	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9655		0.5578	Normal Distribution

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.811	0.7873	0.8347	0.7355	0.8857	0.01156	0.06226	7.68%	0.0%
6.25		4	0.8332	0.823	0.8435	0.8	0.8654	0.004992	0.02688	3.23%	-2.75%
12.5		4	0.8864	0.8639	0.909	0.82	0.95	0.011	0.05922	6.68%	-9.31%
25		4	0.876	0.8579	0.8941	0.8224	0.9216	0.008827	0.04753	5.43%	-8.02%
50		4	0.868	0.8473	0.8886	0.8165	0.94	0.01007	0.0542	6.25%	-7.03%
100		4	0.8802	0.8696	0.8907	0.84	0.9	0.00515	0.02774	3.15%	-8.53%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.125	1.094	1.156	1.031	1.226	0.01504	0.08101	7.2%	0.0%
6.25		4	1.151	1.137	1.165	1.107	1.195	0.006714	0.03616	3.14%	-2.31%
12.5		4	1.236	1.199	1.273	1.133	1.345	0.01792	0.09649	7.81%	-9.85%
25		4	1.215	1.188	1.243	1.136	1.287	0.01348	0.0726	5.97%	-8.05%
50		4	1.205	1.172	1.238	1.128	1.323	0.01601	0.08623	7.15%	-7.13%
100		4	1.219	1.203	1.235	1.159	1.249	0.007676	0.04134	3.39%	-8.34%

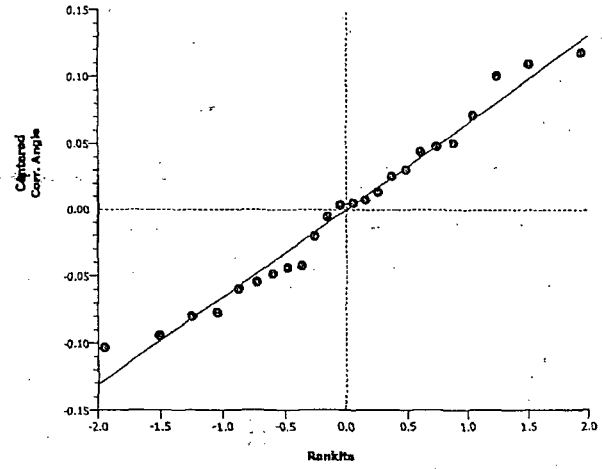
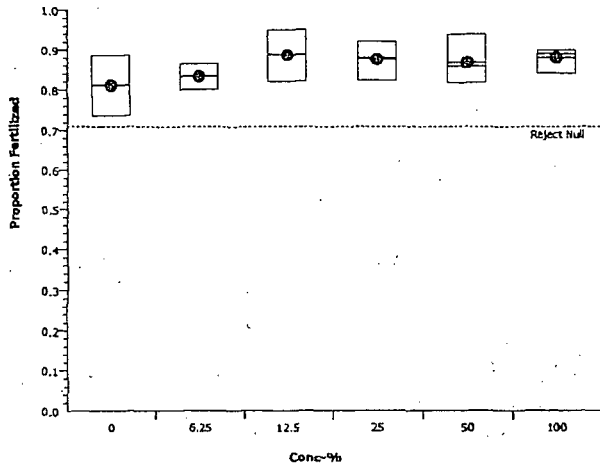
Arbacia Sperm Cell Fertilization Test

EnviroSystems, Inc.

Analysis ID: 07-0278-9342 Endpoint: Proportion Fertilized
Analyzed: 01 Sep-09 13:11 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 01 Sep-09 13:12 (p 1 of 1)

Test Code: 18-8450-4744/18858 Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 08-7462-1555 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 01 Sep-09 13:12 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Sample ID: 04-8365-6690 Code: 18858 Client: FLP Energy
 Sample Date: 20 Aug-09 06:00 Material: Power Plant Cooling Water Project: Third Quarter WET Compliance Test
 Receive Date: 20 Aug-09 11:00 Source: Seabrook Station
 Sample Age: 8h (3 °C) Station: NH0020338 Final Discharge

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

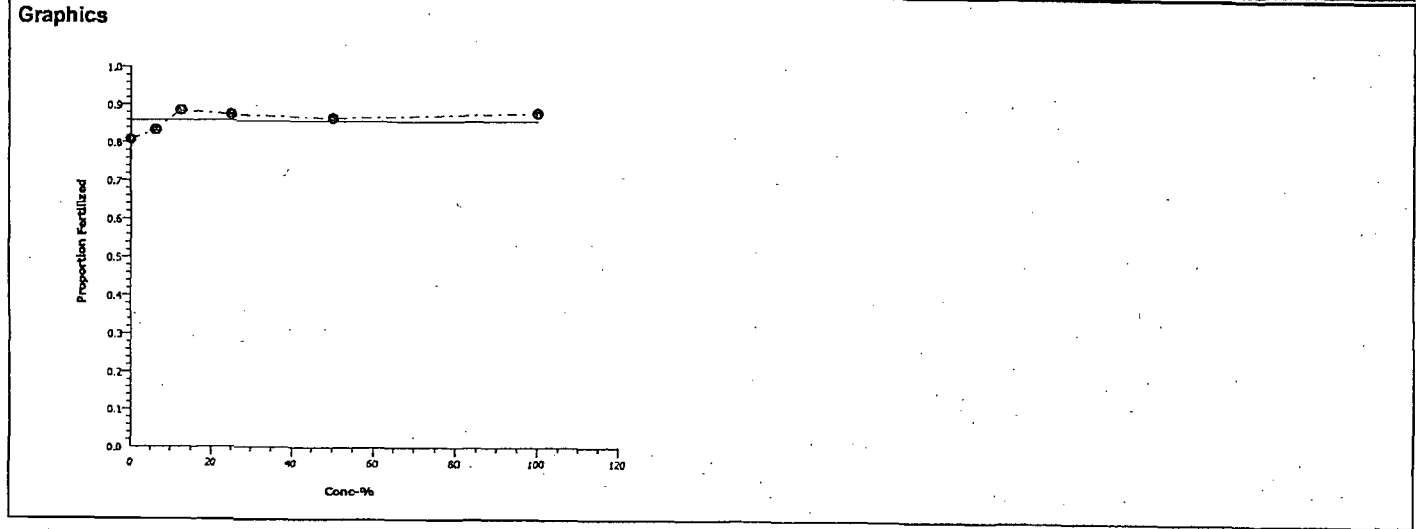
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC10	>100	N/A	N/A	<1	N/A	N/A

Proportion Fertilized Summary Calculated Variate(A/B)

Conc-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Receiving Water	4	0.811	0.7355	0.8857	0.01137	0.06226	7.68%	0.0%	359	444
6.25		4	0.8332	0.8	0.8654	0.004908	0.02688	3.23%	-2.75%	351	421
12.5		4	0.8864	0.82	0.95	0.01081	0.05922	6.68%	-9.31%	358	404
25		4	0.876	0.8224	0.9216	0.008678	0.04753	5.43%	-8.02%	358	409
50		4	0.868	0.8165	0.94	0.009896	0.0542	6.25%	-7.03%	371	428
100		4	0.8802	0.84	0.9	0.005064	0.02774	3.15%	-8.53%	361	410

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.8857	0.7355	0.8246	0.7981
6.25		0.83	0.8	0.8654	0.8376
12.5		0.8558	0.82	0.95	0.92
25		0.91	0.85	0.8224	0.9216
50		0.8772	0.8381	0.8165	0.94
100		0.84	0.9	0.8835	0.8972



M. beryllina 7 Day Chronic Assay

STUDY: 18858	CLIENT: FPL Energy Seabrook Station	SAMPLE: EFFLUENT	DILUENT: RECEIVING WATER (RW)
DAY 0 (START) DATE: 08/18/09	DAY 2 (1 ST RENEWAL) DATE: 8/20/09	DAY 4 (2 ND RENEWAL) DATE: 8/22/09	

CHEMISTRIES SAMPLED

CHEMISTRY	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
AMM	004	008	013	016	021	016-024
TS/TSS	005	009	014	017	022	017-025
TOC	003	007				
METALS	002					

AS RECEIVED & SALINITY ADJUSTED WATER QUALITIES

AS REC'D	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	30.9	29.8	30.1	29.7	31.1	29.7
Dissolved Oxygen (mg/L)	8.6	8.0	8.8	7.3	8.6	7.6
pH (SU)	7.55	7.97	7.78	7.57	7.51	7.49
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SAL. ADJ.	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	/	/	/	/	/	/
Dissolved Oxygen (mg/L)	/	/	/	/	/	/
pH (SU)	/	/	/	/	/	/
TRC (mg/L)	/	/	/	/	/	/

SALINITY ADJUSTMENT RECORD

	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
SAMPLE mLs	/	/	/	/	/	/
SEA SALT g	/	/	/	/	/	/
TOTAL mLs	/	/	/	/	/	/
ACTUAL %	100%		100%		100%	
DATE:	08/18/09	08/17/09	8/20/09	8/19/09	8/22	8/21/09
TIME:	1330	1630	1150	1630	1100	1605
INITIALS:	vc	RAM	vc	ng	wm	sj

SALTWATER CHRONIC ASSAY - NEW WATER QUALITIES

STUDY: 18858		CLIENT: FPL Energy Seabrook Station							SAMPLE: EFFLUENT		DILUENT: RECEIVING WATER (RW)					
NEW DISSOLVED OXYGEN (mg/L)									NEW SALINITY (ppt)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	6.8	6.7	6.6	6.7	6.9	6.6	7.0	29	30	30	29	29	29	29	
RW	A	7.5	7.4	7.0	7.5	6.4	6.2	7.6	30	30	31	31	30	30	30	
6.25%	A	7.1	7.1	6.9	7.2	6.6	6.5	7.2	30	30	31	31	31	31	31	
12.5%	A	7.5	7.1	6.8	6.8	6.7	6.2	7.2	30	30	31	31	30	30	31	
25%	A	7.5	7.0	6.8	6.9	7.0	6.5	7.2	30	30	31	31	31	31	31	
50%	A	7.9	7.2	7.0	6.9	7.0	6.3	7.3	31	31	31	31	31	31	31	
100%	A	8.6	7.6	7.5	7.9	7.3	7.2	8.0	31	31	31	31	31	31	31	
NEW pH (SU)									NEW TEMPERATURE (°C)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	8.15	7.95	8.08	8.01	8.09	7.94	8.00	25	24	24	24	24	25	24	
RW	A	7.99	7.95	7.57	7.61	7.68	7.64	7.58	26.5	24	24	24	26	26	25	
6.25%	A	7.97	7.94	7.62	7.64	7.68	7.64	7.65	26.5	24	24	24	26	26	25	
12.5%	A	7.96	7.91	7.65	7.71	7.71	7.60	7.69	26.5	24	24	24	26	26	25	
25%	A	7.92	7.87	7.70	7.75	7.77	7.56	7.70	25	25	25	24	26	26	25	
50%	A	7.82	7.80	7.75	7.79	7.73	7.56	7.71	24	24	24	24	26	26	25	
100%	A	7.58	7.60	7.79	7.85	7.67	7.55	7.67	24	26	24	24	26	26	25	
INC TEMP (°C):		25	25	25	25	25	25	25								
DATE:		8/18/04	8/19	8/20	8/21	8/22	8/23	8/24								
TIME:		1525	0640	1315	0930	1145	1520	1100								
INITIALS:		W	WMM	WMM	WMM	WMM	JO	ST								

SALTWATER CHRONIC ASSAY - OLD WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:			DILUENT:			
18858		FPL Energy Seabrook Station							EFFLUENT			RECEIVING WATER (RW)			
OLD TEMPERATURE (°C)									OLD SALINITY (ppt)						
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	24	24	24	24	25	24	24	29	30	30	30	29	29	29
RW	A	24	24	24	24	25	24	24	30	30	31	31	30	30	31
6.25%	A	24	24	24	24	25	24	24	31	31	31	31	31	31	31
12.5%	A	24	24	24	24	25	24	24	31	31	31	31	31	31	31
25%	A	24	24	24	24	25	24	24	31	31	31	31	31	31	31
50%	A	24	24	24	24	25	24	24	31	31	31	31	31	31	31
100%	A	24	24	24	24	25	24	24	31	31	31	32	32	31	31
OLD pH (SU)															
CONC	REP	1	2	3	4	5	6	7							
LAB	A	8.04	7.84	7.99	7.97	7.93	7.95	7.94							
RW	A	7.95	7.79	8.01	7.98	7.94	7.94	7.95							
6.25%	A	7.93	7.90	8.03	7.98	7.96	8.01	7.97							
12.5%	A	7.89	7.73	8.04	7.97	7.96	7.97	7.95							
25%	A	7.86	7.73	8.04	7.96	7.97	7.95	7.93							
50%	A	7.82	7.72	8.05	7.96	7.97	7.95	7.95							
100%	A	7.66	7.59	8.06	7.96	7.93	7.96	7.95							
DATE:		8/19/08	8/20/08	8/21	8/22	8/23	8/24	8/25							
TIME:		0830	1225	0835	0810	1425	1000	0945							
INITIALS:		WM	WM	WM	WM	JG	JJ	KE							

DILUTIONS PREPARATIONS

STUDY: 18858		CLIENT: FPL Energy Seabrook Station	
SPECIES: <i>A. bahia</i>			
Diluent: Receiving Water (RW)		Sample: E1 P1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)	
Lab	0	800	
RW	0	↓	
6.25%	56		
12.5%	100		
25%	200		
50%	400		
100%	800		
INITIALS:	WMM		
TIME:	1335		
DATE:	8/20/09		

DILUTIONS PREPARATION

STUDY: 18858		CLIENT: FPL Energy Seabrook Station					
SPECIES: <i>M. beryllina</i>			TEST: chronic renewal				
START	Day: 0		Day: 1		Day:		
	Sample: E0, P0		Sample: E0, P0		Sample:		
Diluent: RW	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Concentration							
Lab	0	2000	0	1600			
RW	0		0				
6.25%	125		100				
12.5%	250		200				
25%	500		400				
50%	1000		800				
100%	2000	↓	1600	↓			
7							
1 st Renewal	Day: 2		Day: 3		Day:		
Diluent: RW	Sample: E1, D1		Sample: E1, D1		Sample:		
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600			
RW	0		0				
6.25%	100		100				
12.5%	200		200				
25%	400		400				
50%	800		800				
100%	1600	↓	1600	↓			
RW = Receiving Water A-2416							
2 nd Renewal	Day: 4		Day: 5		Day: 6		
Diluent: RW	Sample: E2, D2		Sample: E2, D2		Sample: E2, D2		
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600	0	1600	
RW	0		0		0		
6.25%	100		100		100		
12.5%	200		200		200		
25%	400		400		400		
50%	800		800		800		
100%	1600	↓	1600	↓	1600	↓	

DILUTIONS PREPARATIONS

STUDY: 18858	CLIENT: FPL Energy Seabrook Station	
SPECIES: <i>A. punctulata</i>		
Diluent: Receiving Water (RW)	Day: 0 Start	
	Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	100
RW	0	↓
6.25%	0.25	
12.5%	12.5	
25%	25	
50%	50	
100%	100	
INITIALS:	LB	
TIME:	1255	
DATE:	8/20/09	

RECORD OF METERS USED

STUDY: 18858	CLIENT: FPL Energy Seabrook		
A.bahia			
Exposure (Hours)			
	0	24	48
Water Quality Station #	2	21	2
Temperature thermometer or probe #	YS300	YS300	YS300
Initials / Date	wm 8/20/09	wm 8/21/09	wm 8/22/09

Water Quality Station #1		Water Quality Station #2		Water Quality Station	
DO meter #	3	DO meter #	23	DO meter #	
DO probe #	82	DO probe #	20	DO probe #	
pH meter #	1097	pH meter #	470	pH meter #	
pH probe #	83	pH probe #	85	pH probe #	
S/C meter #	YS300	S/C meter #	YS300	S/C meter #	
S/C probe #	↓	S/C probe #	↓	S/C probe #	
Salinity meter #	↓	Salinity meter #	↓	Salinity meter #	

RECORD OF METERS USED
M. beryllina Chronic

STUDY: 18858	CLIENT: FPL Energy Seabrook Station							
NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	2	1	1	1	2	1	1	/
Temperature thermometer or probe #	YSE300	YS300	YS1300	YS300	YS300	YS300	YS1300	/
Initials	W.C.	WM	WM	WM	WM	JQ	JJ	/
OLD WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	/	1	1	2	1	1	1	1
Temperature thermometer or probe #	/	YS300	YS1300	YS300	YS300	YS300	YS1300	YSE 700
Initials	/	WM	WM	WM	WM	JQ	JJ	W.C.
Date		8/19	8/20	8/21	8/22	8/23	8/24	8/25

Water Quality Station #1		Water Quality Station #2		Water Quality Station #3	
DO meter #	3	DO meter #	23	DO meter #	/
DO probe #	82	DO probe #	20	DO probe #	/
pH meter #	1047	pH meter #	470	pH meter #	/
pH probe #	83	pH probe #	85	pH probe #	/
S/C meter #	YS1300	S/C meter #	YS1300	S/C meter #	/
S/C probe #	↓	S/C probe #	↓	S/C probe #	/
Salinity meter #		Salinity meter #		Salinity meter #	/

Report No: 18858
Project: Seabrook Station

SDG:

Sample ID: Effluent Start
Matrix: Water
Sampled: 08/18/09 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	18858-005	36000	50	mg/L	08/18/09	08/19/09	JQ /SM2540B
Total suspended solids	18858-005	20	10	mg/L	08/18/09	08/19/09	JQ /SM 2540D
Aluminum, total	18858-002	ND	0.02	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Total organic carbon	18858-003	ND	0.4	mg/L	08/27/09	08/27/09	KAJ/SM 5310 C
Cadmium, total	18858-002	ND	0.0005	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Calcium, total	18858-002	340	10	mg/L	08/25/09	09/01/09	JLH/EPA 200.8
Chromium, total	18858-002	ND	0.002	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Copper, total	18858-002	0.086	0.002	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Lead, total	18858-002	ND	0.0005	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Magnesium, total	18858-002	1080	10	mg/L	08/25/09	09/01/09	JLH/EPA 200.8
Nickel, total	18858-002	0.012	0.002	mg/L	08/25/09	08/26/09	JLH/EPA 200.8
Ammonia-N	18858-004	0.11	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G
Zinc, total	18858-002	ND	0.002	mg/L	08/25/09	08/26/09	JLH/EPA 200.8

Sample ID: Effluent First Renewal
Matrix: Water
Sampled: 08/20/09 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	18858-013	0.1	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G

Sample ID: Effluent Second Renewal
Matrix: Water
Sampled: 08/22/09 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	18858-021	ND	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

Report No: 18858
Project: Seabrook Station

SDG:

Sample ID: Receiving Water Start
Matrix: Water
Sampled: 08/17/09 1300

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	18858-009	33000	50	mg/L	08/18/09	08/19/09	JQ /SM2540B
Total suspended solids	18858-009	58	10	mg/L	08/18/09	08/19/09	JQ /SM 2540D
Total organic carbon	18858-007	0.4	0.4	mg/L	08/27/09	08/27/09	KAJ/SM 5310 C
Ammonia-N	18858-008	ND	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G

Sample ID: Receiving Water First Renewal
Matrix: Water
Sampled: 08/19/09 1504

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	18858-016	ND	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G

Sample ID: Receiving Water Second Renewal
Matrix: Water
Sampled: 08/21/09 1100

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	18858-024	ND	0.1	mg/L as N	08/26/09	08/26/09	KAJ/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 18858	CLIENT: SEABROOK STATION					
SAMPLE RECEIPT INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Sample Receipt Date & Time:	08/18/09 1300	08/17/09	01/20/09 1100	08/19/09	8/22/09 1055	8/21/09 1205
Received By:	SJ	DM	LB	LB	WM	WM
Delivered Via:	Client	Normandeau	Client	Normandeau	Client	Normandeau
Logged Into Lab By:	KC	RAM	JQ	LB	WM	SJ
Date & Time Logged In:	08/18/09 1420	08/17/09 1620	8/20/09 1100	8/19/09 1623	8/24/09 1055	8/21/09 1600
SAMPLE CONDITION INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Chain of Custody?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Chain of Custody Signed?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Chain of Custody Complete?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Sample Date?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Sample Time?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Sample Type?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Custody Seal in Place?	Yes or No (NA)	Yes or No (NA)	Yes or No (NA)	Yes or No (NA)	Yes or No (NA)	Yes or No (NA)
Shipping Container Intact?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
Temp Blank Temperature:	3°C	17°C	3°C	19°C	5°	6
DOES CLIENT NEED NOTIFICATION OF TEMP?	NO		NO		NO	
Sample Arrived on Ice?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No
COMMENTS:	See C.O.C.	See C.O.C.	See C.O.C.	See C.O.C.	See C.O.C.	See C.O.C.



EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Jc

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Stati
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not nee F=Done in L=Lab to
001	Effluent Start	8/17/09- 8/18/09	0900- 0600	JL	C	3	3750	P	4 C	Water	N
002	Effluent Start	8/17/09- 8/18/09	0900- 0600	JL	C	1	250	P	HNO3	Water	N
003	Effluent Start	8/17/09- 8/18/09	0900- 0600	JL	C	1	40	G	H2SO4	Water	N
004	Effluent Start	8/17/09- 8/18/09	0900- 0600	JL	C	1	125	P	H2SO4	Water	N
005	Effluent Start	8/17/09- 8/18/09	0900- 0600	JL	C	1	125	P	4 C	Water	N

Relinquished By: <i>[Signature]</i>	Date: 8-18-09	Time: 1300	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received at Lab By:

Comments:

ERR

COC Number: A1005274

Sample Delivery Group No: August 2009

CHAIN OF CUSTODY DOCUMENTATION

Contact: Al Legendre		Project Name: Seabrook Station	
Address: P.O. Box 300		Project Number: P0105	
Address: Seabrook, NH 03874		Project Manager: Al Legendre	
Fax: 603-773-7740		email: al.legendre@tpl.com	
P.O.No.:		Quote No:42109	

Date Sampled	Time Sampled	By	Grab or com- posite (G/C)	Container No	Size (mL)	Type (P/G/T)	Field Preservation	Matrix	Filter	Analyses Requested/ Special Instructions:
8/17/09	1300	MS	G	6	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartDiluent
					40	G	H2SO4	Water	N	TOC
					125	P	H2SO4	Water	N	NH3:
					125	P	4 C	Water	N	TS, TSS

Date: 8/17/09 Time: 1545	Received By: MS
Date: 8.17.09 Time: 1545	Received at Lab By: MS



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1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI J

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Stat
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not nei F=Done in L=Lab to
010	Effluent First Renewal	8/19/09 - 8/20/09	0900 - 0600	RB	C	3	3750	P	4 C	Water	N
011	Effluent First Renewal	8/19/09 - 8/20/09	0900 - 0600	RB	C	1	250	P	HNO3	Water	N
012	Effluent First Renewal	8/19/09 - 8/20/09	0900 - 0600	RB	C	1	40	G	H2SO4	Water	N
013	Effluent First Renewal	8/19/09 - 8/20/09	0900 - 0600	RB	C	1	125	P	H2SO4	Water	N
014	Effluent First Renewal	8/19/09 - 8/20/09	0900 - 0600	RB	C	1	125	P	4 C	Water	N

Relinquished By: <i>[Signature]</i>	Date: 8/20/09	Time: 1100	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received at Lab By:

Comments:

ERR

COC Number: A1005275

Sample Delivery Group No:	August 2009
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env. stem
1 Lafayette Road
Hampton, NH 03842

DUJ 3343
FAX: 603-926-3521

COI

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Sta
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com

Protocol: NPDES

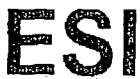
Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not ne F=Done L=Lab t
015 023	Receiving Water ^{first} Second Renewal	8/19/09	1502	ENR	G	6	3750	P	4 C	Water	N
016 024	Receiving Water ^{first} Second Renewal	8/19/09	1504	ENR	G	1	125	P	H2SO4	Water	N
017 025	Receiving Water ^{first} Second Renewal	8/19/09	1506	ENR	G	1	125	P	4 C	Water	N

Relinquished By: <i>Willydo</i>	Date: 8/19/09	Time: 1623	Received By: <i>Joe Bon</i>
Relinquished By:	Date:	Time:	Received at Lab By:

Comments: ERR

COC Number: A1005276

Sample Delivery Group No: August 2009



EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Jo

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Stati
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in Lab L=Lab to
018	Effluent Second Renewal	8/21/09 - 8/22/09	0900 - 0600	AL	C	4	3750	P	4 C	Water	N
019	Effluent Second Renewal	8/21/09 - 8/22/09	0900 - 0600	AL	C	1	250	P	HNO3	Water	N
020	Effluent Second Renewal	8/21/09 - 8/22/09	0900 - 0600	AL	C	1	40	G	H2SO4	Water	N
021	Effluent Second Renewal	8/21/09 - 8/22/09	0900 - 0600	AL	C	1	125	P	H2SO4	Water	N
022	Effluent Second Renewal	8/21/09 - 8/22/09	0900 - 0600	AL	C	1	125	P	4 C	Water	N

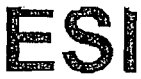
Relinquished By: <i>Jan D...</i>	Date: 8-22-09	Time: 1035	Received By: <i>Walt D...</i>
Relinquished By:	Date:	Time:	Received at Lab By:

Comments:

ERR

COC Number: A1005276

Sample Delivery Group No: August 2009



ENVIRONMENTAL SYSTEMS, INC.
 1 Lafayette Road
 Hampton, NH 03842

VERMONT 303-8 3451
 FAX: 603-926-3521

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Sta
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not ne F=Done L=Lab tk
023	15 Receiving Water First ^{second} Renewal	8/2/09	1100	ENR	G	6	3750	P	4 C	Water	N
024	06 Receiving Water First ^{second} Renewal	8/2/09	1100	ENR	G	1	125	P	H2SO4	Water	N
025	017 Receiving Water First ^{second} Renewal	8/2/09	1100	ENR	G	1	125	P	4 C	Water	N

Relinquished By: <i>W. Legendre</i>	Date: 8/2/09	Time: 1205	Received By: <i>Walter M...</i>
Relinquished By:	Date:	Time:	Received at Lab By:

Comments:
 ERR



November 13, 2009

SBK-L-09236

NPDES Permit No. NH0020338

Environmental Protection Agency
NPDES Program Operation Section
P.O. Box 8127
Boston, MA 02114

Seabrook Station
October 2009 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of October 2009. The enclosed DMRs (Enclosure 1) are submitted pursuant to Part I.B of the referenced NPDES permit. Northeast Laboratory Services of Winslow, ME performed Metal Cleaning Waste analyses for Outfall 26A. Copies of the Outfall 026A analytical reports are enclosed. Seabrook Station Chemistry Department personnel performed the remaining required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 025B had no flow during the month of October, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in October. No visible oil sheen, foam or floating solids were noted during the month. The DMR for Outfall 001 indicates a sampling frequency of one TRO analysis per day for the month of October. One additional sample was performed on October 01. All sample results have been included in the monthly average. The DMR also indicates a maximum pH of 8.2 s.u. This was determined not to be an exceedence as the intake water pH was equal to the discharge water pH.

Outfalls 022A, 023A, 024A

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of October. No exceedences occurred.

Outfall 025A

One continuous discharge occurred during the month of October. The discharge began on September 30 and was terminated in the early morning of October 1. Samples for this discharge were collected on September 30 and reported in that month; the daily flow for October 1 is therefore reported without any sample analysis as indicated by the NODI code. No exceedences occurred.

Outfall 025C

One batch discharge occurred during the month of October. No exceedences occurred.

Outfall 025D

Nine batch discharges occurred during the month of October. No exceedences occurred.

Outfall 026A

Three batch discharges occurred during the month of October. No exceedences occurred. NextEra Energy Seabrook requested and received a clarification letter from the EPA (ref: EPA letter dated August 6, 2009 from David Webster to Michael O'Keefe) regarding the manner in which compliance with certain effluent limitations for Outfall 026 would be ascertained. The clarification pertained to the daily maximum concentration limit for iron and copper and the pH limit for the processed wastewater.

The EPA clarification letter authorized the discharge of iron and copper from this outfall pursuant to a daily mass limit of 3.75 lbs for each metal. The spreadsheet provided in the enclosure to this letter includes calculations confirming that the 3.75 lb. daily mass limit was complied with for each metal. The Outfall 026 discharge concentration limit for the metals, 1 mg/L, was also complied with although our initial estimates for the iron and copper concentrations indicated that the permit limit may be exceed. The Reverse Osmosis treatment process yielded greater metal removal than estimated and compliance was achieved. The additional information requested by EPA clarification letter is provided in the enclosed spreadsheet. The dilution water flow rate assumption is 387,000 GPM and is determined by pump curves.

Additionally the EPA clarification letter indicated that the chemical cleaning wastewater may be discharged at a pH greater than allowed for the internal Outfall 026 (6.0 – 9.0 s.u.) and so long as the pH at outfall 001 is maintained between the water quality based range of 6.5 – 8.0 s.u. the NPDES Permit pH limits would be complied with. Based on the EPA clarification the DMR for Outfall 026 specifies a maximum pH of 10.5 s.u. with no permit exceedence. The measured pH at Outfall 001 during the three discharges is provided on the enclosed spreadsheet.

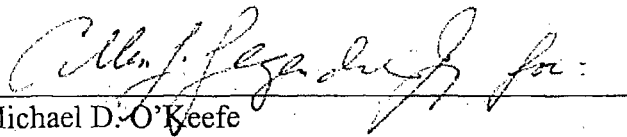
Outfall 027A

Seven discharges were made from the Cooling Tower to support maintenance activities during the month of October. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael D. O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-09236

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

001A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 10/01/2009 TO 10/31/2009

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	54	57	deg F	0	24/01	DA.
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO/AV/MN	Req. Mon. DAILY/MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.8 @	*****	0.8-0.82	SU	0	01/07	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	1.8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	0			
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	3 DAILY/MX	mg/L			When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	0			
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	4.3 DAILY/MX	mg/L			When Discharging	CALC'D
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.00	0.05	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY/MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	135	557	Mgal/d	*****	*****	*****	*****	0	24/01	ES
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY/MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	3	5	deg F	0	24/01	DA.
61576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY/MX	deg F		Continuous	RCORDR

0 Rec'd 11/13/2009

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED		<i>Gene St. Pierre</i>	603 773-7496
		AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 10/01/2009	TO 10/31/2009

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge 61576 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI		C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED		<i>Gene St. Pierre</i>	603 773-7476
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 360-1 (Rev. 10/01/06)
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	003A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD:	
MM/DD/YYYY	MM/DD/YYYY
FROM 10/01/2009	TO 10/31/2009

BACK-FLUSHING OPERATION
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit 00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO/AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****	*****			
	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED		<i>Gene St. Pierre</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

022A
DISCHARGE NUMBER

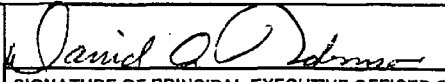
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	10/01/2009	TO	10/31/2009

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	14,904	26,175	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO AVG	122400 DAILY/MX	gal/d	*****	*****	*****	*****	*****	Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.9	3.7	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY/MX	mg/L	*****	Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY/MX	mg/L	*****	Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Gene St. Pierre / Site Vice President			603 773-7496	11/13/2009	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

023A
DISCHARGE NUMBER


DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 10/01/2009 TO 10/31/2009

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	2507	6247	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMATE
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.2	5.8	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED			603 773-7496	11/13/2009
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE REGULATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

024A
DISCHARGE NUMBER

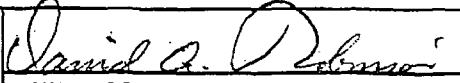
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 10/01/2009 TO 10/31/2009

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	391	894		*****	*****	*****	*****	0	01/07	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO/AVG	122400 DAILY/MX	gal/d	*****	*****	*****	*****	*****	Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.7	2.1	mg/L	0	07/WT	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO/AVG	100 DAILY/MX	mg/L	*****	Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WT	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO/AVG	20 DAILY/MX	mg/L	*****	Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Gene St. Pierre / Site Vice President TYPED OR PRINTED			603 773-7426	11/13/2009	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025A
DISCHARGE NUMBER


DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
10/01/2009 TO 10/31/2009

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	138333	138333	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO'AVG	425000 DAILY/MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI E					
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO'AVG	100 DAILY/MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Gene St. Pierre / Site Vice President			603 773-7426	11/13/2009	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM 10/01/2009 TO 10/31/2009

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO AVG	210000 DAILY/MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMATE
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY/MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED		<i>David A. Deland</i>	603 773-7496	11/13/2009
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025C
DISCHARGE NUMBER

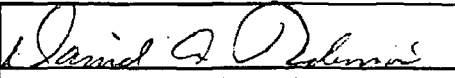
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 10/01/2009 TO 10/31/2009

WASTE HOLDUP SUMP
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	13642	13642	gal/d.	*****	*****	*****	*****	0	01/BA	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once/Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.5	0.5	mg/L	0	01/BA	GR.
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once/Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once/Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE	DATE	
Gene St. Pierre / Site Vice President TYPED OR PRINTED			603 773-7496	11/13/2009	
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 40-0004
OMB 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

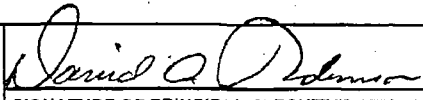
MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 10/01/2009 TO 10/31/2009

WASTE TEST/RECOVERY TEST TANKS
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17,701	24,959	gal/d.	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO/AVG	100000 DAILY/MX	gal/d.	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.8	7.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO/AVG	100 DAILY/MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO/AVG	20 DAILY/MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	11/13/2009
			AREA Code NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	026A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 10/01/2009	TO 10/31/2009

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	33849	42498	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	450000 DAILY/MX	gal/d	*****	*****	*****	*****		Once/Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	10.0	*****	10.5	SU	0	01/BA	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once/Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY/MX	mg/L		Once/Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY/MX	mg/L		Once/Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.02	0.03	mg/L	0	01/BA	GR
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY/MX	mg/L		Once/Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.61	0.80	mg/L	0	01/BA	GR
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY/MX	mg/L		Once/Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violators.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED		<i>Gene St. Pierre</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496
		AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

026A

NPDES - Metal Cleaning Effluents

DAY Description FLOW, gpd Time, min pH TSS, ppm O & G, ppm Iron, ppm Iron, Lb/da 001 Iron, ppm Cu, ppm Cu, Lb/da 001 Cu, ppm COMMENTS

1-Oct-09														
2-Oct-09														
3-Oct-09														
4-Oct-09														
5-Oct-09														
6-Oct-09														
7-Oct-09														
8-Oct-09	WTNG 09-217	25200	270	10.2	0.0	0.0	0.80	0.17	4.44E-04	0.03	0.006	1.66E-05	Ammonia= 580 ppm, Chelates = 30 ppm. Disch for 270 min @ 93 GPM; 001 pH = 7.9	
9-Oct-09														
10-Oct-09	Temp Tank I 09-218	17263	175	10.0	0.0	0.0	0.25	0.04	1.47E-04	0.01	0.001	5.86E-06	Ammonia= 410 ppm, Chelates = 13.8 ppm Disch for 175 min @ 99GPM 001 pH = 7.9 First release on 10/10/09	
10-Oct-09	CPS-LC 09-218	25235	201	10.5	0.0	0.0	0.77	0.16	5.74E-04	0.02	0.004	1.49E-05	Ammonia= 520 ppm, Chelates = 22.8 ppm Disch for 201 min @ 126 gpm; 001 pH = 7.5 Second Release on 10/10/09	
10-Oct-09		42498						0.20			0.006			
13-Oct-09														
14-Oct-09														
15-Oct-09														
16-Oct-09														
17-Oct-09														

MIN				10.0										
AVE		33849			0.0	0.00	0.61				0.02			
MAX		42498.0		10.5	0.0	0.00	0.80							

Batch release # = 3

P.O. Box 788
Waterville, Maine 04903-0788

ANALYSIS REPORT

227 China Road
Winslow, Maine 04901

Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08572
Project Number: OR13 ASCA
P.O. Number: 02212433
Date Collected: 10/08/2009 07:30 PM
Date Received: 10/08/2009 11:30 PM
Date Reported: 10/15/2009

Sample Matrix: W-WATER

Sample Description: WTNG 09-217

Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	0.03		mg/L	0.01	EPA 200.7	10/09/2009 5:10	10/09/2009 9:25	JEY
Iron Total	0.80		mg/L	0.01	EPA 200.7	10/09/2009 5:10	10/09/2009 9:25	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/09/2009 10:00	10/09/2009 12:00	MJC
Ammonia Nitrogen	580		mg/L	0.72	SM 4500NH3 B & C	10/09/2009 5:25	10/09/2009 9:00	MG
Total Organic Carbon	10		mg/L	1	EPA 415.1	10/09/2009 8:07	10/09/2009 8:07	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/09/2009 6:45	10/09/2009 10:15	TLM

Comments:

This is an amended report reviewed on 10-28-09 issued on 10-28-09 due to incorrect sample start times that were entered for iron and copper. These have now been corrected.

Results are reported on a wet weight basis.

This report shall not be reproduced, except in full, without written permission from Northeast Laboratory Services.

The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyn
James F. Galasyn, Ph.D., Chemistry Lab Manager

Review Date: 10/15/2009

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sampling methodology used by the individual performing the sampling. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the environmental soundness, safety or health of a property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is sufficiently completed or after a thirty-day period, whichever period is greater. NEL liability extends only to the cost of the testing.

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08562
Project Number: OR13 ASCA
P.O. Number: 02212433
Date Collected: 10/08/2009 11:20 AM
Date Received: 10/08/2009 04:00 PM
Date Reported: 10/09/2009

Sample Matrix: W-WATER
Sample Description: Temp Tank I 09-216
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	0.01		mg/L	0.01	EPA 200.7	10/08/2009 16:45	10/09/2009 9:06	JEY
Iron Total	0.25		mg/L	0.01	EPA 200.7	10/08/2009 16:45	10/09/2009 9:06	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/08/2009 18:00	10/09/2009 9:00	MJC
Ammonia Nitrogen	410		mg/L	0.72	SM 4500NH3 B & C	10/09/2009 5:25	10/09/2009 9:00	MG
Total Organic Carbon	4.6		mg/L	1	EPA 415.1	10/08/2009 16:55	10/08/2009 16:55	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/08/2009 16:00	10/09/2009 7:00	TLM

Comments:

Results are reported on a wet weight basis.

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The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyn Review Date: 10/09/2009
James F. Galasyn, Ph.D., Chemistry Lab Manager

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sampling methodology used by the individual performing the sampling. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the environmental soundness, safety or health of a property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is sufficiently completed or after a thirty-day period, whichever period is greater. NEL liability extends only to the cost of the testing.

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08609
Project Number: OR13 ASCA
P.O. Number: 02212433
Date Collected: 10/09/2009 03:20 PM
Date Received: 10/09/2009 07:00 PM
Date Reported: 10/10/2009

Sample Matrix: W-WATER
Sample Description: CPS-LC 09-218
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	0.02		mg/L	0.01	EPA 200.7	10/09/2009 19:05	10/10/2009 10:18	JEY
Iron Total	0.77		mg/L	0.01	EPA 200.7	10/09/2009 19:05	10/10/2009 10:18	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/09/2009 19:15	10/10/2009 9:00	MJC
Ammonia Nitrogen	520		mg/L	0.72	SM 4500NH3 B & C	10/10/2009 5:10	10/10/2009 7:45	MJG
Total Organic Carbon	7.6		mg/L	1	EPA 415.1	10/09/2009 19:01	10/09/2009 19:01	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/09/2009 19:00	10/09/2009 22:00	TLM

Comments:

Results are reported on a wet weight basis.

This report shall not be reproduced, except in full, without written permission from Northeast Laboratory Services.

The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By

James F. Galasyn

Review Date:

10/10/2009

James F. Galasyn, Ph.D., Chemistry Lab Manager

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sampling methodology used by the individual performing the sampling. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the environmental soundness, safety or health of a property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is sufficiently completed or after a thirty-day period, whichever period is greater. NEL liability extends only to the cost of the testing.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	027A
PERMIT NUMBER	DISCHARGE NUMBER

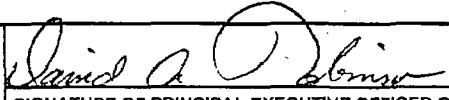
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 10/01/2009	TO 10/31/2009

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	71,500	142,914	gal/d.	*****	*****	*****	*****	0	D4/DS	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO/AVG	Req: Mon DAILY MX	gal/d	*****	*****	*****	*****	*****	Daily	ESTIMATE
pH	SAMPLE MEASUREMENT	*****	*****	*****	8.2	*****	8.5	SU	0	D4/DS	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU	*****	Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	D4/DS	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	1.5 INST MAX	mg/L	*****	Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d.	*****	*****	*****	*****	0	D4/DS	CA
34044 0 0 See Comments	PERMIT REQUIREMENT	Req: Mon MO/AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****	*****	Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President TYPED OR PRINTED			603 773-7496
	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NOVEMBER 2009 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



December 15, 2009

SBK-L-09255

NPDES Permit No. NH0020338

Ms. Joy Hilton
United States Environmental
Protection Agency, Region 1
5 Post Office Square-Suite 100 (OESO4-3)
Boston, MA 02109-3912

Seabrook Station
November 2009 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of November 2009. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Northeast Laboratory Services of Winslow, ME performed Metal Cleaning Waste analyses for Outfall 26A. Copies of the Outfall 026A analytical reports are enclosed. Seabrook Station Chemistry Department personnel performed the remaining required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 025B had no flow during the month of November, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 30 days in November. No visible oil sheen, foam or floating solids were noted during the month.

One continuous discharge and six batch discharges were made during the month of November from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Seabrook Station's thirteenth refueling outage began Oct. 01, 2009 and concluded Nov. 12, 2009. The refueling outage required many of the plant systems to be drained to the Circulating Water System (Outfall 001). Plant system drainage was sampled and accounted for in the appropriate outfall.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of November. No exceedences occurred.

Outfall 025A

One continuous discharge occurred during the month of November. No exceedences occurred.

Outfall 025C

Four batch discharges occurred during the month of November. No exceedences occurred.

Outfall 025D

Five batch discharges occurred during the month of November. No exceedences occurred.

Outfall 026A

Two batch discharges occurred during the month of November. No exceedences occurred. NextEra Energy Seabrook requested and received a clarification letter from the EPA (ref: EPA letter dated August 6, 2009 from David Webster to Michael O'Keefe) regarding the manner in which compliance with certain effluent limitations for Outfall 026 would be ascertained. The clarification pertained to the daily maximum concentration limit for iron and copper and the pH limit for the processed wastewater.

The EPA clarification letter authorized the discharge of iron and copper from this outfall pursuant to a daily mass limit of 3.75 lbs for each metal. The spreadsheet provided in the enclosure to this letter includes calculations confirming that the 3.75 lb. daily mass limit was complied with for each metal. The Outfall 026 discharge concentration limit for the metals, 1 mg/L, was also complied with although our initial estimates for the iron and copper concentrations indicated that the permit limit may be exceed. The Reverse Osmosis treatment process yielded greater metal removal than estimated and compliance was achieved. The additional information requested by EPA clarification letter is provided in the enclosed spreadsheet. The dilution water flow rate assumption is 387,000 GPM and is determined by pump curves.

Additionally the EPA clarification letter indicated that the chemical cleaning wastewater may be discharged at a pH greater than allowed for the internal Outfall 026 (6.0 – 9.0 s.u.) and so long as the pH at outfall 001 is maintained between the water quality based range of 6.5 – 8.0 s.u. the NPDES Permit pH limits would be complied with. Based on the EPA clarification the DMR for Outfall 026 specifies a maximum pH of 10.9 s.u. with no permit exceedence. The measured pH at Outfall 001 during the two discharges is provided on the enclosed spreadsheet.


Outfall 027A

Seven discharges were made from the Cooling Tower to support maintenance activities during the month of November. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-09255

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY	TO	MM/DD/YYYY
11/01/2009		11/30/2009

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	70	82	deg F	0	24/01	DA.
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.8	*****	7.9	SU	0	01/07	GR.
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	(NO DI) (C)			
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	(NO DI) (C)			
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.00	0.13	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	520	557	Mgal/d.	*****	*****	*****	*****	0	24/01	ES.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d.	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	20	34	deg F	0	24/01	DA.
61576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE	
Gene St. Pierre / Site Vice President TYPED OR PRINTED				SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM 11/01/2009	TO	11/30/2009	

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI		C			
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Gene St. Pierre Site Vice President TYPED OR PRINTED		<i>Gene St. Pierre</i>	603-773-7496	12/15/2009
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-10-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	003A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 11/01/2009	TO 11/30/2009

BACK-FLUSHING OPERATION
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit 00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****	*****			
	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Gene St. Pierre / Site Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Robinson</i>	TELEPHONE	DATE
			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	022A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 11/01/2009	TO 11/30/2009

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	22721	33321	gal/d.	*****	*****	*****	*****	0	01/07	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400# DAILY MX	gal/d.	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.5	1.1	mg/L	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Gene St. Pierre</i>	TELEPHONE	DATE
			603 773-7496	12/15/2009
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	023A
PERMIT NUMBER	DISCHARGE NUMBER

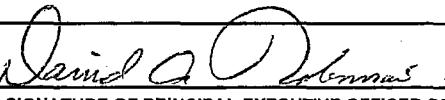
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
FROM 11/01/2009	TO	11/30/2009

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	1675	5140	gal/d	*****	*****	*****	*****	0	01/07	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.5	6.8	mg/L	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
			603 773-7496	12/15/2009	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	024A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
FROM 11/01/2009	TO	11/30/2009

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	553	1370	gal/d.	*****	*****	*****	*****	0	01/07	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.2	1.8	mg/L	0	07/WD	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Gene St. Pierre</i>	TELEPHONE	DATE	
			603 773-7496	12/15/2009	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	025A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	11/01/2009	TO	11/30/2009

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	8742	51401	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO:AVG	425000 DAILY:MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO:AVG	100 DAILY:MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Gene St Pierre</i>	TELEPHONE	DATE
<i>Gene St Pierre / Site Vice President</i> TYPED OR PRINTED			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB NO. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 11/01/2009 TO 11/30/2009

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****	*****			
	PERMIT REQUIREMENT	Reg. Mon. MO AVG	210000 DAILY:MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY:MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Gene St Pierre</i>	TELEPHONE	DATE	
			603 773-7496	12/15/2009	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	025C
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY	TO	MM/DD/YYYY
FROM 11/01/2009		11/30/2009

WASTE HOLDUP SUMP
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	15801	16728	gal/d.	*****	*****	*****	*****	0	01/BA	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO:AVG	60000 DAILY:MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	15.6	32.3	mg/L	0	01/BA	GR.
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO:AVG	100 DAILY:MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR.
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO:AVG	20 DAILY:MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Gene St. Pierre / Site Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David O. [Signature]</i>	TELEPHONE	DATE
			603 773-7496	12/15/2009
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

025D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM 11/01/2009 TO 11/30/2009

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17433	18531	gal/d	*****	*****	*****	*****	0	01/BA	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO:AVG	100000 DAILY:MX	gal/d	*****	*****	*****	*****		Once:Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO:AVG	100 DAILY:MX	mg/L		Once:Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO:AVG	20 DAILY:MX	mg/L		Once:Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Gene St. Pierre</i>	TELEPHONE	DATE
			603 773-7496	12/15/2009
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 10-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

026A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 11/01/2009	TO 11/30/2009

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	17510	24592	gal/d.	*****	*****	*****	*****	0	01/BA	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d.	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	10.2	*****	10.9	SU.	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu) 01042 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.000	0.014	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe) 01045 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.58	0.71	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering this information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE 603 773-7496	DATE 12/15/2009

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

026A

NPDES - Metal Cleaning Effluents

DAY Description FLOW, gpd Time, min 001A pH TSS, ppm O & G, ppm Iron, ppm Iron, Lb/da 001 Iron, ppm Cu, ppm Cu, Lb/da 001 Cu, ppm

1-Nov-09												
2-Nov-09												
3-Nov-09												
4-Nov-09												
5-Nov-09												
6-Nov-09												
7-Nov-09												
8-Nov-09												
9-Nov-09												
10-Nov-09												
11-Nov-09	CPS-LC	10428	46	7.9	0.0	0.0	0.71	0.06	9.56E-04	0.000	0.000	0.00E+00
12-Nov-09	WTNG	24592	208	7.9	0.0	0.0	0.44	0.09	3.09E-04	0.014	0.003	9.84E-06
13-Nov-09												
14-Nov-09												
15-Nov-09												

MIN				7.9								
AVE		17510.0			0.0	0.00	0.58			0.01		
MAX		24592.0		7.9	0.0	0.00	0.71			0.01		



P.O. Box 788
Waterville, Maine 04903-0788

227 China Road
Winslow, Maine 04901

Administrative Offices
Phone: 207-873-7711
Fax: 207-873-7022

Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08868
Project Number: OR-13 ASCA
P.O. Number: 02212433
Date Collected: 10/15/2009 01:10 PM
Date Received: 10/16/2009 03:15 PM
Date Reported: 10/19/2009

Sample Matrix: W-WATER
Sample Description: CPS-LC 09-228
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	<0.01		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:21	JEY
Iron Total	0.71		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:21	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/16/2009 15:30	10/16/2009 19:45	MJC
Ammonia Nitrogen	330		mg/L	0.72	SM 4500NH3 B & C	10/16/2009 10:00	10/16/2009 18:00	PL
Total Organic Carbon	5.0		mg/L	1	EPA 415.1	10/17/2009 9:56	10/17/2009 9:56	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/18/2009 10:00	10/18/2009 16:15	TLM

Comments:

Results are reported on a wet weight basis.

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The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyn Review Date: 10/19/2009
James F. Galasyn, Ph.D., Chemistry Lab Manager

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Winslow, Maine 04901

Administrative Offices
Phone: 207-873-7711
Fax: 207-873-7022

Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08869
Project Number: OR-13 ASCA
P.O. Number: 02212433
Date Collected: 10/15/2009 01:10 PM
Date Received: 10/16/2009 03:15 PM
Date Reported: 10/19/2009

Sample Matrix: W-WATER

Sample Description: CPS-LC 09-228 DUP

Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	<0.01		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:31	JEY
Iron Total	0.77		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:31	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/16/2009 15:30	10/16/2009 19:45	MJC
Ammonia Nitrogen	320		mg/L	0.72	SM 4500NH3 B & C	10/16/2009 10:00	10/16/2009 18:00	PL
Total Organic Carbon	5.1		mg/L	1	EPA 415.1	10/17/2009 10:19	10/17/2009 10:19	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/18/2009 10:00	10/18/2009 16:15	TLM

Comments:

Results are reported on a wet weight basis.

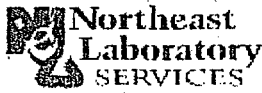
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The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyn
James F. Galasyn, Ph.D., Chemistry Lab Manager

Review Date: 10/19/2009

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Winslow, Maine 04901

Administrative Offices
Phone: 207-873-7711
Fax: 207-873-7022

Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08871
Project Number: OR-13 ASCA
P.O. Number: 02212433
Date Collected: 10/15/2009 08:14 PM
Date Received: 10/16/2009 03:15 PM
Date Reported: 10/19/2009

Sample Matrix: W-WATER
Sample Description: WTNG 09-231
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Copper Total	0.014		mg/L	0.01	EPA 200.7	10/17/2009	10:30	10/18/2009	13:37	JEY
Iron Total	0.44		mg/L	0.01	EPA 200.7	10/17/2009	10:30	10/18/2009	13:37	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/16/2009	15:30	10/16/2009	19:45	MJC
Ammonia Nitrogen	540		mg/L	0.72	SM 4500NH3 B & C	10/16/2009	10:00	10/16/2009	18:00	PL
Total Organic Carbon	5.7		mg/L	1	EPA 415.1	10/17/2009	10:36	10/17/2009	10:36	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/18/2009	10:00	10/18/2009	16:15	TLM

Comments:

Results are reported on a wet weight basis.

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The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyn
James F. Galasyn, Ph.D., Chemistry Lab Manager

Review Date: 10/19/2009

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Winslow, Maine 04901

Administrative Offices
Phone: 207-873-7711
Fax: 207-873-7022

Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

ANALYSIS REPORT

Attention: BILLY COX
NEXT ERA ENERGY SEABROOK LLC
SEABROOK STATION
PO BOX 300
SEABROOK NH 03874

Lab ID Number: AL08872
Project Number: OR-13 ASCA
P.O. Number: 02212433
Date Collected: 10/15/2009 08:14 PM
Date Received: 10/16/2009 03:15 PM
Date Reported: 10/19/2009

Sample Matrix: W-WATER

Sample Description: WTNG 09-231 DUP

Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time	Analysis Date/Time	Analyst
Copper Total	0.014		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:41	JEY
Iron Total	0.48		mg/L	0.01	EPA 200.7	10/17/2009 10:30	10/18/2009 13:41	JEY
Oil and Grease	<1.0		mg/L	1.0	EPA 1664	10/16/2009 15:30	10/16/2009 19:45	MJC
Total Organic Carbon	5.6		mg/L	1	EPA 415.1	10/17/2009 10:54	10/17/2009 10:54	JFG
Total Suspended Solids-Std. Methods	<1.0		mg/L	1.0	SM 2540 D	10/18/2009 10:00	10/18/2009 16:15	TLM

Comments:

Results are reported on a wet weight basis.

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The results in this report relate only to the samples listed on this report and the test methods in this report meet all of the requirements of the NELAC standard unless otherwise noted above.

Reviewed By James F. Galasyu
James F. Galasyu, Ph.D., Chemistry Lab Manager

Review Date: 10/19/2009

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sampling methodology used by the individual performing the sampling. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the environmental soundness, safety or health of a property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is sufficiently completed or after a thirty-day period, whichever period is greater. NEL liability extends only to the cost of the testing.

NATIONAL POLLUTANT DISCHARGE REGISTRATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

027A
DISCHARGE NUMBER

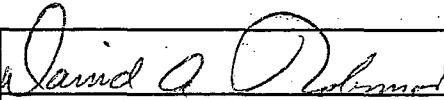
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 11/01/2009	TO 11/30/2009

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	118092	248214	gal/d.	*****	*****	*****	*****	0	DL/DS	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	8.2	*****	8.5	su	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	su		Daily	GRAB
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	.5 INST. MAX	mg/L		Daily	GRAB
Oxidants, total residual 34044 0 0 See Comments	SAMPLE MEASUREMENT	0.0	0.0	lb/d.	*****	*****	*****	*****	0	DL/DS	CA.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	12/15/2009
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

Regulatory Correspondence Review & Approval Record

LETTER REVIEW IS EXPECTED TO BE COMPLETE WITHIN 2 WORKING DAYS OF RECEIPT BY THE REVIEWER

Title: November 2009 Discharge Monitoring Reports

Agency: EPA and NH DES

Letter Number: SBK-L-09255 **Due Date:** 12/15/09

Licensing Lead: Legendre **Phone No.:** _____

Manager Responsible for Technical Accuracy: D Robinson **Signature:** [Signature] **Date:** _____

Review Due Date: _____

Reviewer	Signature	Date	Reviewer	Signature	Date
<input type="checkbox"/> Licensing Manager	_____	_____	<input type="checkbox"/> Reg Programs Manager	_____	_____
<input type="checkbox"/> Operations	_____	_____	<input type="checkbox"/> Legal	_____	_____
<input type="checkbox"/> Engineering	_____	_____	<input type="checkbox"/> Training	_____	_____
<input type="checkbox"/> _____	<u>[Signature]</u>	<u>12/15/09</u>	<input type="checkbox"/> PGM	_____	_____
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/> Asst PGM	_____	_____
<input type="checkbox"/> Maintenance	_____	_____	<input type="checkbox"/> Site VP	_____	_____
<input type="checkbox"/> Corporate	_____	_____	<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> SORC Meeting No: _____	SORC Signature: _____				

CLONED LETTER: Yes No
 (Cloned letters require a peer review)

Peer Review: _____

Validation Review Yes No

By: _____
Date: _____
Method: _____

Does the letter contain commitments? Yes No
Tracking CR Initiated **CR Number** _____
Commitment Database Updated?

Confidential, Proprietary, or Safeguards letters are properly stamped or identified.

Admin Review: Shaly Sweeney | 12/15/09

- Letter Format Correct
- Signature and Date on Original Letter
- Letter Distribution Correct
- Oath or Affirmation Signature / Notarized on Original
- Date of letter & Notary are consistent

Mailed to Agency (By/Date):

US Mail _____ **UPS** _____ **Registered** _____ **Other** _____



January 14, 2010

SBK-L-10011

NPDES Permit No. NH0020338

Water Technical Unit
United States Environmental Protection Agency
OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
December 2009 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of December 2009. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of December, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in December. No visible oil sheen, foam or floating solids were noted during the month

One continuous discharge and one batch discharge were made during the month of December from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Seabrook Station experienced a forced outage beginning December 06, 2009 and ending December 24, 2009. The outage required many of the plant systems to be drained to the Circulating Water System (Outfall 001). Plant system drainage was sampled and accounted for in the appropriate outfall.

Outfall 001B

The fourth quarter Whole Effluent Toxicity (WET) tests were performed in November/December 2009. No toxicity was observed in the effluent bioassays. The complete WET test report prepared by EnviroSystems, Inc. is provided in Enclosure 2.

Sampling for the fourth quarter WET testing was performed under the following discharge scenarios:

- Day 1 (November 30 – December 1, 2009) included discharges from Outfalls 025A, 025C & 025D,
- Day 2 (December 2 – 3, 2009) included discharges from Outfalls 025A & 025C,
- Day 3 (December 4 – 5, 2009) included discharges from Outfalls 025C & 025D.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of December. No exceedences occurred.

Outfall 025A

Four continuous discharges occurred during the month of December. No exceedences occurred.

Outfall 025C

Four batch discharges occurred during the month of December. No exceedences occurred.

Outfall 025D

Seven batch discharges occurred during the month of December. No exceedences occurred.

Outfall 027A

Four discharges were made from the Cooling Tower to support maintenance activities during the month of December. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE 1 to SBK-L-10011

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 12/01/2009	TO 12/31/2009

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit 00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	62	79	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req: Mon. MO AV. MN	Req: Mon. DAILY MX	deg F		Continuous	RCORDR
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	7.8	8.0	SU.	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	6.5 MINIMUM	8 MAXIMUM	SU.		Weekly	GRAB
Biocides 01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DET C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	3	3	mg/L		When Discharging	GRAB
Biocides 01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DET C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	4.5	4.5	mg/L		When Discharging	CALC'D
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.00	0.09	mg/L	0	01/01	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant 50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	570	660	Mgal/d	*****	*****	*****	*****	0	24/01	ES
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge 61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	17	39	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	4 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE 603 773-7496	DATE 01/14/2010	
			AREA Code	NUMBER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Gene St. Pierre</i>				

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY	TO	MM/DD/YYYY
FROM 12/01/2009		12/31/2009

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI	C				
61576 0 0 See Comments	PERMIT REQUIREMENT					45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7496	01/14/2010
TYPED OR PRINTED		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 10-0004
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001B
PERMIT NUMBER	DISCHARGE NUMBER

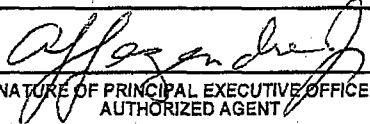
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM 10/01/2009	TO	12/31/2009	

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
LC50 Static 48Hr Acute Mysid. Bahía	SAMPLE MEASUREMENT	*****	*****	*****	>100	*****	*****	%	0	01/90	COMP24
TAA3E 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
LC50 Static 48Hr Acute Menidia	SAMPLE MEASUREMENT	*****	*****	*****	>100	*****	*****	%	0	01/90	COMP24
TAA6B 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Static 1Hr Fert. Chronic Arbacia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBH3A 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Statre 7Day Chronic Menidia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBP6B 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE
			603 773-7773	01/14/2010	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PLEASE REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH ADDITIONAL PAGE FOR COMMENTS OR EXPLANATION OF VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 12/01/2009 TO 12/31/2009

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon MO/AVG	120 DAILY/MX	(deg. F)		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO/AVG	500000 DAILY/MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE REGULATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	022A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM 12/01/2009	TO	12/31/2009	

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	18,987	27,394	gal/d.	*****	*****	*****	*****	0	01/07	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****	0	Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.8	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L	0	Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L	0	Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>David A. Robinson</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 4040-0004
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 12/01/2009 TO 12/31/2009

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	5775	15156	gal/d	*****	*****	*****	*****	0	01/07	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****	*****	Monthly	EST/MA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.3	9.6	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L	*****	Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L	*****	Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>David A. Robinson</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

024A
DISCHARGE NUMBER


DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 12/01/2009 TO 12/31/2009

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	482	1393	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.3	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	01/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	025A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
FROM 12/01/2009	TO	12/31/2009

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	75,461	156,367	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****	0	Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.8	25.6	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L	0	Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	10/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L	0	Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS, PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	025B
PERMIT NUMBER	DISCHARGE NUMBER

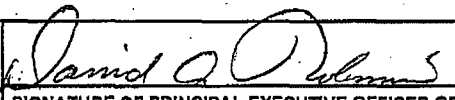
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 12/01/2009	TO 12/31/2009

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	63,744	93,178	gal/d.	*****	*****	*****	*****	0	99/99	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	02/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Gene St. Pierre / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	01/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	12/01/2009	TO	12/31/2009

WASTE HOLDUP SUMP
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	18,314	19,244	gal/d.	*****	*****	*****	*****	0	01/BA	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req Mon MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.7	5.9	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7478
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	025D
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM: 12/01/2009	TO: 12/31/2009

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	17,824	17,832	gal/d	*****	*****	*****	*****	0	01/BA	ES
	PERMIT REQUIREMENT	Req. Mon. MOAVG	100000 DAILY/MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.5	1.2	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MOAVG	100 DAILY/MX	mg/L		Once Per Batch	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	5 MOAVG	20 DAILY/MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

026A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
12/01/2009	FROM	12/31/2009	TO

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****					
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	9 MAXIMUM	SU			Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L			Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L			Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	MO AVG	DAILY MX	mg/L			Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	MO AVG	DAILY MX	mg/L			Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Gene St. Pierre / Site Vice President		<i>Gene St. Pierre</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: FPL ENERGY SEABROOK LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: FPL ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

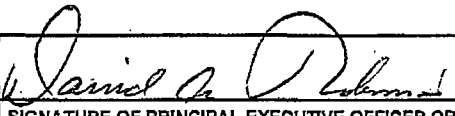
MONITORING PERIOD
MM/DD/YYYY
FROM 12/01/2009 TO 12/31/2009

COOLING TOWER BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	82420	179277	gal/d.	*****	*****	*****	*****	0	DL/DS	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	8.3	*****	8.4	SU	0	DL/DS	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	MINIMUM	*****	MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	INST. MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA.
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.8 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Gene St. Pierre / Site Vice President			603 773-7496	01/14/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

ENCLOSURE 2 to SBK-L-10011

**TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
December 2009**

**FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338**

Prepared For

**FPL Energy Seabrook Station
Route 1
P.O. Box 300
Seabrook, New Hampshire 03874**

Purchase Order Number: 02196759

By

**EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842**

December 2009
Reference Number SeabrookStation19224-09-12

STUDY NUMBER 19224

EXECUTIVE SUMMARY

The following summarizes the results of acute and chronic exposure bioassays performed during December 2009 to support the NPDES biomonitoring requirements of FPL Energy Seabrook Station, Seabrook, New Hampshire. Acute and chronic definitive assays were completed using the marine species, *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*.

A. bahia were ≤ 5 days old at the start of the test. *M. beryllina* were 13 days old at the start of the test. *A. punctulata* were from cultures maintained by ESI. Original stock was obtained from commercial supply. Dilution water was receiving water collected off shore by Normandeau Associates, Bedford, New Hampshire.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the chronic and modified acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Exposure Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Americamysis bahia</i>	48 Hours	>100%	100%	Report	NA	Yes
<i>Menidia beryllina</i>	48 Hours	>100%	100%	Report	NA	Yes

Chronic Exposure Toxicity Evaluation

Species	Exposure	C-NOEC	LOEC	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Menidia beryllina</i>	7 Days	100%	>100%	Report	NA	Yes*
<i>Arbacia punctulata</i>	60 Minutes	100%**	>100%	Report	NA	Yes

COMMENTS:

* The *M. beryllina* assay did not meet the suggested statistical variability limit (MSDp) of 28%, although this limit is not a requirement at this time.

** The statistical analysis for *A. punctulata* fertilization determined the 50% test concentration was significantly less than the receiving water diluent control, however according to USEPA Region I policy it is not considered to be significantly less if fertilization is >70%. In addition, review of the urchin fertilization data documented a non-standard dose response curve and computation of the LC-10 resulted in a value of >100%. Based on this finding, the C-NOEC value most representative of the effluent is 100%.

**TOXICOLOGICAL EVALUATION
OF TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
December 2009**

**FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338**

1.0 INTRODUCTION

This report presents the results of acute and chronic toxicity tests completed on a series of composite effluent samples collected from FPL Energy Seabrook Station, Seabrook, New Hampshire. Testing was based on programs and protocols developed by the US EPA (2002). A 48 hour static acute toxicity test was conducted using the mysid shrimp, *Americamysis bahia*, a 7 day modified acute and chronic toxicity test was conducted with the inland silverside, *M. beryllina*, and a 60 minute chronic fertilization assay was conducted with the purple sea urchin, *A. punctulata*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test organisms are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test organisms. Samples with high LC-50 values are less likely to cause significant environmental impacts. The no-effect concentration is also determined to provide information about the level of effluent which would have minimal acute effects in the environment. This Acute No Observed Effect Concentration (A-NOEC) is defined as the highest tested effluent concentration which causes no significant mortality. Chronic tests evaluate toxicity based on sublethal effects. Fertilization of *Arbacia punctulata* eggs or growth (weight) of *Menidia beryllina* are measured to determine effluent concentrations that have a significant impact on the organisms. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest concentration that had an effect (C-LOEC) and the highest concentration where no effect was observed (C-NOEC). *A. punctulata* fertilization data are also evaluated to determine the effluent concentration where a reduction in fertilization rates occurs. This is known as the Inhibition Concentration (IC).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

When necessary, *A. bahia* and *M. beryllina* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

Male and female *A. punctulata* are maintained in separate chambers as recommended by protocol (EPA 2002).

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. When necessary, effluent used in the *A. bahia* and *M. beryllina* assays was salinity adjusted to 25±2 ppt and the effluent used in the *A. punctulata* assay was salinity adjusted to 30±2 ppt using artificial sea salts according to protocol (EPA 2002). Effluent and receiving water samples that were received at or above a salinity of 25±2 ppt did not require salinity adjustment (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1

and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in effluent and diluent samples. Samples containing ≥ 0.02 mg/L TRC were treated with sodium thiosulfate (EPA 2002).

2.4 Bioassays

Test concentrations for the assays were 100%, 50%, 25%, 12.5%, and 6.25% effluent.

2.4.1 *Americamysis bahia* Acute Exposure Bioassay

The 48 hour static acute assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Test chambers were 250 mL glass beakers with 200 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Survival and dissolved oxygen were recorded daily in all replicates. Temperature, pH, and salinity were measured in one replicate of each test treatment daily.

2.4.2 *Menidia beryllina* Chronic Exposure Bioassay

The 7 day static renewal chronic exposure assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Fish were maintained in 600 mL beakers containing 500 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Prior to daily renewals, survival and dissolved oxygen in all replicates were recorded and pH, salinity and temperature were measured in one replicate of each test treatment. Dissolved oxygen, salinity, pH, and temperature were measured in one replicate of each new test treatment. Survival data was analyzed to assess acute toxicity after the initial 48 hours of exposure.

During the test, fish were fed ≤ 24 hour old *Artemia* nauplii twice a day. On Day 7 of the assay surviving fish were removed from test solutions, rinsed to remove any surface detritus and salts, and tranquilized using Finquel® brand tricaine methanesulfonate. Fish were placed on tared containers and dried for 24 hours at 104°C to obtain dry weight to the nearest 0.01 mg. To obtain final dry weight/fish used for statistical comparisons, the net dry weight was divided by the number of organisms introduced at the initiation of the assay.

2.4.3 *Arbacia punctulata* Chronic Fertilization Bioassay

Test chambers were 20 mL glass vials with 5 mL of test solution in each of 4 replicates. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted (see data appendix for final counts) and exposed to effluent solutions for 60 minutes. Eggs were introduced to sperm/effluent solutions and exposed for 20 minutes prior to the addition of preservative. Aliquots of preserved solution were counted to determine fertilized and unfertilized eggs.

2.5 Data Analysis

When necessary, statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. If survival in the highest test concentration is $>50\%$, the LC-50 is obtained by direct observation of the raw data. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are conducted on a regular basis for each test species. These results, Table 2, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS AND DISCUSSION

LC-50 and A-NOEC values from the *A. bahia* acute exposure assays are presented in Table 3. Data

from the *A. punctulata* fertilization assay are summarized in Table 4. Results of the chronic exposure assay completed using *M. beryllina* are provided in Table 5. A summary of water quality data collected during the assays is presented in Table 6. US EPA Attachment F toxicity test summary forms are included after the tables. Support data, including copies of laboratory bench sheets, can be found in Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria require $\geq 90\%$ survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate and the MSDp for fertilization to be $< 25\%$ for *Arbacia punctulata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

3.3 *Menidia beryllina* Chronic Exposure Bioassay

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.500 mg/fish based on Day 7 survival, and the MSDp for biomass to be $< 28\%$ for *Menidia beryllina* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 5 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls*. US EPA Region I Offices, Boston, Massachusetts.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms*. Third Edition. EPA-821-R-02-014.

**TABLE 1. Summary of Sample Collection Information.
FPL Energy Seabrook Station Effluent Evaluation. December 2009.**

Sample Description	Type	Collection		Receipt		Arrival Temp °C
		Date	Time	Date	Time	
EFFLUENT						
Start	Comp	11/30-12/01/09	0900-0600	12/01/09	0845	5
1st Renewal	Comp	12/02-03/09	0910-0600	12/03/09	0845	5
2nd Renewal	Comp	12/04-05/09	0900-0600	12/05/09	1115	4
RECEIVING WATER						
Start	Grab	11/30/09	1300	11/30/09	1608	5
1st Renewal	Grab	12/02/09	0950	12/03/09	1100	5
2nd Renewal	Grab	12/04/09	0821	12/04/09	0951	5

**TABLE 2. Summary of Reference Toxicant Data.
FPL Energy Seabrook Station Effluent Evaluation. December 2009.**

Date	Endpoint	Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
<i>A. bahia</i>					
12/02/09	Survival	LC-50 - 48 Hr	22.9	21.5	17.4 - 25.6 SDS (mg/L)
<i>M. beryllina</i>					
12/04/09	Survival	LC-50 - 48 Hr	8.2	7.6	4.6 - 10.5 SDS (mg/L)
10/27/09	Survival	C-NOEC	5.0	5.0	2.5 - 10.0 SDS (mg/L)
10/27/09	Growth	C-NOEC	5.0	5.0	2.5 - 10.0 SDS (mg/L)
<i>A. punctulata</i>					
12/03/09	Fertilization	C-NOEC	10.0	5.0	1.0 - 10.0 Copper (µg/L)
12/03/09	Fertilization	IC-25	43.5	15.0	0.0 - 46.9 Copper (µg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

**TABLE 3. Summary of Acute Evaluation Results: *A. bahia*.
FPL Energy Seabrook Station Effluent Evaluation. December 2009.**

Species	Exposure	PERCENT SURVIVAL						
		Lab	RW	6.25%	12.5%	25%	50%	100%
<i>A. bahia</i>	48 hours	100%	97.5%	97.5%	100%	100%	90%	97.5%

Species	Exposure	LC-50 COMPUTATION TECHNIQUE				A-NOEC
		Spearman-Kärber	Linear Regression	Nonlinear Regression		
<i>A. bahia</i>	48 Hours	NC	NC	NC		100%

COMMENTS:

RW = Receiving Water used as diluent.

**TABLE 4. Summary of Chronic Bioassay Results: *A. punctulata*.
FPL Energy Seabrook Station Effluent Evaluation. December 2009.**

	TREATMENTS						
	Lab	RW	6.25%	12.5%	25%	50%	100%
Mean % Fertilization	95.5%	94.3%	93.3%	93.2%	93.1%	88.6%	94.0%
Significantly < Diluent	-	-	No	No	No	No	No

Chronic No Observed Effect Concentration 100%*
 Lowest Observed Effect Concentration >100%
 IC-10: >100%
 MSDp: 4.3%

COMMENTS:

RW = Receiving Water used as diluent.

* The statistical analysis for *A. punctulata* fertilization determined the 50% test concentration was significantly less than the receiving water diluent control, however according to USEPA Region I policy it is not considered to be significantly less if fertilization is >70%. In addition, review of the urchin fertilization data documented a non-standard dose response curve and computation of the IC-10 resulted in a value of >100%. Based on this finding, the C-NOEC value most representative of the effluent is 100%.

TABLE 5. Summary of Chronic and Modified Acute Bioassay Results: *M. beryllina*. FPL Energy Seabrook Station Effluent Evaluation. December 2009.

Effluent Conc.	Mean Percent Survival		Mean Biomass (mg/fish)	Is There a Significant Difference Based on	
	Day 2	Day 7		Survival (%)	Growth (Biomass)
LAB	100.0%	87.5%	1.65	-	-
RW	100.0%	90.0%	1.91	-	-
6.25%	100.0%	87.5%	1.68	No	No
12.5%	100.0%	87.5%	2.18	No	No
25.0%	100.0%	95.0%	2.00	No	No
50.0%	100.0%	95.0%	1.83	No	No
100.0%	100.0%	80.0%	1.38	No	No

LC-50 = >100%

MSDp = 32.4%*

NOEC = 100.0% NOEC = 100.0%

COMMENTS:

RW = Receiving Water used as diluent.

Difference between diluent and treatment means considered to be significant when $p < 0.05$

Additional bioassay data and statistical analyses are provided in Appendix A.

* The *M. beryllina* assay did not meet the suggested statistical variability limit (MSDp) of 28%, although this limit is not a requirement at this time.

TABLE 6. Initial Water Quality Data Summary. FPL Energy Seabrook Station Effluent Evaluation. December 2009

PARAMETER	UNITS	EFFLUENT	RECEIVING WATER
Salinity	ppt	31.6	31.3
pH	SU	7.48	7.80
Total Residual Chlorine	mg/L	<0.02	<0.02
Total Solids	mg/L	32000	35000
Total Suspended Solids	mg/L	68	38
Ammonia	mg/L as N	<0.1	<0.1
Total Organic Carbon	mg/L	<0.4	<0.4
Aluminum, total	mg/L	0.05	-
Cadmium, total	mg/L	<0.0005	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	0.002	-
Lead, total	mg/L	<0.0012	-
Nickel, total	mg/L	0.007	-
Zinc, total	mg/L	<0.002	-

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 12/03/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 12/05/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input checked="" type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
	<input checked="" type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 12/02-03/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 12/02/09 LC-50: 22.9 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: 97.5 %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50 >100% %

Upper Limit: - %

Lower Limit: - %

Method: Direct Observation

A-NOEC: 100 %

C-NOEC: - %

C-LOEC: - %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 12/01/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 12/08/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input checked="" type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 11/30/09 12/02-03/09 12/04-05/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 12/04/09 LC-50: 8.2 mg/L Sodium Dodecyl Sulfate
10/27/09 NOEC: 5.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: 90 % Mean Dry Weight/fish 2.12 mg
 MSDp: 32.4 %

LIMITS

LC-50: Report %
 A-NOEC: - %
 C-NOEC: Report %
 IC- - %

RESULTS

LC-50 >100 %
 Upper Limit: - %
 Lower Limit: - %
 Method: Direct Observation
 A-NOEC: 100 %
 C-NOEC: 100 %
 C-LOEC: >100 %
 IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 12/03/09
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 12/03/09

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input checked="" type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input checked="" type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 12/02-03/09

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 12/03/09 NOEC: 10.0 mg/L Copper
12/03/09 IC-25 43.5 mg/L Copper

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Proportion Fertilized: <u>94.3</u> %	MSDp: <u>4.3</u> %
LIMITS	RESULTS
LC-50: <u>Report</u> %	LC-50: _____ %
A-NOEC: <u>-</u> %	Upper Limit: _____ %
C-NOEC: <u>Report</u> %	Lower Limit: _____ %
IC- _____ %	Method: <u>NA</u>
	A-NOEC: _____ %
	C-NOEC: <u>100</u> %
	C-LOEC: <u>>100</u> %
	IC- <u>10</u> <u>>100</u> %

APPENDIX A

DATA SHEETS AND STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Biomonitoring Testing	1
<i>A. bahia</i> Acute Bioassay Daily Observation Bench Sheets	2
<i>A. bahia</i> Survival and Growth Statistics	0
<i>A. bahia</i> Organism Culture Data	1
<i>M. beryllina</i> - 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>M. beryllina</i> Larval Fish Dry Weight Summary Sheet	1
<i>M. beryllina</i> Survival and Growth Statistics	6
<i>M. beryllina</i> Organism Culture Data	1
<i>A. punctulata</i> Fertilization Water Quality and Sperm Dilutions	1
<i>A. punctulata</i> Egg Count Data Sheet	1
<i>A. punctulata</i> Fertilization Statistics	4
Water Quality Bench Sheets	3
Dilution Preparation Bench Sheets and Instrument Use Logs	5
Analytical Chemistry Support Data Summary Report	1
Sample Receipt Record - Effluent and Diluent Samples	2
Chain of Custody Record	6
Total Appendix Pages	36

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i>	EPA-821-R-02-012
<i>Pimephales promelas</i>	EPA-821-R-02-012
<i>Americamysis bahia</i>	EPA-821-R-02-012
<i>Menidia beryllina</i> , <i>Cyprinodon variegatus</i>	EPA-821-R-02-012
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013, 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013, 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-013, 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-013, 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-013, 1008.0
<i>Champia parvula</i>	EPA-821-R-02-013, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20 th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20 th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20 th Edition - Method 5310C
Specific Conductance	Standard Methods 20 th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20 th Edition - Method 4500NH3G
pH	Standard Methods 20 th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20 th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20 th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20 th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20 th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19224		"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES						
CLIENT: FPL Energy Seabrook Station	TEST ORGANISM: <i>A. bahia</i>	TRC	AMM	TS/TSS	TOC	T. Metals	pH	SALINITY
SAMPLE: EFFLUENT	ORGANISM SUPPLIER/BATCH/AGE: See Organism Culture Sheet	EFF	See M. bergllina Chem's					
DILUENT: Receiving Water		DIL						

SALINITY ADJUSTMENT RECORD : 1000 ML EFFLUENT + 0 G SEA SALTS = 100% ACTUAL PERCENTAGE

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
LAB	A	10	10	10	8.0	6.2	6.3	7.89	7.87	7.87	24	24	24	29	29	28
	B	10	10	10	8.1	6.2	6.2									
	C	10	10	10	8.2	6.2	6.2									
	D	10	10	10	8.2	6.2	6.1									
Rec' Water	A	10	10	10	8.1	6.3	6.2	7.75	7.92	7.92	24	24	24	31	32	32
	B	10	10	9	8.3	6.4	6.2									
	C	10	10	10	8.3	6.4	6.2									
	D	10	10	10	8.3	6.4	6.2									
6.25%	A	10	9	9	8.2	6.4	6.3	7.74	7.93	7.89	24	24	24	31	32	33
	B	10	10	10	8.1	6.5	6.3									
	C	10	10	10	8.0	6.5	6.3									
	D	10	10	10	8.0	6.5	6.4									
12.5%	A	10	10	10	8.0	6.5	6.4	7.73	7.92	7.91	24	24	24	31	32	33
	B	10	10	10	7.9	6.4	6.3									
	C	10	10	10	7.8	6.4	6.3									
	D	10	10	10	7.9	6.5	6.4									

DATE	12/3/09	12/4	12/5	12/3/09	12/4	12/5
TIME	1555	1110	1425	1340	1400	1410
INITIALS	VA	WM	WM	ST	LB	LB

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19224										"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES						
CLIENT: FPL Energy Seabrook Station					TEST ORGANISM: <i>A. bahia</i>											
SAMPLE: EFFLUENT										See Page 1						
DILUENT: Receiving Water																
CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
25%	A	10	10	10	7.7	6.5	6.4	7.71	7.93	7.95	24	24	24	31	32	33
	B	10	10	10	7.6	6.5	6.3									
	C	10	10	10	7.7	6.4	6.3									
	D	10	10	10	7.7	6.4	6.4									
50%	A	10	9	9	7.8	6.4	6.4	7.66	7.92	7.97	24	24	24	31	32	34
	B	10	10	10	7.8	6.4	6.4									
	C	10	9	9	7.8	6.5	6.5									
	D	10	10	8	7.9	6.5	6.5									
100%	A	10	10	9	7.9	6.6	6.5	7.53	7.91	7.99	24	24	24	32	32	34
	B	10	10	10	7.9	6.5	6.5									
	C	10	10	10	7.8	6.5	6.5									
	D	10	10	10	7.8	6.5	6.5									
DATE	12/18	12/19	12/5	12/3/09	12/4	12/5										
TIME	1555	1410	1425	1340	1400	1410										
INITIALS	JQ	WM	WM	SJ	LB	LB										

‡ - Temperature in vessel.



Aquatic Research Organisms

see B13
JR

DATA SHEET

I. Organism History

Species AMERICANYSIS bahia

Source: Lab reared Hatchery reared _____ Field collected _____

Hatch date 12-1-09 Receipt date _____

Lot number 120109MS Strain _____

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity 30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater _____ Saltwater Other _____

Recirculating Flow through _____ Static _____

DIET: Flake food Phytoplankton _____ Trout chow

Artemia Rotifers _____ YCT _____ Other EWING-STIRLING DIET

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: EST # of Organisms 920+

Carrier: _____ Date shipped 12-3-09

Biologist: Mark Overington

Menidia beryllina 7 DAY CHRONIC ASSAY

STUDY		CLIENT		SAMPLE						DILUENT				FISH/BATCH			
19224		FPL Energy Seabrook Station		EFFLUENT						RECEIVING WATER (RW)				See Organism Culture Sheet			
		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)							
CONC	REP	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7	
LAB	A	10	10	10	10	10	10	10	9	5.5	6.2	6.0	5.5	6.0	6.4	5.8	
	B	10	10	10	10	9	8	8	8	5.5	6.0	5.6	5.4	5.8	6.2	5.6	
	C	10	10	10	10	10	10	10	9	5.4	6.0	5.5	5.4	5.8	6.1	5.6	
	D	10	10	10	10	10	10	10	9	5.4	5.7	5.5	5.3	5.6	5.9	5.3	
RW	A	10	10	10	10	10	10	10	9	5.3	5.7	5.2	5.3	5.6	5.9	5.2	
	B	10	10	10	10	10	10	10	10	5.2	5.6	5.2	5.2	5.7	5.9	5.4	
	C	10	10	10	9	9	9	8	8	5.2	5.7	5.2	5.3	5.8	6.1	5.5	
	D	10	10	10	10	10	9	9	9	5.1	5.7	5.1	5.4	5.6	6.0	5.0	
6.25%	A	10	10	10	10	10	10	10	10	5.3	5.3	4.9	5.5	5.6	6.0	5.1	
	B	10	10	10	10	10	10	10	10	5.3	5.2	5.1	5.8	5.6	5.9	5.3	
	C	10	10	10	9	9	9	9	8	5.2	5.9	5.2	5.6	5.8	6.1	5.5	
	D	10	10	10	10	9	9	8	7	5.2	5.9	5.2	5.5	5.8	6.0	5.4	
12.5%	A	10	10	10	10	9	9	8	7	5.2	5.8	5.2	5.5	5.9	6.0	5.4	
	B	10	10	10	10	10	9	9	8	5.2	6.1	5.2	5.5	5.8	6.0	5.3	
	C	10	10	10	10	10	10	10	10	5.2	5.7	5.2	5.5	5.8	6.1	5.3	
	D	10	10	10	10	10	10	10	10	5.0	5.6	5.1	5.3	5.5	5.8	5.0	
25%	A	10	10	10	10	10	10	10	10	5.2	5.5	5.0	5.2	5.5	5.7	4.9	
	B	10	10	10	10	10	10	10	10	4.8	5.5	4.9	5.2	5.5	5.7	5.0	
	C	10	10	10	10	10	10	10	9	5.1	5.8	5.1	5.2	5.8	5.9	5.1	
	D	10	10	10	10	9	9	9	9	5.2	5.9	5.2	5.3	5.7	6.0	5.2	
50%	A	10	10	10	10	10	10	10	9	5.0	5.9	5.3	5.9	6.0	6.0	4.7	
	B	10	10	10	10	10	9	9	9	5.2	5.9	5.2	5.6	5.8	6.1	5.3	
	C	10	10	10	10	10	10	10	10	5.2	5.9	5.0	5.5	5.7	5.8	5.0	
	D	10	10	10	10	10	10	10	10	5.0	5.8	5.1	5.4	5.5	5.8	5.0	
100%	A	10	10	10	10	10	9	8	8	5.4	5.8	5.3	5.7	5.9	6.0	5.1	
	B	10	10	10	10	10	9	9	7	5.4	6.1	5.4	5.7	6.0	6.1	5.4	
	C	10	10	10	10	10	10	9	9	5.3	6.0	5.3	5.6	6.0	6.1	5.3	
	D	10	10	10	10	8	8	8	8	5.3	6.1	5.5	5.5	5.9	6.1	5.8	
INC TEMP °C:		25	25	25	25	25	25	25	25								
DATE:		12/10/9	12/11/9	12/13	12/14	12/15	12/16	12/17	12/18								
TIME:		1250	115	1025	1100	1325	1350	0950	1055								
INITIALS:		LB	JG	LM	ST	WM	JG	ST	WM								

ADDITIONAL OLD WATER QUALITIES ON SEPARATE DATA SHEET.

WM

Larval Fish Dry Weight Summary Sheet

Study: 19224
Client: Seabrook
Date/Time/Init: 12/12/09 1548 NR 12/08/09 0800 JQ
Conc Fish and Foil (mg) Tare Wt (mg)

Lab A	28.26	12.97
Lab B	28.11	13.06
Lab C	28.12	13.01
Lab D	33.94	13.53
RW A	29.65	12.31
RW B	35.57	13.47
RW C	27.82	12.69
RW D	35.36	13.35
6A	31.83	13.93
6B	29.32	13.61
6C	29.53	14.27
6D	30.84	12.49
12A	36.24	12.07
12B	30.19	14.93
12C	33.45	11.73
12D	38.5	12.51
25A	40.75	12.96
25B	31.19	11.52
25C	29.42	12.78
25D	29.29	13.29
50A	29.99	11.94
50B	28.27	14.05
50C	32.89	11.93
50D	33.16	13.17
100A	27.3	12.85
100B	26.33	12.88
100C	28.68	12.23
100D	25.03	14.01

CETIS Summary Report

Report Date: 15 Dec-09 11:31 (p 1 of 2)
 Test Code: 16-7173-9383/19224 Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Batch ID: 08-1208-8034	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 01 Dec-09 12:50	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 08 Dec-09 10:55	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 22h	Source: ARO - Aquatic Research Organisms, NH	Age: 13 d

Sample ID: 20-8191-2850	Code: 19224	Client: FLP Energy
Sample Date: 30 Nov-09 09:00	Material: Industrial Effluent	Project: Fourth Quarter WET Compliance Test
Receive Date: 01 Dec-09 08:45	Source: Seabrook Station	
Sample Age: 28h (5 °C)	Station: NH0020338 Final Discharge	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-3819-9076	7d Proportion Survived	100	>100	N/A	21.6%	1	Dunnell's Multiple Comparison Test
05-2349-9467	Mean Dry Biomass-mg	100	>100	N/A	32.4%	1	Dunnell's Multiple Comparison Test
19-0637-8595	Mean Dry Weight-mg	100	>100	N/A	33.8%	1	Dunnell's Multiple Comparison Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-3819-9076	7d Proportion Survived	Control Resp	0.9	0.8 - NL	Yes	Result Within Limits
05-2349-9467	Mean Dry Biomass-mg	Control Resp	1.91	0.5 - NL	Yes	Result Within Limits
05-2349-9467	Mean Dry Biomass-mg	PMSD	0.324	0.11 - 0.28	Yes	Result Above Limit

7d Proportion Survived Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.9	0.87	0.93	0.8	1	0.0149	0.0816	9.07%	0.0%
0	Lab Water	4	0.875	0.856	0.894	0.8	0.9	0.00913	0.05	5.71%	2.78%
6.25		4	0.875	0.819	0.931	0.7	1	0.0274	0.15	17.1%	2.78%
12.5		4	0.875	0.819	0.931	0.7	1	0.0274	0.15	17.1%	2.78%
25		4	0.95	0.928	0.972	0.9	1	0.0105	0.0577	6.08%	-5.56%
50		4	0.95	0.928	0.972	0.9	1	0.0105	0.0577	6.08%	-5.56%
100		4	0.8	0.77	0.83	0.7	0.9	0.0149	0.0816	10.2%	11.1%

Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.91	1.78	2.04	1.51	2.21	0.0635	0.348	18.2%	0.0%
0	Lab Water	4	1.65	1.55	1.74	1.5	2.04	0.0481	0.263	16.0%	14.0%
6.25		4	1.68	1.62	1.74	1.53	1.84	0.0282	0.155	9.2%	12.2%
12.5		4	2.18	2	2.35	1.53	2.6	0.0856	0.469	21.5%	-13.8%
25		4	2	1.8	2.2	1.6	2.78	0.0989	0.542	27.1%	-4.6%
50		4	1.83	1.72	1.94	1.42	2.1	0.0544	0.298	16.3%	4.39%
100		4	1.38	1.3	1.47	1.1	1.65	0.0412	0.226	16.3%	27.7%

Mean Dry Weight-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	2.12	2.02	2.22	1.89	2.45	0.0476	0.261	12.3%	0.0%
0	Lab Water	4	1.88	1.78	1.98	1.68	2.27	0.0498	0.273	14.5%	11.2%
6.25		4	1.97	1.8	2.14	1.57	2.62	0.083	0.455	23.0%	6.89%
12.5		4	2.53	2.28	2.79	1.91	3.45	0.123	0.676	26.7%	-19.6%
25		4	2.09	1.92	2.27	1.78	2.78	0.0847	0.464	22.2%	1.19%
50		4	1.92	1.83	2.01	1.58	2.1	0.0422	0.231	12.0%	9.36%
100		4	1.73	1.64	1.82	1.38	1.92	0.0443	0.242	14.0%	18.2%

CETIS Summary Report

Report Date: 15 Dec-09 11:31 (p 2 of 2)

Test Code: 16-7173-9383/19224 Mb

Menidia beryllina 7-d Larval Survival and Growth Test						EnviroSystems, Inc.
7d Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	0.9	1	0.8	0.9	
0	Lab Water	0.9	0.8	0.9	0.9	
6.25		1	1	0.8	0.7	
12.5		0.7	0.8	1	1	
25		1	1	0.9	0.9	
50		0.9	0.9	1	1	
100		0.8	0.7	0.9	0.8	
Mean Dry Biomass-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.73	2.21	1.51	2.2	
0	Lab Water	1.53	1.5	1.51	2.04	
6.25		1.79	1.57	1.53	1.84	
12.5		2.42	1.53	2.17	2.6	
25		2.78	1.97	1.66	1.6	
50		1.8	1.42	2.1	2	
100		1.44	1.35	1.65	1.1	
Mean Dry Weight-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.93	2.21	1.89	2.45	
0	Lab Water	1.7	1.88	1.68	2.27	
6.25		1.79	1.57	1.91	2.62	
12.5		3.45	1.91	2.17	2.6	
25		2.78	1.97	1.85	1.78	
50		2.01	1.58	2.1	2	
100		1.81	1.92	1.83	1.38	

CETIS Analytical Report

Report Date: 15 Dec-09 11:31 (p 3 of 4)

Test Code: 16-7173-9383/19224 Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 05-3819-9076	Endpoint: 7d Proportion Survived	CETIS Version: CETISv1.7.0
Analyzed: 15 Dec-09 9:02	Analysis: Parametric-Control vs Treatments	Official Results: Yes

Batch ID: 08-1208-8034	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 01 Dec-09 12:50	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 08 Dec-09 10:55	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 22h	Source: ARO - Aquatic Research Organisms, NH	Age: 13 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	21.6%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	0.222	2.41	0.257	0.7596	Non-Significant Effect
	12.5	0.222	2.41	0.257	0.7596	Non-Significant Effect
	25	-0.714	2.41	0.257	0.9638	Non-Significant Effect
	50	-0.714	2.41	0.257	0.9638	Non-Significant Effect
	100	1.32	2.41	0.257	0.2911	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1293002	0.02586005	5	1.14	0.3776	Non-Significant Effect
Error	0.4099169	0.02277316	18			
Total	0.5392171	0.04863321	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	4.18	15.1	0.5231	Equal Variances
Distribution	Shapiro-Wilk Normality	0.928		0.0882	Normal Distribution

7d Proportion Survived Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.9	0.869	0.931	0.8	1	0.0152	0.0816	9.07%	0.0%
6.25		4	0.875	0.818	0.932	0.7	1	0.0279	0.15	17.1%	2.78%
12.5		4	0.875	0.818	0.932	0.7	1	0.0279	0.15	17.1%	2.78%
25		4	0.95	0.928	0.972	0.9	1	0.0107	0.0577	6.08%	-5.56%
50		4	0.95	0.928	0.972	0.9	1	0.0107	0.0577	6.08%	-5.56%
100		4	0.8	0.769	0.831	0.7	0.9	0.0152	0.0816	10.2%	11.1%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.25	1.21	1.3	1.11	1.41	0.0231	0.125	9.93%	0.0%
6.25		4	1.23	1.15	1.31	0.991	1.41	0.0399	0.215	17.5%	1.89%
12.5		4	1.23	1.15	1.31	0.991	1.41	0.0399	0.215	17.5%	1.89%
25		4	1.33	1.29	1.37	1.25	1.41	0.0175	0.0941	7.07%	-6.08%
50		4	1.33	1.29	1.37	1.25	1.41	0.0175	0.0941	7.07%	-6.08%
100		4	1.11	1.07	1.15	0.991	1.25	0.0196	0.106	9.48%	11.2%

CETIS Analytical Report

Report Date: 15 Dec-09 11:31 (p 4 of 4)

Test Code: 16-7173-9383/19224 Mb

Menidia beryllina 7-d Larval Survival and Growth Test

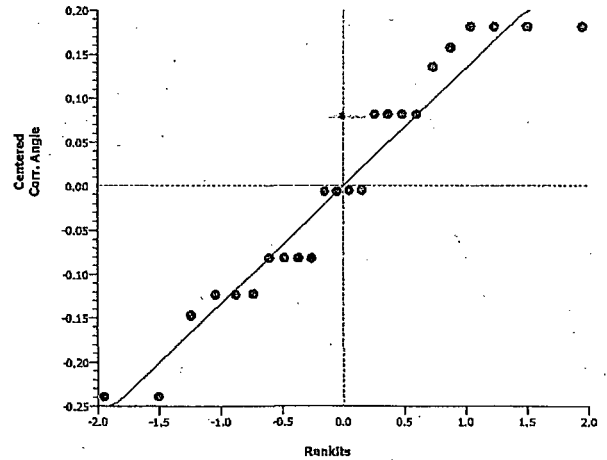
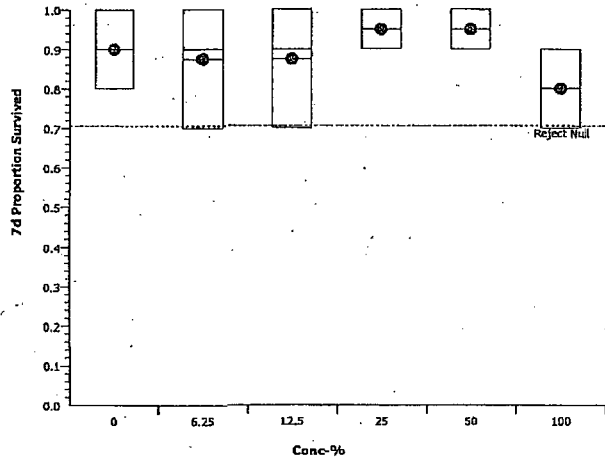
EnviroSystems, Inc.

Analysis ID: 05-3819-9076
Analyzed: 15 Dec-09 9:02

Endpoint: 7d Proportion Survived
Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 15 Dec-09 11:31 (p 1 of 4)
 Test Code: 16-7173-9383/19224 Mb

Menidia beryllina 7-d Larval Survival and Growth Test										EnviroSystems, Inc.	
Analysis ID: 05-2349-9467		Endpoint: Mean Dry Biomass-mg			CETIS Version: CETISv1.7.0						
Analyzed: 15 Dec-09 9:02		Analysis: Parametric-Control vs Treatments			Official Results: Yes						
Batch ID: 08-1208-8034		Test Type: Growth-Survival (7d)			Analyst:						
Start Date: 01 Dec-09 12:50		Protocol: EPA/821/R-02-014 (2002)			Diluent: Receiving Water						
Ending Date: 08 Dec-09 10:55		Species: Menidia beryllina			Brine: Generic commercial salts						
Duration: 6d 22h		Source: ARO - Aquatic Research Organisms, NH			Age: 13 d						
Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD			
Untransformed	0	C > T	Not Run	100	>100	N/A	1	32.4%			
Dunnett's Multiple Comparison Test											
Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)				
Receiving Water		6.25	0.907	2.41	0.621	0.4633	Non-Significant Effect				
		12.5	-1.02	2.41	0.621	0.9838	Non-Significant Effect				
		25	-0.341	2.41	0.621	0.9143	Non-Significant Effect				
		50	0.326	2.41	0.621	0.7201	Non-Significant Effect				
		100	2.06	2.41	0.621	0.0947	Non-Significant Effect				
Auxiliary Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision				
Extreme Value	Grubbs Single Outlier			2.41	2.8	0.2504	No Outliers Detected				
ANOVA Table											
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)					
Between	1.517492	0.3034985	5	2.28	0.0900	Non-Significant Effect					
Error	2.3945	0.1330278	18								
Total	3.911992	0.4365262	23								
ANOVA Assumptions											
Attribute	Test			Test Stat	Critical	P-Value	Decision(1%)				
Variances	Bartlett Equality of Variance			4.99	15.1	0.4167	Equal Variances				
Distribution	Shapiro-Wilk Normality			0.979		0.8855	Normal Distribution				
Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.91	1.78	2.05	1.51	2.21	0.0646	0.348	18.2%	0.0%
6.25		4	1.68	1.62	1.74	1.53	1.84	0.0287	0.155	9.2%	12.2%
12.5		4	2.18	2	2.36	1.53	2.6	0.0871	0.469	21.5%	-13.8%
25		4	2	1.8	2.21	1.6	2.78	0.101	0.542	27.1%	-4.6%
50		4	1.83	1.72	1.94	1.42	2.1	0.0553	0.298	16.3%	4.39%
100		4	1.38	1.3	1.47	1.1	1.65	0.0419	0.226	16.3%	27.7%

CETIS Analytical Report

Report Date: 15 Dec-09 11:31 (p 2 of 4)
Test Code: 16-7173-9383/19224 Mb

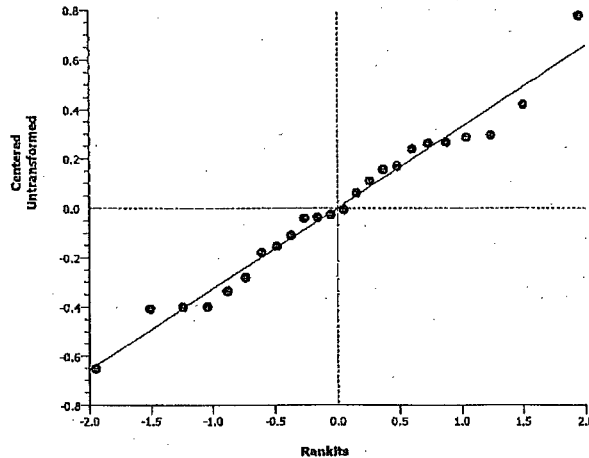
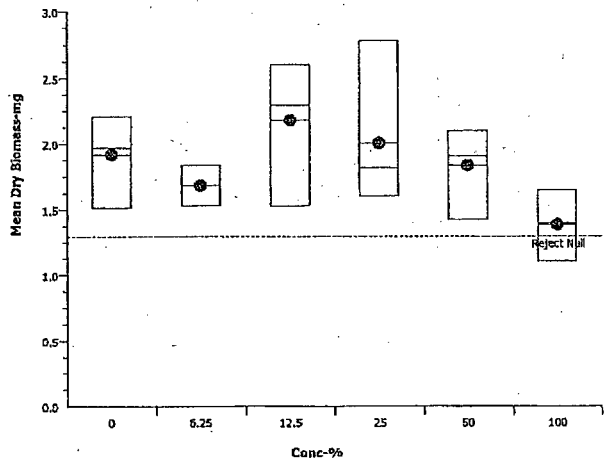
Menidia beryllina 7-d Larval Survival and Growth Test

EnviroSystems, Inc.

Analysis ID: 05-2349-9467 Endpoint: Mean Dry Biomass-mg
Analyzed: 15 Dec-09 9:02 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics





Aquatic Research Organisms

DATA SHEET

Rec 12-01-09
1145
DM

I. Organism History

Species MENIDIA BERYLLINA

Source: Lab reared Hatchery reared Field collected

Hatch date 11-18-09 Receipt date _____

Lot number 111509 MB Strain _____

Brood origination CAPE COD MA

II. Water Quality

Temperature 25 °C Salinity ~30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater Saltwater Other _____

Recirculating Flow through Static

DIET: Flake food Phytoplankton Trout chow _____

Artemia Rotifers YCT _____ Other ENCAP SHRIMP DIET

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: EST # of Organisms 580+

Carrier: _____ Date shipped 12-1-09

Biologist: Mark Desjardis

Arbacia punctulata Chronic Fertilization Assay

STUDY: 19224	CLIENT: FPL Energy Seabrook Station	SAMPLE/DILUENT: EFFLUENT / RECEIVING WATER (RW)	DATE / INITIALS: 12/3/09 LB		
SALINITY ADJUSTMENT RECORD: 1000 ml EFFLUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
SALINITY ADJUSTMENT RECORD: 1000 ml DILUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
EFFLUENT CONCENTRATION)	D.O. (mg/L)	pH (SU)	TEMPERATURE (°C)	SALINITY (ppt)	TRC (mg/L)
"AS RECEIVED" EFFLUENT	8.2	7.49 7.78 (@) 25 12/3/09		31.3	<0.02
"AS RECEIVED" RW DILUENT	8.5	7.78		30.6	<0.02
LAB CONTROL	8.1	7.91	20	28	
RW	7.9	7.76	21	31	
6.25%	8.0	7.75	21	31	
12.5%	8.1	7.75	21	31	
25%	8.0	7.73	21	31	
50%	8.0	7.70	21	31	
100%	7.9	7.60	21	32	

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 130 X 10⁴ = SPM SOLUTION E = 1.30 X 10⁶

SPERM CONCENTRATIONS:

SOLUTION E X 40 = SOLUTION A = 5.20 X 10⁷ SPM
 SOLUTION E X 20 = SOLUTION B = 2.60 X 10⁷ SPM
 SOLUTION E X 5 = SOLUTION C = 6.50 X 10⁶ SPM

FINAL COUNTS:

FINAL SPERM COUNT: 5.20 X 10⁷
 FINAL EGG COUNT: 2300

Sampling Date _____ Time _____

Bottles Pulled: EFFLUENT DILUENT
 TOC
 METALS N/A
 AMM
 TS/S

TEST TIMES:

SPERM COLLECTED: 16:15 15:15
 EGGS COLLECTED: 16:10 14:10
 SPERM ADDED: 15:25
 EGGS ADDED: 16:25
 FIXATIVE ADDED: 16:45

Meters Used

DO meter # 24 DO probe # 89 pH meter # 1097 pH probe # 87 S/C meter # YS130D S/C probe # YS130D
 SALINITY meter # YS130D Temp. (thermometer or probe #) YS130D

Arbacia punctulata Chronic Fertilization Assay

STUDY	CLIENT	SAMPLE/DILUENT			DATE
19224	FPL Energy Seabrook Station	EFFLUENT / RECEIVING WATER (RW)			12/4/09
EFFLUENT CONC.	REPLICATE VIAL				
	<u>1</u> FERT/TOTAL	<u>2</u> FERT/TOTAL	<u>3</u> FERT/TOTAL	<u>4</u> FERT/TOTAL	
LAB	101/105	101/107	96/100	100/105	
RW	98/105	97/100	100/107	100/107	
6.25%	100/106	101/105	90/100	102/110	
12.5%	91/101	96/100	100/107	95/102	
25%	100/107	100/106	100/108	92/100	
50%	100/112	91/100	82/100	92/100	
100%	113/121	105/112	101/109	100/104	

INITIALS: LB

CETIS Summary Report

Report Date: 15 Dec-09 11:32 (p 1 of 1)
 Test Code: 01-9025-6877/19224 Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Batch ID: 21-2788-2822	Test Type: Fertilization	Analyst:
Start Date: 03 Dec-09 15:26	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 03 Dec-09 16:26	Species: Arbacia punctulata	Brine: Generic commercial salts
Duration: 60m	Source: In-House Culture	Age:

Sample ID: 15-4126-3873	Code: 19224	Client: FLP Energy
Sample Date: 03 Dec-09 06:00	Material: Industrial Effluent	Project: Fourth Quarter WET Compliance Test
Receive Date: 03 Dec-09 08:45	Source: Seabrook Station	
Sample Age: 9h (5 °C)	Station: NH0020338 Final Discharge	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-5550-7827	Proportion Fertilized	25	50	35.4	4.32%	4	Dunnell's Multiple Comparison Test

Point Estimate Summary							
Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
09-7654-6870	Proportion Fertilized	EC10	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-5550-7827	Proportion Fertilized	Control Resp	0.943	0.7 - 1	Yes	Result Within Limits
09-7654-6870	Proportion Fertilized	Control Resp	0.943	0.7 - 1	Yes	Result Within Limits
00-5550-7827	Proportion Fertilized	PMSD	0.0432	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.943	0.936	0.95	0.933	0.97	0.00327	0.0179	1.9%	0.0%
0	Lab Water	4	0.955	0.951	0.958	0.944	0.962	0.0015	0.00819	0.86%	-1.21%
6.25		4	0.933	0.923	0.943	0.9	0.962	0.00479	0.0262	2.81%	1.06%
12.5		4	0.932	0.923	0.941	0.901	0.96	0.00441	0.0242	2.59%	1.21%
25		4	0.931	0.927	0.935	0.92	0.943	0.00187	0.0102	1.1%	1.29%
50		4	0.886	0.869	0.903	0.82	0.92	0.00826	0.0452	5.11%	6.09%
100		4	0.94	0.934	0.946	0.927	0.962	0.00276	0.0151	1.61%	0.34%

Proportion Fertilized Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	0.933	0.97	0.935	0.935	
0	Lab Water	0.962	0.944	0.96	0.952	
6.25		0.943	0.962	0.9	0.927	
12.5		0.901	0.96	0.935	0.931	
25		0.935	0.943	0.926	0.92	
50		0.893	0.91	0.82	0.92	
100		0.934	0.938	0.927	0.962	

CETIS Analytical Report

Report Date: 15 Dec-09 11:32 (p 1 of 2)
 Test Code: 01-9025-6877/19224 Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 00-5550-7827 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 15 Dec-09 9:11 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 21-2788-2822 Test Type: Fertilization Analyst:
 Start Date: 03 Dec-09 15:26 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 03 Dec-09 16:26 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 60m Source: In-House Culture Age:

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	25	50	35.4	4	4.32%

Dunnett's Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water		6.25	0.597	2.41	0.0796	0.6047	Non-Significant Effect
		12.5	0.7	2.41	0.0796	0.5578	Non-Significant Effect
		25	0.822	2.41	0.0796	0.5020	Non-Significant Effect
		50*	3.1	2.41	0.0796	0.0124	Significant Effect
		100	0.241	2.41	0.0796	0.7525	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02728183	0.005456366	5	2.5	0.0694	Non-Significant Effect
Error	0.03934544	0.002185858	18			
Total	0.06662726	0.007642223	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	3.82	15.1	0.5763	Equal Variances
Distribution	Shapiro-Wilk Normality	0.954		0.3364	Normal Distribution

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.943	0.936	0.95	0.933	0.97	0.00333	0.0179	1.9%	0.0%
6.25		4	0.933	0.923	0.943	0.9	0.962	0.00487	0.0262	2.81%	1.06%
12.5		4	0.932	0.923	0.941	0.901	0.96	0.00449	0.0242	2.59%	1.21%
25		4	0.931	0.927	0.935	0.92	0.943	0.0019	0.0102	1.1%	1.29%
50		4	0.886	0.869	0.903	0.82	0.92	0.0084	0.0452	5.11%	6.09%
100		4	0.94	0.934	0.946	0.927	0.962	0.00281	0.0151	1.61%	0.34%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Wate	4	1.33	1.32	1.35	1.31	1.4	0.00793	0.0427	3.21%	0.0%
6.25		4	1.31	1.29	1.33	1.25	1.37	0.00982	0.0529	4.03%	1.48%
12.5		4	1.31	1.29	1.33	1.25	1.37	0.00902	0.0486	3.71%	1.74%
25		4	1.31	1.3	1.31	1.28	1.33	0.00378	0.0203	1.56%	2.04%
50		4	1.23	1.2	1.26	1.13	1.28	0.0126	0.0677	5.5%	7.7%
100		4	1.32	1.31	1.34	1.3	1.37	0.00626	0.0337	2.54%	0.6%

CETIS Analytical Report

Report Date: 15 Dec-09 11:32 (p 2 of 2)
Test Code: 01-9025-6877/19224 Ap

Arbacia Sperm Cell Fertilization Test

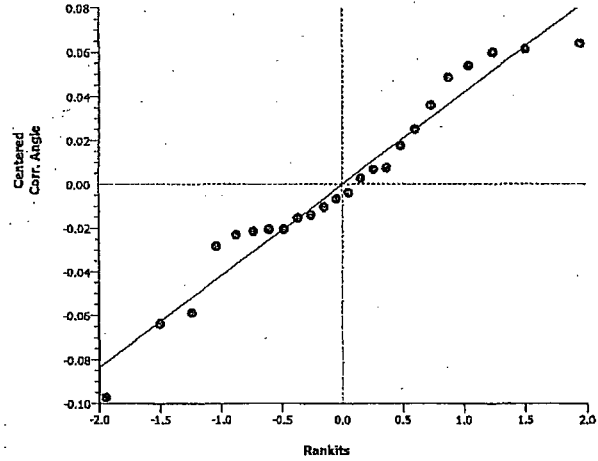
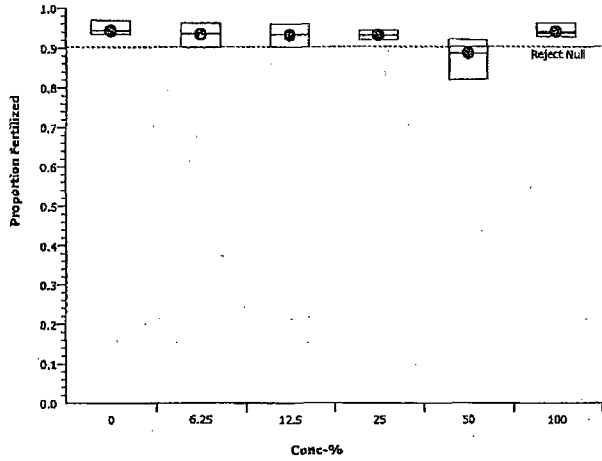
EnviroSystems, Inc.

Analysis ID: 00-5550-7827
Analyzed: 15 Dec-09 9:11

Endpoint: Proportion Fertilized
Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 15 Dec-09 11:32 (p 1 of 1)
 Test Code: 01-9025-6877/19224 Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 09-7654-6870 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 15 Dec-09 9:11 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Batch ID: 21-2788-2822 Test Type: Fertilization Analyst:
 Start Date: 03 Dec-09 15:26 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 03 Dec-09 16:26 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 60m Source: In-House Culture Age:

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

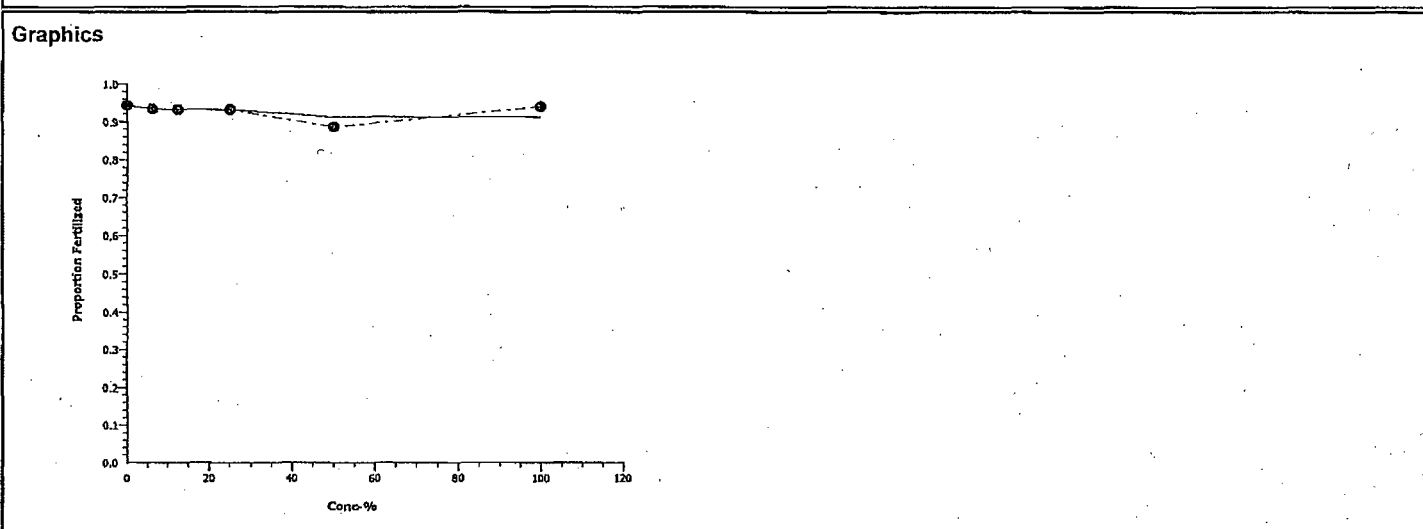
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC10	>100	N/A	N/A	<1	N/A	N/A

Proportion Fertilized Summary **Calculated Variate(A/B)**

Conc-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Receiving Water	4	0.943	0.933	0.97	0.00327	0.0179	1.9%	0.0%	395	419
6.25		4	0.933	0.9	0.962	0.00479	0.0262	2.81%	1.06%	393	421
12.5		4	0.932	0.901	0.96	0.00441	0.0242	2.59%	1.21%	382	410
25		4	0.931	0.92	0.943	0.00187	0.0102	1.1%	1.29%	392	421
50		4	0.886	0.82	0.92	0.00826	0.0452	5.11%	6.09%	365	412
100		4	0.94	0.927	0.962	0.00276	0.0151	1.61%	0.34%	419	446

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.933	0.97	0.935	0.935
6.25		0.943	0.962	0.9	0.927
12.5		0.901	0.96	0.935	0.931
25		0.935	0.943	0.926	0.92
50		0.893	0.91	0.82	0.92
100		0.934	0.938	0.927	0.962



M. beryllina 7 Day Chronic Assay

STUDY: 19224	CLIENT: FPL Energy Seabrook Station	SAMPLE: EFFLUENT	DILUENT: RECEIVING WATER (RW)
DAY 0 (START) DATE: 12/1/09	DAY 2 (1 ST RENEWAL) DATE: 12/3/09	DAY 4 (2 ND RENEWAL) DATE:	

CHEMISTRIES SAMPLED

CHEMISTRY	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
AMM	004	008	013	016	021	024
TS/TSS	005	009	014	017	022	025
TOC	003	007				
METALS	002					

AS RECEIVED & SALINITY ADJUSTED WATER QUALITIES

AS REC'D	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	31.6	31.3	31.3	30.6	32.0	31
Dissolved Oxygen (mg/L)	8.6	10.3	8.2	8.5	8.8	8.2
pH (SU)	7.48	7.80	7.49	7.78	7.76	7.40
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SAL. ADJ.	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	/	/	/	/	/	/
Dissolved Oxygen (mg/L)	/	/	/	/	/	/
pH (SU)	/	/	/	/	/	/
TRC (mg/L)	/	/	/	/	/	/

SALINITY ADJUSTMENT RECORD

	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
SAMPLE mLs	/	/	/	/	/	/
SEA SALT g	/	/	/	/	/	/
TOTAL mLs	/	/	/	/	/	/
ACTUAL %	100%	100%	100%	100%	100%	/
DATE:	12/1/09	11/30/09	12/3/09	12/2/09	12/5/09	12/4/09
TIME:	0920	1620	1008	1505	12005	1455
INITIALS:	LB	ST	LB	LB	LB	ST

SALTWATER CHRONIC ASSAY - NEW WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:			DILUENT:			
19224		FPL Energy Seabrook Station							EFFLUENT			RECEIVING WATER (RW)			
NEW DISSOLVED OXYGEN (mg/L)									NEW SALINITY (ppt)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	8.8	8.5	7.4	7.0	6.9	7.5	7.1	30	30	30	29	29	29	29
RW	A	8.4	8.7	7.5	7.0	7.1	7.4	7.1	31	31	31	31	31	31	31
6.25%	A	8.0	²²⁻¹²⁻¹² 8.6	7.7	7.3	7.2	7.6	7.3	32	32	32	31	32	32	32
12.5%	A	7.9	8.5	7.7	6.9	7.2	7.5	7.3	32	32	31	31	32	32	31
25%	A	7.9	8.4	7.4	7.0	7.0	7.5	7.4	32	32	31	32	32	32	31
50%	A	7.7	8.3	7.5	7.0	6.8	7.5	7.5	32	32	32	32	32	32	32
100%	A	8.0	8.5	7.4	7.1	7.1	8.1	7.6	32	32	32	32	32	32	32
NEW pH (SU)									NEW TEMPERATURE (°C)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	7.85	8.00	7.99	7.99	8.06	8.00	7.89	24	24	24	24	24	24	24
RW	A	7.90	7.84	7.80	7.84	7.62	7.50	7.32	24	24	24	24	24	24	24
6.25%	A	7.89	7.82	7.80	7.84	7.68	7.51	7.35	24	24	24	24	24	24	24
12.5%	A	7.87	7.81	7.79	7.83	7.66	7.50	7.47	24	24	24	24	24	24	24
25%	A	7.83	7.75	7.74	7.81	7.66	7.49	7.65	24	24	25	24	24	24	24
50%	A	7.75	7.70	7.73	^{7.72} 7.79	7.71	7.61	7.69	24	24	25	24	24	24	24
100%	A	7.56	7.51	7.65	7.62	7.79	7.79	7.74	24	24	26	24	25	24	24
INC TEMP (°C):		25	25	25	25	25	25	25							
DATE:		12/1/09	12/2	12/3	12/4	12/5	12/6	12/7							
TIME:		1025	1200	1130	1135	1400	1425	1015							
INITIALS:		kc	JQ	JQ	SJ	LB	JQ	SJ							

SALTWATER CHRONIC ASSAY - OLD WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:		DILUENT:						
19224		FPL Energy Seabrook Station							EFFLUENT		RECEIVING WATER (RW)						
OLD TEMPERATURE (°C)									OLD SALINITY (ppt)								
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7		
LAB	A	24	24	24	24	24	24	24	29	30	31	29	29	29	29		
RW	A	24	24	24	24	24	24	24	32	32	31	32	32	32	32		
6.25%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	32		
12.5%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	32		
25%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	32		
50%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	33		
100%	A	24	24	24	24	24	24	24	32	32	32	32	33	33	33		
OLD pH (SU)																	
CONC	REP	1	2	3	4	5	6	7									
LAB	A	7.69	7.74	7.87	7.81	7.90	7.84	7.68									
RW	A	7.70	7.65	7.75	7.74	7.72	7.63	7.53									
6.25%	A	7.71	7.66	7.76	7.94	7.73	7.63	7.53									
12.5%	A	7.73	7.69	7.78	7.78	7.75	7.64	7.60									
25%	A	7.67	7.61	7.73	7.71	7.71	7.61	7.57									
50%	A	7.72	7.64	7.76	7.74	7.76	7.69	7.55									
100%	A	7.70	7.61	7.76	7.71	7.80	7.78	7.64									
DATE:		12/16/1	12/13	12/4	12/5	12/6	12/7	12/8									
TIME:		1055	1005	1045	1055	1315	0920	0955									
INITIALS:		JR	JS	ST	LB	JS	IL	JS									

DILUTIONS PREPARATIONS

STUDY: 19224	CLIENT: FPL Energy Seabrook Station	
SPECIES: <i>A. bahia</i>		
Diluent: Receiving Water (RW)	Sample: ED, D&I ^{SS} 12/3/09	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	800
RW	0	↓
6.25%	50	
12.5%	100	
25%	200	
50%	400	
100%	800	
INITIALS:	SJ	
TIME:	1330	
DATE:	12/3/09	

DILUTIONS PREPARATION

STUDY: 19224		CLIENT: FPL Energy Seabrook Station					
SPECIES: <i>M. beryllina</i>			TEST: chronic renewal				
START	Day: 0		Day: 1		Day:		
Diluent: RW	Sample: E0,00		Sample: E0,00		Sample:		
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	2000	0	1600			
RW	0	↓	0	↓			
6.25%	125		100				
12.5%	250		200				
25%	500		400				
50%	1000		800				
100%	2000		1600				
			✓			↓	
1 st Renewal	Day: 2		Day: 3		Day:		
Diluent: RW	Sample: E1,01		Sample: E1,01		Sample:		
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600			
RW	0	↓	0	↓			
6.25%	100		100				
12.5%	200		200				
25%	400		400				
50%	800		800				
100%	1600		1600				
			↓			↓	
2 nd Renewal	Day: 4		Day: 5		Day: 6		
Diluent: RW	Sample: E2,02		Sample: E2,02		Sample: E2,02		
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600	0	1600	
RW	0	↓	0	↓	0	↓	
6.25%	100		100		100		
12.5%	200		200		200		
25%	400		400		400		
50%	800		800		800		
100%	1600		1600		1600		
			↓				↓

RW = Receiving Water

Day	Date	Time	Init
0	12/1/09	1005	WC
1	12/2	1150	JQ
2	12/3	1115	JQ
3	12/4	1130	SJ
4	12/5	1350	UB
5	12/6	1410	JQ
6	12/7	1010	SJ

DILUTIONS PREPARATIONS

STUDY: 19224		CLIENT: FPL Energy Seabrook Station
SPECIES: <i>A. punctulata</i>		
Diluent: Receiving Water (RW)	Day: 0 Start	
	Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	100
RW	0	↓
6.25%	6.25	
12.5%	12.5	
25%	25	
50%	50	
100%	100	
INITIALS:	UB	
TIME:	1320	
DATE:	12/3/09	

RECORD OF METERS USED

STUDY: 19224	CLIENT: FPL Energy Seabrook		
A.bahia			
Exposure (Hours)			
	0	24	48
Water Quality Station #	1	1	1
Temperature thermometer or probe #	YS130D	YS130D	YS130D
Initials / Date	SJ 12/3/09	LB 12/4	LB 12/5

Water Quality Station #1	Water Quality Station #2	Water Quality Station #3
DO meter # 24	DO meter #	DO meter #
DO probe # 89	DO probe #	DO probe #
pH meter # 1097	pH meter #	pH meter #
pH probe # 87	pH probe #	pH probe #
S/C meter # YS130D	S/C meter #	S/C meter #
S/C probe # ↓	S/C probe #	S/C probe #
Salinity meter #	Salinity meter #	Salinity meter #

(25)

RECORD OF METERS USED
M. beryllina Chronic

STUDY: 19224	CLIENT: FPL Energy Seabrook Station							
NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	2	1	2	1	1	1	1	/
Temperature thermometer or probe #	YSI300	YSI300	YSI300	YSI300	YSI300	YSI300	YSI300	/
Initials	ue	JQ	JQ	SJ	LB	JQ	SJ	/
OLD WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	/	2	1	1	1	1	1	J
Temperature thermometer or probe #	/	YSI300	YSI300	YSI300	YSI300	YSI300	YSI300	YSI300
Initials	/	JQ	JQ	SJ	LB	JQ	JQ	JQ
Date	12/1/09	12/2/09	12/3	12/4/09	12/5	12/6	12/19	12/18

Water Quality Station #1		Water Quality Station #2		Water Quality Station #3	
DO meter #	24	DO meter #	23	DO meter #	/
DO probe #	89	DO probe #	20	DO probe #	/
pH meter #	1097	pH meter #	470	pH meter #	/
pH probe #	87	pH probe #	86	pH probe #	/
S/C meter #	YSI300	S/C meter #	YSI300	S/C meter #	/
S/C probe #		S/C probe #		S/C probe #	/
Salinity meter #		Salinity meter #		Salinity meter #	/

Report No: 19224
 Project: Seabrook Station

SDG:

Sample ID: Effluent Start
 Matrix: Water
 Sampled: 12/01/09

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19224-005	32000	50	mg/L	12/02/09	12/03/09	JQ /SM2540B
Total suspended solids	19224-005	68	10	mg/L	12/02/09	12/03/09	JQ /SM 2540D
Aluminum, total	19224-002	0.05	0.02	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Total organic carbon	19224-003	ND	0.4	mg/L	12/03/09	12/03/09	KAJ/SM 5310 C
Cadmium, total	19224-002	ND	0.0005	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Calcium, total	19224-002	350	0.5	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Chromium, total	19224-002	ND	0.002	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Copper, total	19224-002	0.002	0.002	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Lead, total	19224-002	ND	0.0012	mg/L	12/02/09	12/07/09	JLH/EPA 200.8
Magnesium, total	19224-002	950	0.5	mg/L	12/02/09	12/07/09	JLH/EPA 200.8
Nickel, total	19224-002	0.007	0.002	mg/L	12/02/09	12/03/09	JLH/EPA 200.8
Ammonia-N	19224-004	ND	0.1	mg/L as N	12/01/09	12/01/09	KAJ/SM 4500-NH3 G
Zinc, total	19224-002	ND	0.002	mg/L	12/02/09	12/03/09	JLH/EPA 200.8

Sample ID: Effluent First Renewal
 Matrix: Water
 Sampled: 12/03/09 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19224-013	ND	0.1	mg/L as N	12/07/09	12/07/09	MES/SM 4500-NH3 G

Sample ID: Effluent Second Renewal
 Matrix: Water
 Sampled: 12/05/09 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19224-021	ND	0.1	mg/L as N	12/07/09	12/07/09	MES/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

Report No: 19224
Project: Seabrook Station

SDG:

Sample ID: Receiving Water Start
Matrix: Water
Sampled: 11/30/09 1300

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19224-009	35000	50	mg/L	12/02/09	12/03/09	JQ /SM2540B
Total suspended solids	19224-009	38	10	mg/L	12/02/09	12/03/09	JQ /SM 2540D
Total organic carbon	19224-007	ND	0.4	mg/L	12/03/09	12/03/09	KAJ/SM 5310 C
Ammonia-N	19224-008	ND	0.1	mg/L as N	12/01/09	12/01/09	KAJ/SM 4500-NH3 G

Sample ID: Receiving Water First Renewal
Matrix: Water
Sampled: 12/02/09 0950

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19224-016	ND	0.1	mg/L as N	12/07/09	12/07/09	MES/SM 4500-NH3 G

Sample ID: Receiving Water Second Renewal
Matrix: Water
Sampled: 12/04/09 0817

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19224-024	ND	0.1	mg/L as N	12/07/09	12/07/09	MES/SM 4500-NH3 G

Notes:

ND = Not Detected

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 19224				CLIENT: SEABROOK STATION			
SAMPLE RECEIPT INFORMATION							
	Start Sample		First Renewal		Second Renewal		
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT	
Sample Receipt Date & Time:	12/1/09 0845	11/30/09 1608	12/3/09 0740	12/2/09 1100	12/5/09 1115	12/4/09 0951	
Received By:	JS	MES	RAM	JS	WM	JEB	
Delivered Via:	Client	Normandeau	Client	Normandeau	Client	Normandeau	
Logged Into Lab By:	LB	ST	JL	LB	LB	ST	
Date & Time Logged In:	12/1/09 0920	11/30/09 1620	12/3/09 0945	12/2/09 1505	12/5/09 1215	12/4/09 1455	
SAMPLE CONDITION INFORMATION							
	Start Sample		First Renewal		Second Renewal		
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT	
Chain of Custody?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Chain of Custody Signed?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Chain of Custody Complete?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Sample Date?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Sample Time?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Sample Type?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Custody Seal in Place?	Yes or No <input checked="" type="checkbox"/>	Yes or No <input checked="" type="checkbox"/>	Yes or No <input checked="" type="checkbox"/>	Yes or No <input checked="" type="checkbox"/>	Yes or No <input checked="" type="checkbox"/>	Yes or No <input checked="" type="checkbox"/>	
Shipping Container Intact?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
Temp Blank Temperature:	5°C	4°C	5°C	5°C	4°C	5	
DOES CLIENT NEED NOTIFICATION OF TEMP?	NO		NO		NO		
Sample Arrived on Ice?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	
COMMENTS:	see COC	see COC		see COC	see COC	see COC	

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO: 19224
 SDG No:
 Project: P0105
 Delivered via: Client
 Date and Time Received: 12/03/09 0845 Date and Time Logged into Lab: 12/03/09 959
 Recieved By: RAM Logged into Lab by: JL
 Air bill / Way bill: No Air bill included in folder if received? NA
 Cooler on ice/packs: Yes Custody Seals present? NA
 Cooler Blank Temp (C) at arrival: 5 Custody Seals intact? NA
 Number of COC Pages: 1
 COC Serial Number(s): A1005797
 COC Complete: Yes Does the info on the COC match the samples? Yes
 Sampled Date: Yes Were samples received within holding time? Yes
 Field ID complete: Yes Were all samples properly labeled? Yes
 Sampled Time: Yes Were proper sample containers used? Yes
 Analysis request: Yes Were samples received intact? (none broken or leaking) Yes
 COC Signed and dated: Yes Were sample volumes sufficient for requested analysis? Yes
 Were all samples received? Yes Were VOC vials free of headspace? NA
 Client notification/authorization: Not required

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
Effluent First Renewal	19224-010	W	MB7DCR,TS,TSS 1stRenewal Sample	3x3750 P	4 C	Yes
Effluent First Renewal	19224-011	W	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;	1x250 P	HNO3	Yes
Effluent First Renewal	19224-012	W	TOC	1x40 G	H2SO4	Yes
Effluent First Renewal	19224-013	W	NH3;	1x125 P	H2SO4	Yes
Effluent First Renewal	19224-014	W	TS,TSS	1x125 P	4 C	Yes

Notes and qualifications:



Yafette Road
 mpton, NH 03842

FAX: 603-9-521

11224

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com	P.O.No: ' Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
001	Effluent Start	11-30-09 0900	0900	AW	C	3	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartSample
002	Effluent Start	12-1-09 0600		L	L	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,NI,Pb,Cu,Zn,Al,Ca,Mg;
003	Effluent Start	11-30-09 0900				1	40	G	H2SO4	Water	N	TOC
004	Effluent Start	12-1-09 0600				1	125	P	H2SO4	Water	N	NH3;
005	Effluent Start	12-1-09 0600	2600			1	125	P	4 C	Water	N	TS,TSS

Relinquished By:	Date: 12/1/09 Time: 0845	Received By:	Date: 12/1/09 Time: 0845
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR



ES Environmental Systems, Inc.
 Lafayette Road
 Hampton, NH 03842

VOICE: 603-952-521

19224

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com	P.O.No: ' Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	Container		Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:	
						No	Size (mL)					
006	Receiving Water Start	11/30/09	1200	AK	G	6	3750	P	4 C	Water	N	MB7DCR, AB48AD, AP01CR Start Diluent
007	Receiving Water Start	↓	↓	↓	↓	1	40	G	H2SO4	Water	N	TOC
008	Receiving Water Start	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
009	Receiving Water Start	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS, TSS

Relinquished By: <i>[Signature]</i>	Date: 11/30/09 Time: 1608	Received By: <i>[Signature]</i>	Date: 11/30/09 Time: 1608
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments: _____

ERR

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
010	Effluent First Renewal	12-2-09 12-3-09	0910-0600	AL	C	3	3750	P	4 C	Water	N	MB7DCR,TS,TSS 1stRenewal Sample
011	Effluent First Renewal	12-2-09 12-3-09	0910-0600	AL	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
012	Effluent First Renewal	12-2-09 12-3-09	0910-0600	AL	C	1	40	G	H2SO4	Water	N	TOC
013	Effluent First Renewal	12-2-09 12-3-09	0910-0600	AL	C	1	125	P	H2SO4	Water	N	NH3;
014	Effluent First Renewal	12-2-09 12-3-09	0910-0600	AL	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>AL</i>	Date: <i>12/03/09</i> Time: <i>0845</i>	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received at Lab By: <i>Rene O'Connell</i>	Date: <i>12/03/09</i> Time: <i>0845</i>

Comments:

ERR

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

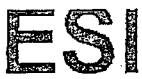
Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested Special Instructions:
015	Receiving Water First Renewal	12/2/09	0750	C. Baker	G	6	3750	P	4 C	Water	N	MB7DCR 1st Renewal Diluent
016	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
017	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>Milly H. W.</i>	Date: 12-3-09	Time: 11:00	Received By: <i>[Signature]</i>	Date: 12/3/09	Time: 11:00
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments: _____

ERR



Environmental Systems, Inc.
 Lafayette Road
 Hampton, NH 03842

VOICE: 603-773-5540
 FAX: 603-773-5621

ESI JOB NO. 14227

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/M)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
018	Effluent Second Renewal	120409-120509	0900-0600	u	C	4	3750	P	4 C	Water	N	MB7DCR,TS,TSS 2ndRenewal Sample
019	Effluent Second Renewal	120409-120509	0900-0600	u	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
020	Effluent Second Renewal	120409-120509	0900-0600	u	C	1	40	G	H2SO4	Water	N	TOC
021	Effluent Second Renewal	120409-120509	0900-0600	u	C	1	125	P	H2SO4	Water	N	NH3;
022	Effluent Second Renewal	120409-120509	0900-0600	u	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>John D. Lyver</i> Date: 12-5-09 Time: 11:15	Received By: <i>Walter M. J. [Signature]</i> Date: 12/5/09 Time: 11:15
Relinquished By: _____ Date: _____ Time: _____	Received at Lab By: _____ Date: _____ Time: _____

Comments: _____

ERR

COC Number: A1005798

Sample Delivery Group No:	December 2009	Page	of
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Lafayette Road
 Exeter, NH 03842

FAX: 603-952-521

19224

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station		Contact: Al Legendre		Project Name: Seabrook Station	
Report to: Al Legendre		Address: P.O. Box 300		Project Number: P0105 Task: 0001	
Invoice to: Al Legendre		Address: Seabrook, NH 03874		Project Manager: Al Legendre	
Voice: 603-773-7773		Fax: 603-773-7740		email: al.legendre@fpl.com P.O.No: ' Quote No:42109	

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	Container		Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:	
						No	Size (mL)					Type (P/G/T)
023	Receiving Water Second Renewal	12/4/09	0821	ENR	G	6	3750	P	4 C	Water	N	MB7DCR 2nd Renewal Diluent
024	Receiving Water Second Renewal	12/4/09	0817	ENR	G	1	125	P	H2SO4	Water	N	NH3;
025	Receiving Water Second Renewal	12/4/09	0818	ENR	G	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>W. K. [Signature]</i>	Date: 12/04/09 Time: 0951	Received By: <i>Just [Signature]</i>	Date: 12/4/09 Time: 0951
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments: _____

ERR

JANUARY 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



February 11, 2010

SBK-L-10028

NPDES Permit No. NH0020338

United States Environmental Protection Agency
Water Enforcement OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
January 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of January 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

Mr. Paul Freeman has replaced Mr. Gene St. Pierre as NextEra Energy Seabrook Site Vice President. The DMRs reflect this personnel change.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of January, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in January. No visible oil sheen, foam or floating solids were noted during the month.

One continuous discharge and two batch discharges were made during the month of January from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfall 001B

The Whole Effluent Toxicity Test Report Certification for the fourth quarter 2009 toxicity test report was inadvertently omitted from our December-2009 DMR. The completed certification is enclosed.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of January. No exceedences occurred.

Outfall 025A

Three continuous discharges occurred during the month of January. No exceedences occurred.

Outfall 025B

Three continuous discharges occurred during the month of January. No exceedences occurred.

Outfall 025C

Five batch discharges occurred during the month of January. No exceedences occurred.

Outfall 025D

Seven batch discharges occurred during the month of January. No exceedences occurred.

Outfall 027A

Three discharges were made from the Cooling Tower to support maintenance activities during the month of January. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

Environmental Protection Agency
SBK-L-10028/Page 3

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10028


WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 11/21/2010
Date

* for fourth quarter
2009 test report


Authorized Signature

Allen K. Legendre Jr. Principal Engineer
Print or Type Name and Title

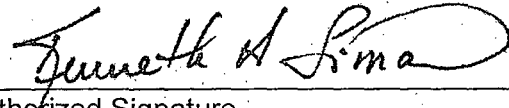
NextEra Energy Seabrook LLC
Print or Type the Permittee's Name

NH 0070338
Print or Type the NPDES Permit No.

Laboratory Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 12/23/09
Date


Authorized Signature

Kenneth A. Simon
President - EnviroSystems, Incorporated

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
0-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR:

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
01/01/2010	01/31/2010

CIRCULATING WATER SYSTEM
External Outfall

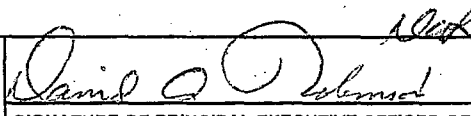
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
WDR 2/9/2010

FROM

TO

No Discharge

PARAMETER	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	77	79	deg F	0	24/01	DA
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.8	*****	7.9	SU	0	01/07	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****	0		
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****	0		
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.00	0.00	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	606	611	Mgal/d	*****	*****	*****	*****	0	24/01	ES
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	39	39	deg F	0	24/01	DA
61576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
TYPED OR PRINTED			603 773-7496	02/09/2010	
			AREA Code	NUMBER	MMDD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
01-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: ^{PAUL FREEMAN} GENE ST. PIERRE, VICE PRESIDENT
CR 2/9/2010

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
01/01/2010 TO 01/31/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	<i>NO DI</i>		<i>C</i>			
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Robinson</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	02/09/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
0-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
Ref 2/10/10

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
01/01/2010	01/31/2010

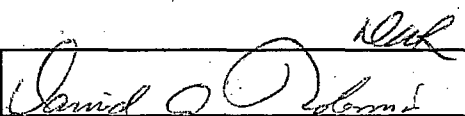
FROM

TO

BACK-FLUSHING OPERATION
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	02/10/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
0-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17123	20207	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David O. [Signature]</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	02/10/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
OKR 2/10/10

NH0020338	023-A
PERMIT NUMBER	DISCHARGE NUMBER

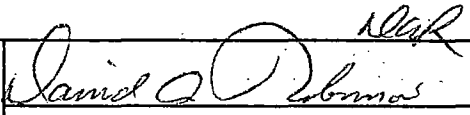
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	385	741	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.5	3.0	mg/L	0	07/WD	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	02/10/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN
Ref 2/10/10

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

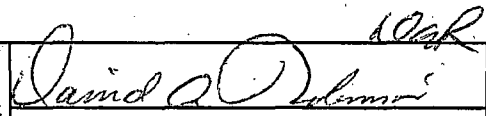
MAJOR

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	97	310	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.4	0.6	mg/L	0	07/WD	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	02/10/2010
TYPED OR PRINTED			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
10/2/210/10

NH0020338	025-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	01/01/2010	TO	01/31/2010

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	72082	191452	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.2	0.5	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David O. [Signature]</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	02/10/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
NOE 2/10/10

NH0020338	025-B
PERMIT NUMBER	DISCHARGE NUMBER

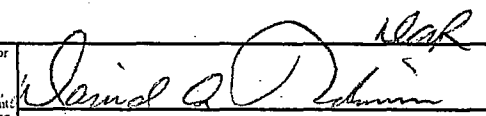
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	81920	111529	g ² /d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO.AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	02/10/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 01/01/2010 TO 01/31/2010

WASTE HOLDUP SUMP
External Outfall

ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
10/2/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17402	20042	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.0	4.8	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David O. [Signature]</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	02/10/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
Order No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
104R 2/10/10

NH0020338	025-D
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	01/01/2010	TO	01/31/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17661	18277	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.5	0.9	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. DeBenedictis</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
NOV 21/10

NH0020338	026-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. DeBorja</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE PERMIT MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: *PAUL FREEMAN*
GENE ST. PIERRE, VICE PRESIDENT
NOV 24/10

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 01/01/2010	TO 01/31/2010

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	77654	92734	gal/d	*****	*****	*****	*****	0	DL/DS	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	8.1	*****	8.3	SU	0	DL/DS	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA.
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Paul Freeman</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	02/10/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

SBK-L-10049

FEBRUARY 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



March 15, 2010

SBK-L-10049

NPDES Permit No. NH0020338

United States Environmental Protection Agency
Water Enforcement OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
February 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of February 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of February, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 28 days in February. No visible oil sheen, foam or floating solids were noted during the month.

One continuous discharge and four batch discharges were made during the month of February from the Condensate Polisher System. As described in the NPDES Permit application, discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of February. No exceedences occurred.

Outfall 025A

Four continuous discharges occurred during the month of February. No exceedences occurred.

Outfall 025B

One continuous discharge occurred during the month of February. No exceedences occurred.

Outfall 025C

Four batch discharges occurred during the month of February. No exceedences occurred.

Outfall 025D

Six batch discharges occurred during the month of February. No exceedences occurred.

Outfall 027A

One discharge was made from the Cooling Tower to support maintenance activities during the month of February. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10049

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form AP-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

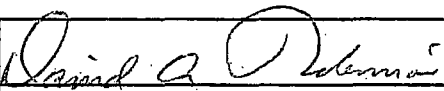
MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	02/01/2010	TO	02/28/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN *Rev 3/11/2010*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	76	78	deg F	0	24/01	DA.
1011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
1400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.9	*****	8.0	SU	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Acidic	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
1289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Acidic	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
1289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.00	0.08	mg/L	0	01/01	GR.
1044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	610	628	Mgal/d.	*****	*****	*****	*****	0	24/01	ES.
1050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	38	40	deg F	0	24/01	DA.
1576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	03/11/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form App
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

CITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

CONTACT: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 03/11/2010

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER


DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 02/01/2010	TO 02/28/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS				
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****							
576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RECORD	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	03/11/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

COMMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

CITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY.		MM/DD/YYYY	
FROM	02/01/2010	TO	02/28/2010

BACK-FLUSHING OPERATION
External Outfall

CONTACT: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN, *Car* 3/11/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
011 10 fluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
056 10 fluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Johnson</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496 AREA Code NUMBER	03/11/2010 MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form App
OMB No. 2540-004

MITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

ME: NextEra Energy Seabrook LLC
DRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

CILITY: NEXTERA ENERGY SEABROOK LLC
CATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 02/01/2010	TO 02/28/2010

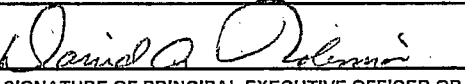
SECONDARY PLANT LEAKAGE VAULT1
External Outfall

IN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 03/11/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	14,499	15,423	gal/d	*****	*****	*****	*****	0	01/07	ES.
556 10 luent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Slids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
530 10 luent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
& grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
556 10 luent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE
			603-773-7496	03/11/2010	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

COMMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

ME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

CITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	02/01/2010	TO	02/28/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

CONTACT: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN *Sign* 3/11/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	716	2043	gal/d.	*****	*****	*****	*****	0	01/07	ES.
056 10 Fluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.6	3.1	mg/L	0	01/07	GR.
530 10 Fluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
556 10 Fluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David D. [Signature]</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form App
OMB No. 2000-0004

FACILITY NAME/ADDRESS (Include Facility Name/Location if Different)

ME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

MAJOR

CITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY
FROM 02/01/2010 TO 02/28/2010


SECONDARY PLANT LEAKAGE VAULT3
External Outfall

CONTACT: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 02/31/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	87	138	gpd	*****	*****	*****	*****	0	01/07	ES
056 10 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
1530 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
1556 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	03/11/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

CITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	02/01/2010	TO	02/28/2010

STEAM GENERATOR BLOWDOWN
External Outfall

CONTACT: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PAUL FREEMAN *DR* 3/11/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	83,731	164,448	gal/d	*****	*****	*****	*****	0	99/99	ES
056 1 0 fluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.4	1.4	mg/L	0	01/BA	GR
0530 1 0 fluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Paul Freeman</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496 AREA Code NUMBER	03/11/2010 MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *NUCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form AP
OMB No. 2040-0004

MITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

CILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN RGR 3/11/2010

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 02/01/2010	TO 02/28/2010

DMR Mailing ZIP CODE: 03874

MAJOR

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	44,277	44,277	gal/d.	*****	*****	*****	*****	0	99/99	ES
0056 1.0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
0530 1.0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Delmonico</i>	603. 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874.

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

ACTIVITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 02/01/2010 TO 02/28/2010

WASTE HOLDUP SUMP
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PAUL FREEMAN *02/31/2010*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	15,535	17,530	gal/d.	*****	*****	*****	*****	0	01/BA	ES
0056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.0	4.1	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Johnson</i>	603 773-7496	03/11/2010
TYPED OR PRINTED			AREA Code NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 02/01/2010	TO 02/28/2010

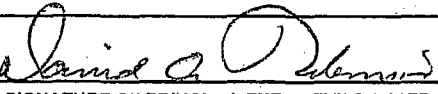
WASTE TEST/RECOVERY TEST TANKS
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 02/31/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	16,606	17,961	gpd/d	*****	*****	*****	*****	0	01/BA	ES.
0056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	100000 DAILY-MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.5	1.1	mg/L	0	01/BA	GR
0530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
0556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
			603 773-7496	03/11/2010	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

IS PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

ACTIVITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 02/01/2010 TO 02/28/2010

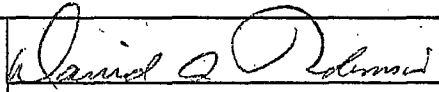
METAL CLEANING WASTES
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN *Recd 3/11/2010*

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
10056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO-AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMATE
pH	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
10400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
10530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
10556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
11042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
11045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	03/11/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 2040-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

ACTIVITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 02/01/2010 TO 02/28/2010

COOLING TOWER BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

PAUL FREEMAN *Rec'd 3/11/2010*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17,333	17,333	gal/d	*****	*****	*****	*****	0	DL/DS	ES
0056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon. MO AVG	Req: Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
PH	SAMPLE MEASUREMENT	*****	*****	*****	8.2	*****	8.2	SU	0	DL/DS	GR
0400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
0404 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA
0404 0 0 See Comments	PERMIT REQUIREMENT	Req: Mon. MO AVG	2.61 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Dolanski</i>	TELEPHONE	DATE	
			603 773-7496	03/11/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

SBK-L-10070

MARCH 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



April 13, 2010

SBK-L-10070

NPDES Permit No. NH0020338

United States Environmental Protection Agency
Water Enforcement OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
March 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of March 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of March, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in March. No visible oil sheen, foam or floating solids were noted during the month.

One batch discharge was made during the month of March from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.



April, 2010

SBK-L-10070

NPDES Permit No. NH0020338

United States Environmental Protection Agency
Water Enforcement OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
March 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of March 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of March, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in March. No visible oil sheen, foam or floating solids were noted during the month.

One batch discharge was made during the month of March from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfall 001B

The first quarter Whole Effluent Toxicity (WET) tests were performed in March 2010. No toxicity was observed in the effluent bioassays. The complete WET test report prepared by EnviroSystems, Inc. is provided in Enclosure 2.

Sampling for the first quarter WET testing was performed under the following discharge scenarios:

- Day 1 (March 08 – March 09, 2010) included discharges from Outfalls 025A, 025C & 025D,
- Day 2 (March 10 – March 11, 2010) included discharges from Outfalls 025A & 025B,
- Day 3 (March 12 – March 13, 2010) included discharges from Outfalls 025C & 025D.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of March. No exceedences occurred.

Outfall 025A

Five continuous discharges occurred during the month of March. No exceedences occurred.

Outfall 025B

Four continuous discharges occurred during the month of March. No exceedences occurred.

Outfall 025C

Seven batch discharges occurred during the month of March. No exceedences occurred.

Outfall 025D

Three batch discharges occurred during the month of March. No exceedences occurred.

Outfall 027A

One discharge was made from the Cooling Tower to support maintenance activities during the month of March. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE 1 to SBK-L-10070

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 03/01/2010	TO 03/31/2010

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

FROM

TO

No Discharge

PAUL FREEMAN *ADGR 4/9/2010*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	72	79	deg F	0	24/01	DA
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req: Mon. MO AV. MN	Req: Mon. DAILY MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.8	*****	7.9	SU	0	01/07	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI	C		
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI	C		
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.05	0.13	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	614	624	Mgal/d	*****	*****	*****	*****	0	24/01	ES
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	.720 MO AVG	.720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	38	38	deg F	0	24/01	DA
31576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Robinson</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
			603 773-7496	04/09/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 10-0004
OMB 20-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 03/01/2010 TO 03/31/2010

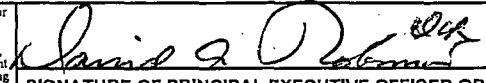
CIRCULATING WATER SYSTEM
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 4/9/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	NO DI		C			
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	04/09/2010
TYPED OR PRINTED			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	01/01/2010	TO	03/31/2010

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN *4/8/2010*

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
LC50 Static 48Hr Acute Mysid. Bahja	SAMPLE MEASUREMENT	*****	*****	*****	> 100	*****	*****	%	0	01/90	COMP24
TAA3E 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
LC50 Static 48Hr Acute Menidia	SAMPLE MEASUREMENT	*****	*****	*****	> 100	*****	*****	%	0	01/90	COMP24
TAA6B 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Static 1Hr Fert. Chronic Arbacia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBH3A 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Staire 7Day Chronic Menidia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBP6B 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Paul Freeman</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
<i>Paul Freeman / Site Vice President</i> TYPED OR PRINTED			603-773-7773	04/08/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PLEASE REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH ADDITIONAL PAGE FOR COMMENTS OR EXPLANATION OF VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 and
OMB No. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN Dir 4/9/2010

NH0020338	003-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 03/01/2010	TO 03/31/2010

BACK-FLUSHING OPERATION
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req: Mon. MO AVG	120 DAILY-MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO.AVG	500000 DAILY-MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. DeBorja</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496 AREA Code NUMBER	04/09/2010 MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 4040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 03/01/2010	TO 03/31/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN *slaf* 4/9/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17 292	20 084	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.3	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. DeBorja</i> slaf	TELEPHONE	DATE
			603 773-7496	04/09/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
03/01/2010 TO 03/31/2010

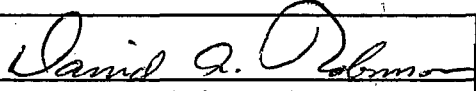
SECONDARY PLANT LEAKAGE VAULT2
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 2/26/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	818	2368	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.4	2.2	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	04/09/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE REGULATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: ~~CENE ST. PIERRE~~, VICE PRESIDENT
PAUL FREEMAN *ack 4/9/2010*

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY
FROM 03/01/2010 TO 03/31/2010

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	2538	5326		*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.6	1.1	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Freeman</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	04/09/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form No. 360-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
03/01/2010 TO 03/31/2010

STEAM GENERATOR BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN *NR 4/9/2010*

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	104761	200418	gal/d.	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	3/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. [Signature]</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	04/12/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 40-0004
OMB 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy, Seabrook LLC

ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREGMAN REC 4/9/2010

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

MAJOR

STEAM GEN. BLWDN DEMINERALIZE

External Outfall

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	03/01/2010	TO	03/31/2010

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	61272	100639	gal/d.	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	0/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	05/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President			
TYPED OR PRINTED		603 773-7496	04/12/2010

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 (Rev. 01/06)
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
03/01/2010	FROM	03/31/2010	TO

WASTE HOLDUP SUMP
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN 1062 4/9/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	15120	19010	gal/d.	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d.	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.5	3.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. [Signature]</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 (Rev. 01/06)
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
03/01/2010 TO 03/31/2010

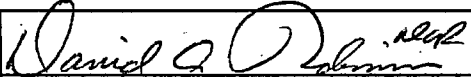
WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

PAUL FREEMAN NOR 4/12/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17338	17849	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.2	4.1	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	04/12/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 360-0004
OMB 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 03/01/2010 TO 03/31/2010

METAL CLEANING WASTES
External Outfall

ATTN: GENE ST-PIERRE, VICE PRESIDENT

No Discharge

PAUL FREEMAN *12/28 4/12/2010*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****		*****					
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. [Signature]</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 340-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 03/01/2010 TO 03/31/2010

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN 04/12/2010

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	121334	121334	gal/d.	*****	*****	*****	*****	0	DL/DS	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	8.2	*****	8.2	SU	0	DL/DS	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d.	*****	*****	*****	*****	0	DL/DS	CA
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d.	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	04/12/2010
TYPED OR PRINTED		AREA Code	NUMBER

David A. Robinson
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

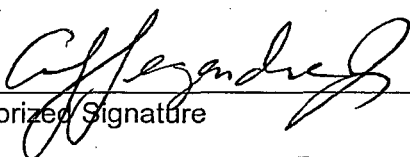
ENCLOSURE 2 to SBK-L-10070

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 4/8/2010
Date


Authorized Signature

Allen K. Legendre Jr, Principal Engineer
Print or Type Name and Title

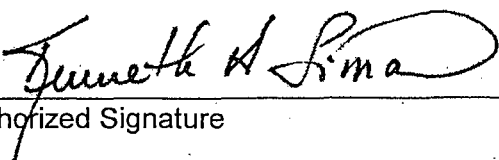
NextEra Energy Seabrook LLC
Print or Type the Permittee's Name

NH 0020338
Print or Type the NPDES Permit No.

Laboratory Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 3/25/10
Date


Authorized Signature

Kenneth A. Simon
President - EnviroSystems, Incorporated

**TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
March 2010**

**FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338**

Prepared For

FPL Energy Seabrook Station
Route 1
P.O. Box 300
Seabrook, New Hampshire 03874

Purchase Order Number: 02196759

By

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

March 2010
Reference Number SeabrookStation19504-10-03

STUDY NUMBER 19504

EXECUTIVE SUMMARY

The following summarizes the results of acute and chronic exposure bioassays performed during March 2010 to support the NPDES biomonitoring requirements of FPL Energy Seabrook Station, Seabrook, New Hampshire. Acute and chronic definitive assays were completed using the marine species, *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*.

A. bahia were ≤ 5 days old at the start of the test. *M. beryllina* were 10 days old at the start of the test. *A. punctulata* were from cultures maintained by ESI. Original stock was obtained from commercial supply. Dilution water was receiving water collected off shore by Normandeau Associates, Bedford, New Hampshire.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the chronic and modified acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Exposure Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Americamysis bahia</i>	48 Hours	>100%	100%	Report	NA	Yes
<i>Menidia beryllina</i>	48 Hours	>100%	100%	Report	NA	Yes

Chronic Exposure Toxicity Evaluation

Species	Exposure	C-NOEC	LOEC	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Menidia beryllina</i>	7 Days	100%	>100%	Report	NA	Yes
<i>Arbacia punctulata</i>	60 Minutes	100%	>100%	Report	NA	Yes

**TOXICOLOGICAL EVALUATION
OF TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
March 2010**

FPL Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338

1.0 INTRODUCTION

This report presents the results of acute and chronic toxicity tests completed on a series of composite effluent samples collected from FPL Energy Seabrook Station, Seabrook, New Hampshire. Testing was based on programs and protocols developed by the US EPA (2002). A 48 hour static acute toxicity test was conducted using the mysid shrimp, *Americamysis bahia*, a 7 day modified acute and chronic toxicity test was conducted with the inland silverside, *M. beryllina*, and a 60 minute chronic fertilization assay was conducted with the purple sea urchin, *A. punctulata*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test organisms are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test organisms. Samples with high LC-50 values are less likely to cause significant environmental impacts. The no-effect concentration is also determined to provide information about the level of effluent which would have minimal acute effects in the environment. This Acute No Observed Effect Concentration (A-NOEC) is defined as the highest tested effluent concentration which causes no significant mortality. Chronic tests evaluate toxicity based on sublethal effects. Fertilization of *Arbacia punctulata* eggs or growth (weight) of *Menidia beryllina* are measured to determine effluent concentrations that have a significant impact on the organisms. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest concentration that had an effect (C-LOEC) and the highest concentration where no effect was observed (C-NOEC). *A. punctulata* fertilization data are also evaluated to determine the effluent concentration where a reduction in fertilization rates occurs. This is known as the Inhibition Concentration (IC).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

When necessary, *A. bahia* and *M. beryllina* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

Male and female *A. punctulata* are maintained in separate chambers as recommended by protocol (EPA 2002).

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. When necessary, effluent used in the *A. bahia* and *M. beryllina* assays was salinity adjusted to 25±2 ppt and the effluent used in the *A. punctulata* assay was salinity adjusted to 30±2 ppt using artificial sea salts according to protocol (EPA 2002). Effluent and receiving water samples that were received at or above a salinity of 25±2 ppt did not require salinity adjustment (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1

and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in effluent and diluent samples. Samples containing ≥ 0.02 mg/L TRC were treated with sodium thiosulfate (EPA 2002).

2.4 Bioassays

Test concentrations for the assays were 100%, 50%, 25%, 12.5%, and 6.25% effluent.

2.4.1 *Americamysis bahia* Acute Exposure Bioassay

The 48 hour static acute assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Test chambers were 250 mL glass beakers with 200 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Survival and dissolved oxygen were recorded daily in all replicates. Temperature, pH, and salinity were measured in one replicate of each test treatment daily.

2.4.2 *Menidia beryllina* Chronic Exposure Bioassay

The 7 day static renewal chronic exposure assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Fish were maintained in 600 mL beakers containing 500 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Prior to daily renewals, survival and dissolved oxygen in all replicates were recorded and pH, salinity and temperature were measured in one replicate of each test treatment. Dissolved oxygen, salinity, pH, and temperature were measured in one replicate of each new test treatment. Survival data was analyzed to assess acute toxicity after the initial 48 hours of exposure.

During the test, fish were fed ≤ 24 hour old *Artemia* nauplii twice a day. On Day 7 of the assay surviving fish were removed from test solutions, rinsed to remove any surface detritus and salts, and tranquilized using Finquel® brand tricaine methanesulfonate. Fish were placed on tared containers and dried for 24 hours at 104°C to obtain dry weight to the nearest 0.01 mg. To obtain final dry weight/fish used for statistical comparisons, the net dry weight was divided by the number of organisms introduced at the initiation of the assay.

2.4.3 *Arbacia punctulata* Chronic Fertilization Bioassay

Test chambers were 20 mL glass vials with 5 mL of test solution in each of 4 replicates. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted (see data appendix for final counts) and exposed to effluent solutions for 60 minutes. Eggs were introduced to sperm/effluent solutions and exposed for 20 minutes prior to the addition of preservative. Aliquots of preserved solution were counted to determine fertilized and unfertilized eggs.

2.5 Data Analysis

When necessary, statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. If survival in the highest test concentration is $>50\%$, the LC-50 is obtained by direct observation of the raw data. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results, Table 2, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS AND DISCUSSION

LC-50 and A-NOEC values from the *A. bahia* acute exposure assays are presented in Table 3. Data

from the *A. punctulata* fertilization assay are summarized in Table 4. Results of the chronic exposure assay completed using *M. beryllina* are provided in Table 5. A summary of water quality data collected during the assays is presented in Table 6. US EPA Attachment F toxicity test summary forms are included after the tables. Support data, including copies of laboratory bench sheets, can be found in Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria require $\geq 90\%$ survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate and the MSDp for fertilization to be $< 25\%$ for *Arbacia punctulata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

3.3 *Menidia beryllina* Chronic Exposure Bioassay

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.500 mg/fish based on Day 7 survival, and the MSDp for biomass to be $< 28\%$ for *Menidia beryllina* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 5 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls*. US EPA Region I Offices, Boston, Massachusetts.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms*. Third Edition. EPA-821-R-02-014.

**TABLE 1. Summary of Sample Collection Information.
FPL Energy Seabrook Station Effluent Evaluation. March 2010.**

Sample Description	Type	Collection		Receipt		Arrival Temp °C
		Date	Time	Date	Time	
EFFLUENT						
Start	Comp	03/08-09/10	0900-0600	03/09/10	1105	4
1st Renewal	Comp	03/10-11/10	0900-0600	03/11/10	1105	3
2nd Renewal	Comp	03/12-13/10	0900-0600	03/13/10	0905	4
RECEIVING WATER						
Start	Grab	03/08/10	0930	03/08/10	1230	5
1st Renewal	Grab	03/10/10	0730	03/10/10	0930	4
2nd Renewal	Grab	03/12/10	1000	03/12/10	1105	5

**TABLE 2. Summary of Reference Toxicant Data.
FPL Energy Seabrook Station Effluent Evaluation. March 2010.**

Date	Endpoint	Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
<i>A. bahia</i>					
02/17/10	Survival	LC-50 - 48 Hr	22.2	21.7	17.7 - 25.6 SDS (mg/L)
<i>M. beryllina</i>					
02/17/10	Survival	LC-50 - 48 Hr	8.3	7.4	4.3 - 10.6 SDS (mg/L)
02/17/10	Survival	C-NOEC	5.0	5.0	2.5 - 10.0 SDS (mg/L)
02/17/10	Growth	C-NOEC	5.0	5.0	2.5 - 10.0 SDS (mg/L)
<i>A. punctulata</i>					
02/18/10	Fertilization	C-NOEC	10.0	5.0	1.0 - 10.0 Copper (µg/L)
02/18/10	Fertilization	IC-25	24.7	12.8	0.0 - 36.8 Copper (µg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

**TABLE 3. Summary of Acute Evaluation Results: *A. bahia*.
FPL Energy Seabrook Station Effluent Evaluation. March 2010.**

Species	Exposure	PERCENT SURVIVAL						
		Lab	RW	6.25%	12.5%	25%	50%	100%
<i>A. bahia</i>	48 hours	97.5%	97.5%	97.5%	100%	97.5%	95%	97.5%

LC-50 COMPUTATION TECHNIQUE

Species	Exposure	Spearman-Kärber	Linear Regression	Nonlinear Regression	A-NOEC
<i>A. bahia</i>	48 Hours	NC	NC	NC	100%

COMMENTS:

RW = Receiving Water used as diluent.

**TABLE 4. Summary of Chronic Bioassay Results: *A. punctulata*.
FPL Energy Seabrook Station Effluent Evaluation. March 2010.**

	TREATMENTS						
	Lab	RW	6.25%	12.5%	25%	50%	100%
Mean % Fertilization	96.2%	90.9%	96.4%	96.7%	96.1%	95.3%	96.0%
Significantly < Diluent	-	-	No	No	No	No	No

Chronic No Observed Effect Concentration 100%
 Lowest Observed Effect Concentration >100%
 IC-10: >100%
 MSDp: 7.4%

COMMENTS:

RW = Receiving Water used as diluent.

TABLE 5. Summary of Chronic and Modified Acute Bioassay Results: *M. beryllina*. FPL Energy Seabrook Station Effluent Evaluation. March 2010.

Effluent Conc.	Mean Percent Survival		Mean Biomass (mg/fish)	Is There a Significant Difference Based on	
	Day 2	Day 7		Survival (%)	Growth (Biomass)
LAB	100.0%	97.5%	1.49	-	-
RW	100.0%	97.5%	1.64	-	-
6.25%	100.0%	100.0%	1.54	No	No
12.5%	97.5%	100.0%	1.62	No	No
25.0%	100.0%	97.5%	1.75	No	No
50.0%	100.0%	97.5%	1.94	No	No
100.0%	100.0%	97.5%	1.59	No	No

LC-50 = >100%

MSDp = 26.7%

NOEC = 100.0% NOEC = 100.0%

COMMENTS:

RW = Receiving Water used as diluent.

Difference between diluent and treatment means considered to be significant when $p < 0.05$

Additional bioassay data and statistical analyses are provided in Appendix A.

TABLE 6. Initial Water Quality Data Summary. FPL Energy Seabrook Station Effluent Evaluation. December 2009

PARAMETER	UNITS	EFFLUENT	RECEIVING WATER
Salinity	ppt	31	29
pH	SU	7.76	7.82
Total Residual Chlorine	mg/L	<0.02	<0.02
Total Solids	mg/L	32000	32000
Total Suspended Solids	mg/L	36	<10
Ammonia	mg/L as N	<0.1	<0.1
Total Organic Carbon	mg/L	<0.4	<0.4
Aluminum, total	mg/L	0.065	-
Cadmium, total	mg/L	<0.0007	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	0.13	-
Lead, total	mg/L	<0.0005	-
Nickel, total	mg/L	0.002	-
Zinc, total	mg/L	0.004	-

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 03/11/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 03/13/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input checked="" type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
	<input checked="" type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 03/10-11/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 02/17/10 LC-50: 22.2 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: 97.5 %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50 >100% %

Upper Limit: - %

Lower Limit: - %

Method: Direct Observation

A-NOEC: 100 %

C-NOEC: - %

C-LOEC: - %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 03/09/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 03/16/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> <i>Menidia beryllina</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Arbacia punctulata</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 03/08-09/10 03/10-11/10 03/12-13/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 02/17/10 LC-50: 8.3 mg/L Sodium Dodecyl Sulfate
02/17/10 NOEC: 5.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: <u>97.5</u> %	Mean Dry Weight/fish <u>1.7</u> mg
	MSDp: <u>26.7</u> %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50 >100 %

Upper Limit: - %

Lower Limit: - %

Method: Direct Observation

A-NOEC: 100 %

C-NOEC: 100 %

C-LOEC: >100 %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: FPL Energy -Seabrook Station TEST START DATE: 03/11/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 03/11/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input checked="" type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input checked="" type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 03/10-11/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 02/18/10 NOEC: 10.0 mg/L Copper
02/18/10 IC-25 24.7 mg/L Copper

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Proportion Fertilized: <u>90.9</u> %	MSDp: <u>7.4</u> %
LIMITS	RESULTS
LC-50: <u>Report</u> %	LC-50: _____ %
A-NOEC: <u>-</u> %	Upper Limit: _____ %
C-NOEC: <u>Report</u> %	Lower Limit: _____ %
IC- _____ %	Method: <u>Dunnett's</u>
	A-NOEC: _____ %
	C-NOEC: <u>100</u> %
	C-LOEC: <u>>100</u> %
	IC- 10: <u>>100</u> %

APPENDIX A

DATA SHEETS AND STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Biomonitoring Testing	1
<i>A. bahia</i> Acute Bioassay Daily Observation Bench Sheets	2
<i>A. bahia</i> Survival and Growth Statistics	0
<i>A. bahia</i> Organism Culture Data	1
<i>M. beryllina</i> - 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>M. beryllina</i> Larval Fish Dry Weight Summary Sheet	1
<i>M. beryllina</i> Survival and Growth Statistics	6
<i>M. beryllina</i> Organism Culture Data	1
<i>A. punctulata</i> Fertilization Water Quality and Sperm Dilutions	1
<i>A. punctulata</i> Egg Count Data Sheet	1
<i>A. punctulata</i> Fertilization Statistics	4
Water Quality Bench Sheets	3
Dilution Preparation Bench Sheets and Instrument Use Logs	5
Analytical Chemistry Support Data Summary Report	2
Sample Receipt Record - Effluent and Diluent Samples	1
Chain of Custody Record	6
Total Appendix Pages	36

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i>	EPA-821-R-02-012
<i>Pimephales promelas</i>	EPA-821-R-02-012
<i>Americamysis bahia</i>	EPA-821-R-02-012
<i>Menidia beryllina</i> , <i>Cyprinodon variegatus</i>	EPA-821-R-02-012
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013, 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013, 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-013, 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-013, 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-013, 1008.0
<i>Champia parvula</i>	EPA-821-R-02-013, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20 th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20 th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20 th Edition - Method 5310C
Specific Conductance	Standard Methods 20 th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20 th Edition - Method 4500NH3G
pH	Standard Methods 20 th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20 th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20 th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20 th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20 th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19504		"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES						
CLIENT: FPL Energy Seabrook Station	TEST ORGANISM: <i>A. bahia</i>	TRC	AMM	TS/TSS	TOC	T. Metals	pH	SALINITY
SAMPLE: EFFLUENT	ORGANISM SUPPLIER/BATCH/AGE: <i>See Organism Culture Sheet</i>	EFF	10.02	013 See N. bergyllina	014	012	011 (E3)	
DILUENT: Receiving Water		DIL	10.02	016	017			

SALINITY ADJUSTMENT RECORD : — ML EFFLUENT + — G SEA SALTS = 100% ACTUAL PERCENTAGE NA

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
LAB	A	10	10	10	7.6	6.8	7.0	8.01	8.10	8.04	24	24	24	28	29	32
	B	10	9	9	7.6	6.9	6.9									
	C	10	10	10	7.6	7.0	7.0									
	D	10	10	10	7.6	7.1	7.0									
Rec' Water	A	10	10	10	8.1	7.1	7.0	7.82	7.96	8.05	24	24	24	30	32	34
	B	10	10	10	8.1	7.2	7.1									
	C	10	10	10	8.1	7.3	7.1									
	D	10	9	9	8.1	7.3	7.1									
6.25%	A	10	10	10	8.1	7.3	7.0	7.83	8.08	8.05	24	24	24	31	32	33
	B	10	10	10	8.1	7.4	6.9									
	C	10	9	9	8.1	7.4	7.0									
	D	10	10	10	8.1	7.3	7.0									
12.5%	A	10	10	10	8.3	7.4	7.0	7.83	8.16	8.09	24	24	24	31	32	33
	B	10	10	10	8.3	7.5	7.0									
	C	10	10	10	8.3	7.6	7.1									
	D	10	10	10	8.3	7.4	7.1									

DATE	3-11-10	3/12/10	3/13	3/11/10	3/12/10	3/13
TIME	1520	1550	1525	1455	1545	1455
INITIALS	DM	W	US	JA	W	LB

‡ - Temperature in vessel

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19504										"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES						
CLIENT: FPL Energy Seabrook Station				TEST ORGANISM: <i>A. bahia</i>												
SAMPLE: EFFLUENT										See Page 1						
DILUENT: Receiving Water																
CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
25%	A	10	10	10	8.3	7.5	7.1	7.83	8.10	8.08	24	24	24	31	32	33
	B	10	10	10	8.3	7.6	6.9									
	C	10	10	10	8.3	7.6	6.7									
	D	10	9	9	8.3	7.4	6.9									
50%	A	10	9	9	8.4	7.5	6.8	7.83	8.10	7.94	24	24	24	31	32	33
	B	10	10	9	8.4	7.5	6.8									
	C	10	10	10	8.4	7.6	6.9									
	D	10	10	10	8.4	7.5	6.9									
100%	A	10	9	9	8.1	7.5	6.9	7.85	8.11	8.08	24	24	24	31	32	33
	B	10	10	10	8.1	7.6	7.0									
	C	10	10	10	8.1	7.6	7.0									
	D	10	10	10	8.1	7.5	7.1									
DATE		3/11/10	3/12/10	3/13	3/11/10	3/12/10	3/13									
TIME		1520	1550	1525	1455	1545	1455									
INITIALS		DM	vc	UP	JR	vc	UP									

‡ - Temperature in vessel.



Aquatic Research Organisms

rec
3/11/10

DATA SHEET

I. Organism History

Species AMERICAMYSIS bahia

Source: Lab reared Hatchery reared Field collected

Hatch date 3-09-10 Receipt date

Lot number 030910MS Strain

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ~30 ppt D.O. — ppm

pH 7.8 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater Saltwater Other

Recirculating Flow through Static

DIET: Flake food Phytoplankton Trout chow

Artemia Rotifers YCT Other ESCAP SHRIMP DIET

Prophylactic treatments:

Comments:

IV. Shipping Information

Client: ESI # of Organisms 1240+

Carrier: Date shipped 3-11-10

Biologist: Mark J. Ferguson

Menidia beryllina 7 DAY CHRONIC ASSAY

STUDY		CLIENT		SAMPLE						DILUENT				FISH/BATCH		
19504		FPL Energy Seabrook Station		EFFLUENT						RECEIVING WATER (RW)				See Organism Culture Sheet		
CONC	REP	NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
		0	1	2	3	4	5	6	7	1	2*	3	4	5	6	7
LAB	A	10	10	10	10	10	10	10	10	5.3	3.9	6.8	6.6	6.9	7.2	7.5
	B	10	10	10	10	10	10	10	10	5.4	4.0	7.0	6.7	6.8	7.2	7.8
	C	10	10	10	10	10	10	10	10	5.5	4.4	7.0	6.9	6.8	6.8	7.7
	D	10	10	10	10	10	10	9	9	5.7	4.5	7.0	7.0	6.8	7.0	7.8
RW	A	10	10	10	10	10	10	10	10	5.6	4.2	7.1	7.1	6.9	7.2	7.6
	B	10	10	10	10	10	10	10	10	5.5	4.4	7.1	7.2	6.9	7.3	7.6
	C	10	10	10	10	10	10	9	9	5.3	4.2	7.2	7.4	6.8	7.3	7.8
	D	10	10	10	10	10	10	10	10	5.5	4.4	7.2	7.4	6.8	7.3	7.8
6.25%	A	10	10	10	10	10	10	10	10	5.3	4.2	7.3	7.5	6.8	7.3	7.8
	B	10	10	10	10	10	10	10	10	5.5	4.4	7.3	7.5	6.9	7.2	7.8
	C	10	10	10	10	10	10	10	10	5.5	4.2	7.4	7.6	6.9	7.4	7.5
	D	10	10	10	10	10	10	10	10	5.7	4.6	7.4	7.5	7.0	7.4	7.8
12.5%	A	10	10	10	10	10	10	10	10	5.3	4.0	7.4	7.5	7.0	7.3	7.8
	B	10	10	10	10	10	10	10	10	5.4	4.2	7.4	7.6	6.9	7.3	7.8
	C	10	10	10	10	10	10	10	10	5.2	4.3	7.4	7.6	6.9	7.3	7.8
	D	10	10	9	9	10	10	10	10	5.4	4.1	7.4	7.5	7.0	7.2	7.9
25%	A	10	10	10	10	10	10	10	10	5.4	4.2	7.4	7.6	6.9	7.2	7.9
	B	10	10	10	10	10	10	10	10	5.6	4.2	7.5	7.6	6.9	7.3	7.9
	C	10	10	10	10	10	10	10	10	5.2	4.1	7.5	7.6	6.9	7.3	8.0
	D	10	10	10	9	9	9	9	9	5.1	4.1	7.5	7.6	6.9	7.3	8.0
50%	A	10	10	10	10	10	10	10	10	5.3	4.3	7.5	7.6	6.8	7.3	7.8
	B	10	10	10	10	10	10	10	10	5.2	4.1	7.6	7.6	6.9	7.3	7.9
	C	10	10	10	10	10	10	9	10	5.2	4.4	7.6	7.7	6.9	7.3	7.9
	D	10	10	10	10	10	10	10	10	5.0	4.0	7.6	7.6	6.9	7.3	7.9
100%	A	10	10	10	10	10	10	10	10	5.5	4.6	7.6	7.5	6.9	7.3	7.8
	B	10	10	10	10	10	10	10	10	5.6	4.7	7.6	7.5	6.8	7.3	7.9
	C	10	10	10	10	10	10	10	10	5.3	4.2	7.6	7.5	6.3	7.3	7.8
	D	10	10	10	10	9	9	9	9	5.3	4.2	7.6	7.5	5.9	7.3	7.8
INC TEMP °C:		26	26	26	26	26	26	26	26	A.M. air July 2						
DATE:		9/9/10	3/10/10	3/11/10	3/12	3/13	3-14	3-15	3/16	ADDITIONAL OLD WATER QUALITIES ON SEPARATE DATA SHEET.						
TIME:		1440	0945	1255	0925	1055	1505	1435	1050							
INITIALS:		UB	W	R	SJ	WM	DM	DM	W							

Larval Fish Dry Weight Summary Sheet

Study:	19504	
Client:	Seabrook St	
Date/Time/Init:	03/19/10 1000 WM	03/14/10 NF
Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	28.19	10.3
Lab B	25.72	12.13
Lab C	25.85	10.88
Lab D	24.69	11.55
RW A	26.51	13.76
RW B	30.06	11.81
RW C	31.05	11.19
RW D	29.15	14.33
6A	29.57	12.12
6B	22.06	8.99
6C	29.48	13.45
6D	29.09	14.09
12A	31.97	13.86
12B	26.05	10.84
12C	24.33	10.93
12D	27.72	9.69
25A	24.66	7.39
25B	21.28	8.05
25C	25.6	7.56
25D	33.38	12.07
50A	26.88	9.48
50B	26.43	6.95
50C	29.71	11.06
50D	34.67	12.42
100A	25.68	12.65
100B	28.29	13.14
100C	31.68	13.55
100D	28.93	11.5

CETIS Summary Report

Report Date: 23 Mar-10 14:54 (p 1 of 2)
 Test Code: 06-2464-2464/19504Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Batch ID: 14-1334-4053	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 09 Mar-10 14:40	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 16 Mar-10 10:50	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 20h	Source: ARO - Aquatic Research Organisms, NH	Age: 10 d

Sample ID: 20-3243-9866	Code: 19504	Client: FLP Energy
Sample Date: 09 Mar-10 06:00	Material: Industrial Effluent	Project: First Quarter WET Compliance Test
Receive Date: 09 Mar-10 11:05	Source: Seabrook Station	
Sample Age: 9h (4 °C)	Station: NH0020338 Final Discharge	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
07-8650-7618	7d Proportion Survived	100	>100	N/A	7.15%	1	Steel Many-One Rank Test
21-2321-3659	Mean Dry Biomass-mg	100	>100	N/A	26.7%	1	Dunnett's Multiple Comparison Test
21-2872-9416	Mean Dry Weight-mg	100	>100	N/A	29.6%	1	Dunnett's Multiple Comparison Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-8650-7618	7d Proportion Survived	Control Resp	0.975	0.8 - NL	Yes	Result Within Limits
21-2321-3659	Mean Dry Biomass-mg	Control Resp	1.64	0.5 - NL	Yes	Result Within Limits
21-2321-3659	Mean Dry Biomass-mg	PMSD	0.267	0.11 - 0.28	Yes	Result Within Limits

7d Proportion Survived Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
0	Lab Water	4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
6.25		4	1	1	1	1	1	0	0	0.0%	-2.56%
12.5		4	1	1	1	1	1	0	0	0.0%	-2.56%
25		4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
50		4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
100		4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%

Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.64	1.52	1.76	1.27	1.99	0.0589	0.323	19.6%	0.0%
0	Lab Water	4	1.49	1.41	1.57	1.31	1.79	0.0391	0.214	14.4%	9.27%
6.25		4	1.54	1.47	1.61	1.31	1.75	0.0336	0.184	12.0%	6.29%
12.5		4	1.62	1.53	1.7	1.34	1.81	0.0419	0.23	14.2%	1.42%
25		4	1.75	1.62	1.87	1.32	2.13	0.0606	0.332	19.0%	-6.35%
50		4	1.94	1.87	2.02	1.74	2.22	0.0375	0.206	10.6%	-18.4%
100		4	1.59	1.51	1.68	1.3	1.81	0.0423	0.232	14.5%	2.95%

Mean Dry Weight-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.7	1.54	1.85	1.27	2.21	0.0746	0.408	24.1%	0.0%
0	Lab Water	4	1.53	1.46	1.6	1.36	1.79	0.0337	0.185	12.1%	10.1%
6.25		4	1.54	1.47	1.61	1.31	1.75	0.0336	0.184	12.0%	9.33%
12.5		4	1.62	1.53	1.7	1.34	1.81	0.0419	0.23	14.2%	4.62%
25		4	1.81	1.64	1.97	1.32	2.37	0.0785	0.43	23.8%	-6.38%
50		4	2	1.92	2.07	1.74	2.22	0.0374	0.205	10.3%	-17.6%
100		4	1.64	1.53	1.75	1.3	1.94	0.0524	0.287	17.5%	3.26%

CETIS Summary Report

Report Date:

23 Mar-10 14:54 (p 2 of 2)

Test Code:

06-2464-2464/19504Mb

Menidia beryllina 7-d Larval Survival and Growth Test						EnviroSystems, Inc.
7d Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1	1	0.9	1	
0	Lab Water	1	1	1	0.9	
6.25		1	1	1	1	
12.5		1	1	1	1	
25		1	1	1	0.9	
50		1	1	0.9	1	
100		1	1	1	0.9	
Mean Dry Biomass-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.27	1.83	1.99	1.48	
0	Lab Water	1.79	1.36	1.5	1.31	
6.25		1.75	1.31	1.6	1.5	
12.5		1.81	1.52	1.34	1.8	
25		1.73	1.32	1.8	2.13	
50		1.74	1.95	1.86	2.22	
100		1.3	1.52	1.81	1.74	
Mean Dry Weight-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.27	1.83	2.21	1.48	
0	Lab Water	1.79	1.36	1.5	1.46	
6.25		1.75	1.31	1.6	1.5	
12.5		1.81	1.52	1.34	1.8	
25		1.73	1.32	1.8	2.37	
50		1.74	1.95	2.07	2.22	
100		1.3	1.52	1.81	1.94	

CETIS Analytical Report

Report Date: 23 Mar-10 14:54 (p 3 of 4)
 Test Code: 06-2464-2464/19504Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 07-8650-7618 Endpoint: 7d Proportion Survived CETIS Version: CETISv1.7.0
 Analyzed: 23 Mar-10 14:53 Analysis: Nonparametric-Control vs Treatments Official Results: Yes

Batch ID: 14-1334-4053 Test Type: Growth-Survival (7d) Analyst:
 Start Date: 09 Mar-10 14:40 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 16 Mar-10 10:50 Species: Menidia beryllina Brine: Generic commercial salts
 Duration: 6d 20h Source: ARO - Aquatic Research Organisms, NH Age: 10 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	7.15%

Steel Many-One Rank Test

Control	vs	Conc-%	Test Stat	Critical	Ties	P-Value	Decision(5%)
Receiving Water		6.25	20	10	1	0.9516	Non-Significant Effect
		12.5	20	10	1	0.9516	Non-Significant Effect
		25	18	10	2	0.8333	Non-Significant Effect
		50	18	10	2	0.8333	Non-Significant Effect
		100	18	10	2	0.8333	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.08	2.8	0.7306	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.00885311	0.001770622	5	0.4	0.8424	Non-Significant Effect
Error	0.07967799	0.004426555	18			
Total	0.0885311	0.006197177	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	0.4	4.25	0.8424	Equal Variances
Distribution	Shapiro-Wilk Normality	0.665		<0.0001	Non-normal Distribution

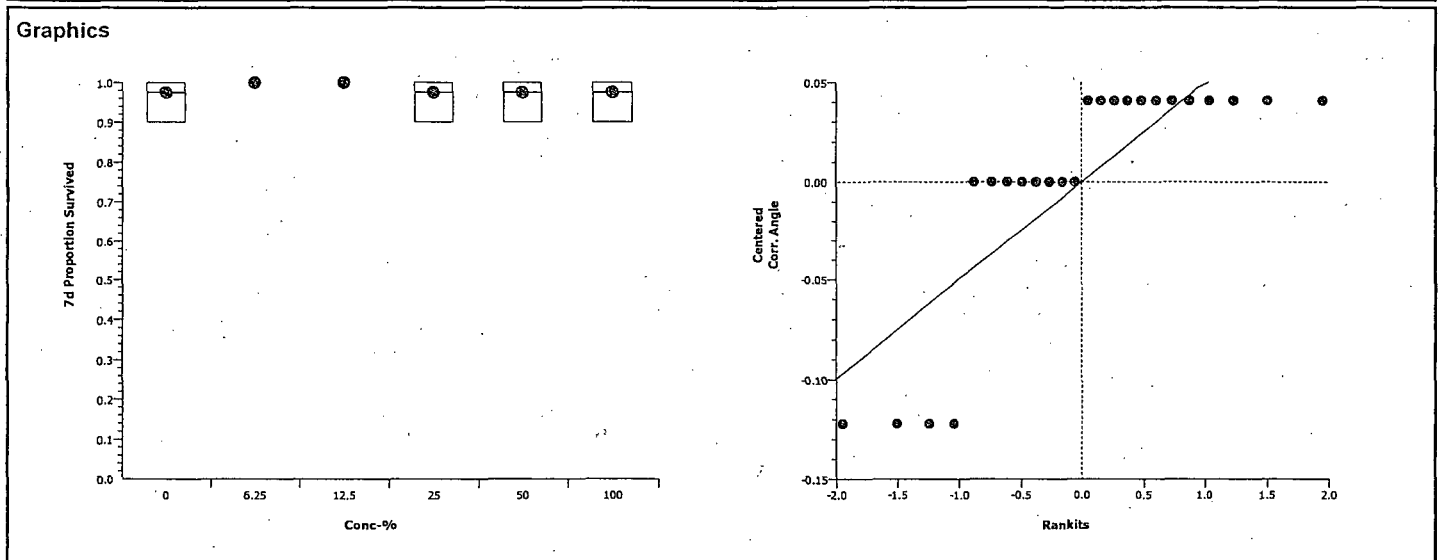
7d Proportion Survived Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%
6.25		4	1	1	1	1	1	0	0	0.0%	-2.56%
12.5		4	1	1	1	1	1	0	0	0.0%	-2.56%
25		4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%
50		4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%
100		4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Wate	4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%
6.25		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	-2.97%
12.5		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	-2.97%
25		4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%
50		4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%
100		4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%

Menidia beryllina 7-d Larval Survival and Growth Test			EnviroSystems, Inc.
Analysis ID: 07-8650-7618	Endpoint: 7d Proportion Survived	CETIS Version: CETISv1.7.0	
Analyzed: 23 Mar-10 14:53	Analysis: Nonparametric-Control vs Treatments	Official Results: Yes	



CETIS Analytical Report

Report Date: 23 Mar-10 14:54 (p 1 of 4)
 Test Code: 06-2464-2464/19504Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 21-2321-3659 Endpoint: Mean Dry Biomass-mg CETIS Version: CETISv1.7.0
 Analyzed: 23 Mar-10 14:54 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 14-1334-4053 Test Type: Growth-Survival (7d) Analyst:
 Start Date: 09 Mar-10 14:40 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 16 Mar-10 10:50 Species: Menidia beryllina Brine: Generic commercial salts
 Duration: 6d 20h Source: ARO - Aquatic Research Organisms, NH Age: 10 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run	100	>100	N/A	1	26.7%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	0.568	2.41	0.438	0.6178	Non-Significant Effect
	12.5	0.128	2.41	0.438	0.7929	Non-Significant Effect
	25	-0.573	2.41	0.438	0.9490	Non-Significant Effect
	50	-1.66	2.41	0.438	0.9975	Non-Significant Effect
	100	0.267	2.41	0.438	0.7431	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.86	2.8	1.0000	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4279052	0.08558104	5	1.29	0.3101	Non-Significant Effect
Error	1.19095	0.06616391	18			
Total	1.618856	0.151745	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	1.56	15.1	0.9061	Equal Variances
Distribution	Shapiro-Wilk Normality	0.97		0.6749	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.64	1.52	1.76	1.28	1.99	0.0599	0.323	19.6%	0.0%
6.25		4	1.54	1.47	1.61	1.31	1.75	0.0342	0.184	12.0%	6.29%
12.5		4	1.62	1.53	1.71	1.34	1.81	0.0426	0.23	14.2%	1.42%
25		4	1.75	1.62	1.87	1.32	2.13	0.0617	0.332	19.0%	-6.35%
50		4	1.94	1.87	2.02	1.74	2.23	0.0382	0.206	10.6%	-18.4%
100		4	1.59	1.51	1.68	1.3	1.81	0.043	0.232	14.5%	2.95%

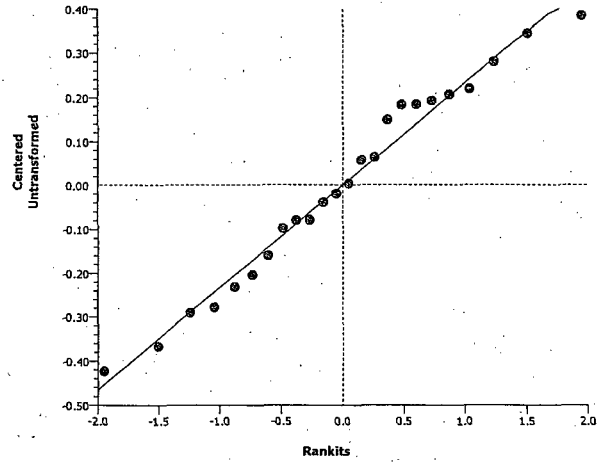
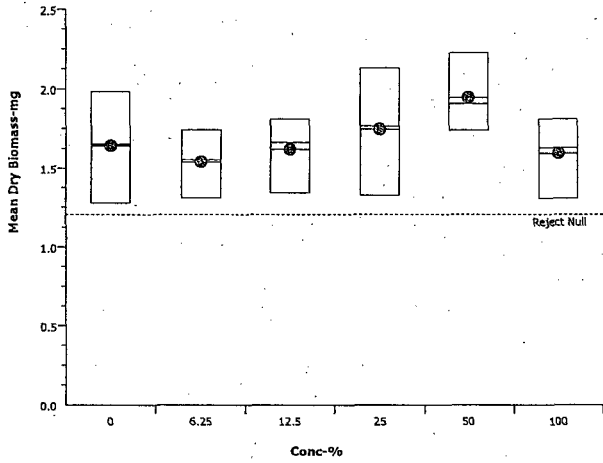
Menidia beryllina 7-d Larval Survival and Growth Test

EnviroSystems, Inc.

Analysis ID: 21-2321-3659 Endpoint: Mean Dry Biomass-mg
Analyzed: 23 Mar-10 14:54 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics





Rec: 3/9/10

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species MENIDIA BERYLINA

Source: Lab reared Hatchery reared _____ Field collected _____

Hatch date 2-27-10 Receipt date _____

Lot number 022410MB Strain _____

Brood origination CAPE COD MA

II. Water Quality

Temperature 25 °C Salinity ≈30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater _____ Saltwater Other _____

Recirculating Flow through _____ Static _____

DIET: Flake food Phytoplankton _____ Trout chow _____

Artemia Rotifers YCT _____ Other ENCAP. SHRIMP DIET

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: EST # of Organisms 2160+

Carrier: _____ Date shipped 3-9-10

Biologist: Mark Townsend

Arbacia punctulata Chronic Fertilization Assay

STUDY: <u>0504</u>	CLIENT: FPL Energy Seabrook Station	SAMPLE/DILUENT: EFFLUENT / RECEIVING WATER (RW)	DATE / INITIALS: <u>3/11/10 LB</u>		
SALINITY ADJUSTMENT RECORD: ml EFFLUENT + g SALT = 100% ACTUAL PERCENTAGE					
SALINITY ADJUSTMENT RECORD: <u>1000</u> ml DILUENT + <u>()</u> g SALT = 100% ACTUAL PERCENTAGE					
EFFLUENT CONCENTRATION)	D.O. (mg/L)	pH (SU)	TEMPERATURE (°C)	SALINITY (ppt)	TRC (mg/L)
"AS RECEIVED" EFFLUENT	<u>8.9</u> <u>12.8</u> <u>3/11/10</u>	<u>7.85</u>		<u>29.6</u>	<u><0.02</u>
"AS RECEIVED" RW DILUENT	<u>8.0</u>	<u>7.78</u>		<u>30.4</u>	<u>40.02</u>
LAB CONTROL	<u>7.1</u>	<u>7.99</u>	<u>21</u>	<u>28</u>	
RW	<u>9.3</u>	<u>7.81</u>	<u>20</u>	<u>31</u>	
6.25%	<u>9.3</u>	<u>7.81</u>	<u>20</u>	<u>31</u>	
12.5%	<u>9.2</u>	<u>7.81</u>	<u>20</u>	<u>31</u>	
25%	<u>8.8</u>	<u>7.82</u>	<u>20</u>	<u>31</u>	
50%	<u>8.8</u>	<u>7.82</u>	<u>21</u>	<u>31</u>	
100%	<u>9.2</u>	<u>7.82</u>	<u>21</u>	<u>31</u>	

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 126 X 10⁴ = SPM SOLUTION E = 1.26 x 10⁶

SPERM CONCENTRATIONS: SOLUTION E X 40 = SOLUTION A = 5.04 x 10⁷ SPM
 SOLUTION E X 20 = SOLUTION B = 2.52 x 10⁷ SPM
 SOLUTION E X 5 = SOLUTION C = 6.30 x 10⁶ SPM

FINAL COUNTS:

FINAL SPERM COUNT: 5.04 x 10⁷
 FINAL EGG COUNT: 2200

Sampling Date _____ Time _____

Bottles Pulled: EFFLUENT DILUENT
 TOC
 METALS N/A
 AMM
 TS/S

TEST TIMES:

SPERM COLLECTED: 1345
 EGGS COLLECTED: 1345
 SPERM ADDED: 1425
 EGGS ADDED: 1525
 FIXATIVE ADDED: 1545

Meters Used

DO meter # 24 DO probe # 89 pH meter # 1097 pH probe # 90 S/C meter # YS130D S/C probe # YS130D
 SALINITY meter # YS130D Temp. (thermometer or probe #) YS130D

Arbacia punctulata Chronic Fertilization Assay

STUDY	CLIENT	SAMPLE/DILUENT			DATE
19504	FPL Energy Seabrook Station	EFFLUENT / RECEIVING WATER (RW)			3/2/16
EFFLUENT CONC.	REPLICATE VIAL				
	<u>1</u> FERT/TOTAL	<u>2</u> FERT/TOTAL	<u>3</u> FERT/TOTAL	<u>4</u> FERT/TOTAL	
LAB	110/120	101/102	101/103	100/104	
RW	94/116	99/106	97/105	92/101	
6.25%	94/101	97/100	100/105	110/114	
12.5%	101/104	100/104	100/101	103/109	
25%	104/105	100/104	94/100	100/105	
50%	101/106	100/105	101/107	99/103	
100%	103/109	106/109	95/101	101/103	

INITIALS: LB

CETIS Summary Report

Report Date: 23 Mar-10 15:01 (p 1 of 1)
 Test Code: 00-4360-4345/19504Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Batch ID: 21-0113-6733	Test Type: Fertilization	Analyst:
Start Date: 11 Mar-10 14:29	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 11 Mar-10 15:49	Species: Arbacia punctulata	Brine: Generic commercial salts
Duration: 80m	Source: In-House Culture	Age:

Sample ID: 20-9296-5157	Code: 19504	Client: FLP Energy
Sample Date: 11 Mar-10 06:00	Material: Industrial Effluent	Project: First Quarter WET Compliance Test
Receive Date: 11 Mar-10 11:05	Source: Seabrook Station	
Sample Age: 8h (3 °C)	Station: NH0020338 Final Discharge	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
20-4732-3872	Proportion Fertilized	100	>100	N/A	7.4%	1	Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
10-2236-5080	Proportion Fertilized	EC10	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
10-2236-5080	Proportion Fertilized	Control Resp	0.909	0.7 - 1	Yes	Result Within Limits
20-4732-3872	Proportion Fertilized	Control Resp	0.909	0.7 - 1	Yes	Result Within Limits
20-4732-3872	Proportion Fertilized	PMSD	0.074	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.909	0.881	0.936	0.81	0.99	0.0135	0.0742	8.16%	0.0%
0	Lab Water	4	0.962	0.95	0.974	0.917	0.99	0.00596	0.0326	3.39%	-5.89%
6.25		4	0.954	0.948	0.961	0.931	0.97	0.0032	0.0175	1.83%	-5.03%
12.5		4	0.967	0.96	0.974	0.945	0.99	0.00344	0.0189	1.95%	-6.4%
25		4	0.961	0.953	0.969	0.94	0.99	0.00392	0.0215	2.24%	-5.76%
50		4	0.953	0.95	0.955	0.944	0.961	0.00129	0.00704	0.74%	-4.82%
100		4	0.96	0.952	0.967	0.941	0.981	0.00362	0.0198	2.07%	-5.6%

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.81	0.99	0.924	0.911
0	Lab Water	0.917	0.99	0.981	0.962
6.25		0.931	0.97	0.952	0.965
12.5		0.971	0.962	0.99	0.945
25		0.99	0.962	0.94	0.952
50		0.953	0.952	0.944	0.961
100		0.945	0.972	0.941	0.981

CETIS Analytical Report

Report Date: 23 Mar-10 15:01 (p 1 of 2)
 Test Code: 00-4360-4345/19504Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 20-4732-3872	Endpoint: Proportion Fertilized	CETIS Version: CETISv1.7.0
Analyzed: 23 Mar-10 15:01	Analysis: Parametric-Control vs Treatments	Official Results: Yes

Batch ID: 21-0113-6733	Test Type: Fertilization	Analyst:
Start Date: 11 Mar-10 14:29	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 11 Mar-10 15:49	Species: Arbacia punctulata	Brine: Generic commercial salts
Duration: 80m	Source: In-House Culture	Age:

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	7.4%

Dunnett's Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water		6.25	-1.36	2.41	0.126	0.9937	Non-Significant Effect
		12.5	-2.05	2.41	0.126	0.9992	Non-Significant Effect
		25	-1.77	2.41	0.126	0.9982	Non-Significant Effect
		50	-1.23	2.41	0.126	0.9908	Non-Significant Effect
		100	-1.64	2.41	0.126	0.9973	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.8	2.8	0.0513	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02837609	0.005675218	5	1.03	0.4275	Non-Significant Effect
Error	0.09875228	0.005486237	18			
Total	0.1271284	0.01116146	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	11.4	15.1	0.0437	Equal Variances
Distribution	Shapiro-Wilk Normality	0.933		0.1115	Normal Distribution

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.909	0.881	0.937	0.81	0.99	0.0138	0.0742	8.16%	0.0%
6.25		4	0.954	0.948	0.961	0.931	0.97	0.00325	0.0175	1.83%	-5.03%
12.5		4	0.967	0.96	0.974	0.945	0.99	0.0035	0.0189	1.95%	-6.4%
25		4	0.961	0.953	0.969	0.94	0.99	0.00399	0.0215	2.24%	-5.76%
50		4	0.953	0.95	0.955	0.944	0.961	0.00131	0.00704	0.74%	-4.82%
100		4	0.96	0.952	0.967	0.941	0.981	0.00369	0.0198	2.07%	-5.6%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.29	1.23	1.34	1.12	1.47	0.0267	0.144	11.2%	0.0%
6.25		4	1.36	1.34	1.37	1.3	1.4	0.00759	0.0409	3.01%	-5.53%
12.5		4	1.39	1.37	1.42	1.33	1.47	0.0107	0.0578	4.14%	-8.33%
25		4	1.38	1.36	1.4	1.32	1.47	0.0121	0.0652	4.73%	-7.2%
50		4	1.35	1.35	1.36	1.33	1.37	0.00309	0.0166	1.23%	-4.99%
100		4	1.37	1.35	1.39	1.32	1.43	0.00971	0.0523	3.81%	-6.68%

CETIS Analytical Report

Report Date: 23 Mar-10 15:01 (p 2 of 2)
Test Code: 00-4360-4345/19504Ap

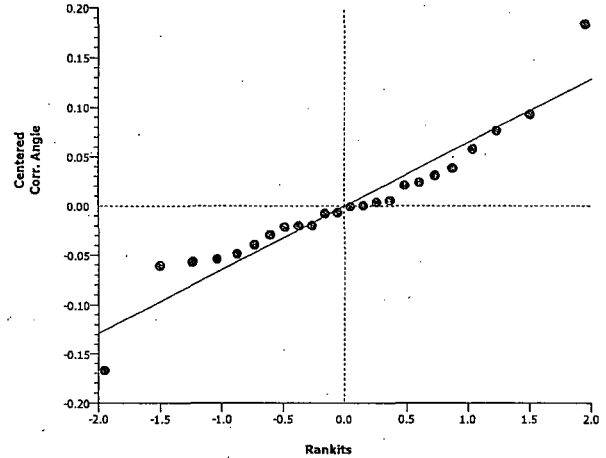
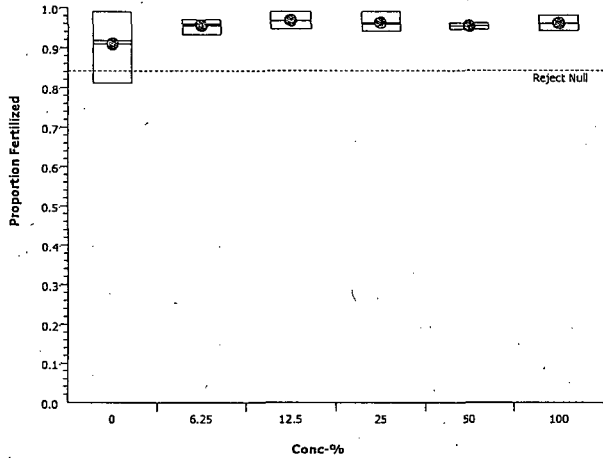
Arbacia Sperm Cell Fertilization Test

EnviroSystems, Inc.

Analysis ID: 20-4732-3872 Endpoint: Proportion Fertilized
Analyzed: 23 Mar-10 15:01 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 23 Mar-10 15:01 (p 1 of 1)
 Test Code: 00-4360-4345/19504Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 10-2236-5080 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 23 Mar-10 15:01 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Batch ID: 21-0113-6733 Test Type: Fertilization Analyst:
 Start Date: 11 Mar-10 14:29 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 11 Mar-10 15:49 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 80m Source: In-House Culture Age:

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Extreme Value	Grubbs Extreme Value	2.8	2.8	0.0513	No Outliers Detected

Point Estimates

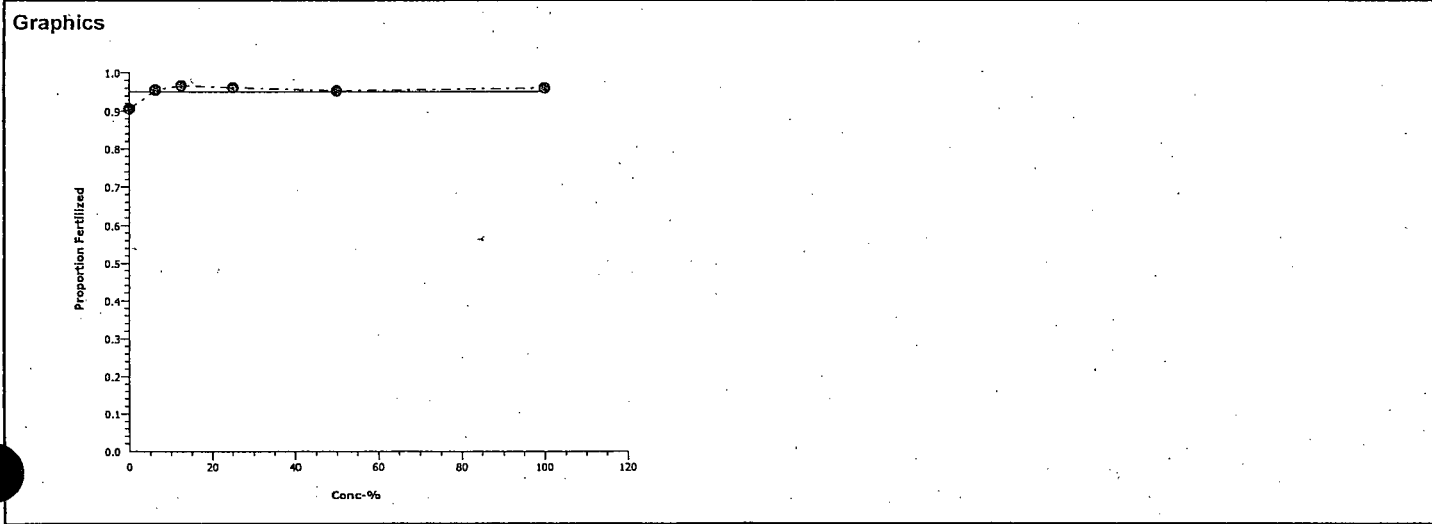
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC10	>100	N/A	N/A	<1	N/A	N/A

Proportion Fertilized Summary Calculated Variate(A/B)

Conc-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Receiving Water	4	0.909	0.81	0.99	0.0135	0.0742	8.16%	0.0%	382	422
6.25		4	0.954	0.931	0.97	0.0032	0.0175	1.83%	-5.03%	401	420
12.5		4	0.967	0.945	0.99	0.00344	0.0189	1.95%	-6.4%	404	418
25		4	0.961	0.94	0.99	0.00392	0.0215	2.24%	-5.76%	398	414
50		4	0.953	0.944	0.961	0.00129	0.00704	0.74%	-4.82%	401	421
100		4	0.96	0.941	0.981	0.00362	0.0198	2.07%	-5.6%	405	422

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.81	0.99	0.924	0.911
6.25		0.931	0.97	0.952	0.965
12.5		0.971	0.962	0.99	0.945
25		0.99	0.962	0.94	0.952
50		0.953	0.952	0.944	0.961
100		0.945	0.972	0.941	0.981



M. beryllina 7 Day Chronic Assay

STUDY: <u>19504</u>	CLIENT: FPL Energy Seabrook Station	SAMPLE: EFFLUENT	DILUENT: RECEIVING WATER (RW)
DAY 0 (START) DATE: <u>3/9/10</u>	DAY <u>2</u> (1 ST RENEWAL) DATE:	DAY <u>4</u> (2 ND RENEWAL) DATE: <u>3/13/10</u>	

CHEMISTRIES SAMPLED

CHEMISTRY	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
AMM	004	008	013	016	021	024
TS/TSS	005	009	014	017	022	025
TOC	003	007				
METALS	002					

AS RECEIVED & SALINITY ADJUSTED WATER QUALITIES

AS REC'D	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	31.1	29.0	29.6	30.4	30.0	29.1 @ 51 28.8 @ 10
Dissolved Oxygen (mg/L)	10.6	12.5	8.9	8.0	9.2	10.0
pH (SU)	7.76	7.82	7.85	7.78	7.87	7.87
TRC (mg/L)	<0.02	10.02	10.02	10.02	10.02	10.02
SAL. ADJ.	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	/	/	/	/	/	/
Dissolved Oxygen (mg/L)	/	/	/	/	/	/
pH (SU)	/	/	/	/	/	/
TRC (mg/L)	/	/	/	/	/	/

SALINITY ADJUSTMENT RECORD

	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
SAMPLE mLs	/	/	/	/	/	/
SEA SALT g (A-)	/	/	/	/	/	/
TOTAL mLs	/	/	/	/	/	/
ACTUAL %	100%	100%	100%	100%	100%	100%
DATE:	3/9/10	3/8/10	3/11/10	3/10/10	3/13/10	3/12/10
TIME:	1220	1365	1150	1100	0945	1345
INITIALS:	ve	JQ	JQ	SJ	UB	JQ (MR)

SALTWATER CHRONIC ASSAY - NEW WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:			DILUENT:			
19504		FPL Energy Seabrook Station							EFFLUENT			RECEIVING WATER (RW)			
NEW DISSOLVED OXYGEN (mg/L)									NEW SALINITY (ppt)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	6.9	8.4	6.8	7.5	6.8	6.7	8.9	30	30	29	29	30	30	29
RW	A	6.8	9.9	7.1	7.5	6.5	7.5	9.5	30	30	30	30	30	30	30
6.25%	A	6.9	9.0	7.3	7.7	6.5	7.6	9.4	30	30	31	31	30	30	30
12.5%	A	7.1	8.9	7.1	7.7	6.6	7.6	9.2	30	30	31	31	30	30	30
25%	A	7.1	8.6	6.8	7.7	6.6	7.6	8.9	30	30	31	31	30	30	30
50%	A	7.6	8.8	6.9	7.8	6.7	7.5	9.0	30	30	31	31	30	30	30
100%	A	6.7	9.7	7.4	7.8	6.8	7.6	9.3	31	31	31	31	30	31	31
NEW pH (SU)									NEW TEMPERATURE (°C)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	8.10	8.07	7.93	8.12	8.05	7.92	7.94	24	24	24	24	24	24	24
RW	A	7.88	7.86	7.78	7.89	7.89	7.82	7.78	24	24	25	24	24	24	24
6.25%	A	7.88	7.85	7.80	7.89	7.88	7.82	7.78	24	24	25	24	24	24	24
12.5%	A	7.86	7.84	7.78	7.87	7.88	7.83	7.79	24	24	25	24	24	24	24
25%	A	7.86	7.83	7.77	7.87	7.89	7.85	7.80	24	24	24	24	24	24	24
50%	A	7.85	7.81	7.79	7.88	7.88	7.85	7.79	24	24	24	24	24	24	24
100%	A	7.80	7.79	7.70	7.86	7.87	7.87	7.81	24	24	24	24	24	24	24
INC TEMP (°C):		26	26	26	26	26	26	26							
DATE:		3/9/10	3/9/10	3/11	3/12	3/13	3/14	3-15							
TIME:		1325	1030	1355	1020	1150	1540	1530							
INITIALS:		ve	ve	JA	ST	LB	DM	DM							

SALTWATER CHRONIC ASSAY - OLD WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:		DILUENT:				
19504		FPL Energy Seabrook Station							EFFLUENT		RECEIVING WATER (RW)				
OLD TEMPERATURE (°C)									OLD SALINITY (ppt)						
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	24	24	24	24	24	24	24	31	31	28	30	30	30	30
RW	A	24	24	24	24	24	24	24	30	31	31	31	31	30	30
6.25%	A	24	24	24	24	24	24	24	30	31	31	31	31	30	30
12.5%	A	24	24	24	24	24	24	24	30	31	31	31	31	30	31
25%	A	24	24	24	24	24	24	24	30	31	31	31	31	31	31
50%	A	24	24	24	24	24	24	24	31	31	31	31	31	31	30
100%	A	24	24	24	24	24	24	24	31	32	31	31	31	31	31
OLD pH (SU)															
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	7.88	7.54	7.90	7.98	7.92	7.86	8.02							
RW	A	7.83	7.47	7.92	8.03	7.97	7.91	7.94							
6.25%	A	7.78	7.50	7.93	8.03	7.95	7.85	8.00							
12.5%	A	7.78	7.48	7.93	8.04	7.98	7.90	7.99							
25%	A	7.78	7.48	7.86	8.06	8.02	7.89	8.01							
50%	A	7.79	7.51	7.93	8.01	8.01	7.88	8.01							
100%	A	7.82	7.57	7.93	8.06	8.03	7.94	8.05							
DATE:		3/10/10	3/11	3/12	3/13	3-14	3-15	3/16/10							
TIME:		0925	1040	0900	1020	1505	1435	1040							
INITIALS:		kc	JB	ST	UB	DM	DM	kc							

DILUTIONS PREPARATIONS

STUDY: <u>19504</u>		CLIENT: FPL Energy Seabrook Station	
SPECIES: <i>A. bahia</i>			
Diluent: Receiving Water (RW)		Sample:	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)	
Lab	0	800	
RW	0		
6.25%	50		
12.5%	100		
25%	200		
50%	400		
100%	800	↓	
INITIALS:	JQ		
TIME:	1425		
DATE:	JQ		

DILUTIONS PREPARATION

STUDY: 19504		CLIENT: FPL Energy Seabrook Station									
SPECIES: <i>M. beryllina</i>				TEST: chronic renewal							
START		Day: 0		Day: 1		Day:					
Diluent: RW		Sample: E0, D0		Sample: E0, D0		Sample:					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Day	Date	Time	Init	
Lab	0	2000	0	1600 2000 SW 316			0	3/9/10	1230	KE	
RW	0	↓	0	↓			1	3/10/10	1010	KE	
6.25%	125	↓	100	↓			2	3/11	1340	JO	
12.5%	250	↓	200	↓			3	3/12	1005	SJ	
25%	500	↓	500 400	↓			4	3/13	1110	WM	
50%	1000	↓	1000 800	↓			5	3-14	1540	DM	
100%	2000	↓	1600 2000	↓			6	3-15	1500	DM	
							7				
1 st Renewal		Day: 2		Day: 3		Day:		RW = Receiving Water Brine Shrimp: A - 2416			
Diluent: RW		Sample: E1, D1		Sample: E1, D1		Sample:					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.					
Lab	0	1600	0	1600							
RW	0	↓	0	↓							
6.25%	100	↓	100	↓							
12.5%	200	↓	200	↓							
25%	400	↓	400	↓							
50%	800	↓	800	↓							
100%	1600	↓	1600	↓							
2 nd Renewal		Day: 4		Day: 5		Day: 6					
Diluent: RW		Sample: E2, D2		Sample: E2, D2		Sample: E2, D2					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.					
Lab	0	1600	0	1600	0	1600					
RW	0	↓	0	↓	0	↓					
6.25%	100	↓	100	↓	100	↓					
12.5%	200	↓	200	↓	200	↓					
25%	400	↓	400	↓	400	↓					
50%	800	↓	800	↓	800	↓					
100%	1600	↓	1600	↓	1600	↓					

DILUTIONS PREPARATIONS

STUDY: 19504	CLIENT: FPL Energy Seabrook Station	
SPECIES: <i>A. punctulata</i>		
Diluent: Receiving Water (RW)	Day: 0 Start	
	Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	100
RW	0	↓
6.25%	6.25	
12.5%	12.5	
25%	25	
50%	50	
100%	100	
INITIALS:	UB	
TIME:	1220	
DATE:	3/11/10	

RECORD OF METERS USED

STUDY: 19504	CLIENT: FPL Energy Seabrook		
<i>A. bahia</i>			
Exposure (Hours)			
	0	24	48
Water Quality Station #	1	2	1
Temperature thermometer or probe #	YS130D	YS5300	YS130D
Initials / Date	(PRL) JQ 3/11/10	vc 3/12/10	LB 3/13

Water Quality Station #1		Water Quality Station #2		Water Quality Station #3	
DO meter #	24	DO meter #	23	DO meter #	
DO probe #	80	DO probe #	20	DO probe #	
pH meter #	1097	pH meter #	420	pH meter #	
pH probe #	90	pH probe #	91	pH probe #	
S/C meter #	YS130D	S/C meter #	YS5300	S/C meter #	
S/C probe #	↓	S/C probe #	↓	S/C probe #	
Salinity meter #		Salinity meter #	↓	Salinity meter #	

RECORD OF METERS USED
M. beryllina Chronic

STUDY: 19504	CLIENT: FPL Energy Seabrook Station							
NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	2	1	1	2	2	1	1	/
Temperature thermometer or probe #	YS300	YS300	YS300	YS300	YS300	YS300	YS300	/
Initials	WC	WC	JQ	ST	LB	DM	DM	/
OLD WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	/	1	1	2	2	1	1	1
Temperature thermometer or probe #	/	YS300	YS300	YS300	YS300	YS300	YS300	YS300
Initials	/	WC	JQ	ST	LB	DM	DM	WC
Date	3/9/10	3/10/10	3/11	3/12	3/13	3-14	3-15	3/16

Water Quality Station #1		Water Quality Station #2		Water Quality Station #3	
DO meter #	23	DO meter #	23	DO meter #	
DO probe #	20	DO probe #	20	DO probe #	
pH meter #	470	pH meter #	470	pH meter #	
pH probe #	91	pH probe #	91	pH probe #	
S/C meter #	YS300	S/C meter #	YS300	S/C meter #	
S/C probe #	↓	S/C probe #	↓	S/C probe #	
Salinity meter #	↓	Salinity meter #	↓	Salinity meter #	

EB

Report No: 19504
Project: Seabrook Station

SDG:

Sample ID: Effluent Start
Matrix: Water
Sampled: 03/09/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19504-005	32000	50	mg/L	03/09/10	03/10/10	JQ /SM2540B
Total suspended solids	19504-005	36	10	mg/L	03/09/10	03/10/10	JQ /SM 2540D
Ammonia-N	19504-004	ND	0.1	mg/L as N	03/10/10	03/10/10	KAJ/SM 4500-NH3 G
Total organic carbon	19504-003	ND	0.4	mg/L	03/16/10	03/16/10	KAJ/SM 5310 C
Aluminum, total	19504-002	0.065	0.02	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Cadmium, total	19504-002	ND	0.0007	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Calcium, total	19504-002	350	0.1	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Chromium, total	19504-002	ND	0.002	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Copper, total	19504-002	0.13	0.002	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Lead, total	19504-002	ND	0.0005	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Magnesium, total	19504-002	880	0.05	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Nickel, total	19504-002	0.002	0.002	mg/L	03/22/10	03/22/10	JLH/EPA 200.8
Zinc, total	19504-002	0.004	0.002	mg/L	03/22/10	03/22/10	JLH/EPA 200.8

Sample ID: Effluent First Renewal
Matrix: Water
Sampled: 03/11/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19504-013	0.15	0.1	mg/L as N	03/19/10	03/19/10	KAJ/SM 4500-NH3 G

Sample ID: Effluent Second Renewal
Matrix: Water
Sampled: 03/13/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19504-021	ND	0.1	mg/L as N	03/19/10	03/19/10	KAJ/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

Report No: 19504
Project: Seabrook Station

SDG:

Sample ID: Receiving Water Start
Matrix: Water
Sampled: 03/08/10 0930

Parameter	Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19504-009 32000	50	mg/L	03/09/10	03/10/10	JQ /SM2540B
Total suspended solids	19504-009 ND	10	mg/L	03/09/10	03/10/10	JQ /SM 2540D
Ammonia-N	19504-008 ND	0.1	mg/L as N	03/10/10	03/10/10	KAJ/SM 4500-NH3 G
Total organic carbon	19504-007 ND	0.4	mg/L	03/16/10	03/16/10	KAJ/SM 5310 C

Sample ID: Receiving Water First Renewal
Matrix: Water
Sampled: 03/10/10 0730

Parameter	Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19504-016 ND	0.1	mg/L as N	03/19/10	03/19/10	KAJ/SM 4500-NH3 G

Sample ID: Receiving Water Second Renewal
Matrix: Water
Sampled: 03/12/10 1000

Parameter	Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19504-024 ND	0.1	mg/L as N	03/19/10	03/19/10	KAJ/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 19504			CLIENT: SEABROOK STATION			
SAMPLE RECEIPT INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Sample Receipt Date & Time:	3/9/10 1105	3/8/10 1230	3/11/10 1105	3/10/10 0930	3/13/10 0925	3/12/10 15
Received By:	SS ³¹⁴	GL	DM	KS	LB	XS
Delivered Via:	Client	Normandeau	Client	Normandeau	Client	Normandeau
Logged Into Lab By:	SS	JQ	JQ	SJ	LB	JQ
Date & Time Logged In:	3/9/10 1200	3/8/10 1300	3/11/10 1135	3/10/10 1100	3/13/10 0945	3/12/10 1345
SAMPLE CONDITION INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Chain of Custody?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Chain of Custody Signed?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Chain of Custody Complete?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Date?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Time?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Type?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Custody Seal in Place?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Shipping Container Intact?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Temp Blank Temperature:	4°C	5°C	3°C	4	4°C	5°C
DOES CLIENT NEED NOTIFICATION OF TEMP?	NO		NO		NO	
Sample Arrived on Ice?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
COMMENTS:	See CAC	See CAC Cubics missing assembly cache	See CAC	See CAC	See CAC	See CAC



viros, Ir
 Lafayette Road
 Hampton, NH 03842

Voice: 1-926-3521
 FAX: 603-773-7740

Job

19.1

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com	P.O.No: ' Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	Container		Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:	
						No	Size (mL)					
001	Effluent Start	03/08/10 03/07/10	0700 - 0600	AP	C	3	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartSample
002	Effluent Start	03/08/10 03/07/10	0700 - 0600	AP	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
003	Effluent Start	03/08/10 03/07/10	0700 - 0600	AP	C	1	40	G	H2SO4	Water	N	TOC
004	Effluent Start	03/08/10 03/07/10	0700 - 0600	AP	C	1	125	P	H2SO4	Water	N	NH3;
005	Effluent Start	03/08/10 03/07/10	0700 - 0600	AP	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By:	Date: 3/9/10	Time: 1105	Received By:	Date: 3/9/10	Time: 1105
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

COC Number: A1006227



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
006	Receiving Water Start	3/8/10	0930	ELF	G	6	3750	P	4 C	Water	N	MB7DCR, AB48AD, AP01CR Start Diluent
007	Receiving Water Start	↓	↓	↓	↓	1	40	G	~ 5 drops H2SO4	Water	N	TOC
008	Receiving Water Start	↓	↓	↓	↓	1	125	P	~ 10 drops H2SO4	Water	N	NH3;
009	Receiving Water Start	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS, TSS

Relinquished By: <i>M. H. L.</i>	Date: <i>3-8-10</i> Time: <i>1230</i>	Received By: <i>J. DeCourse</i>	Date: <i>3/8/10</i> Time: <i>12:30</i>
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station		Contact: Al Legendre		Project Name: Seabrook Station	
Report to: Al Legendre		Address: P.O. Box 300		Project Number: P0105 Task: 0001	
Invoice to: Al Legendre		Address: Seabrook, NH 03874		Project Manager: Al Legendre	
Voice: 603-773-7773		Fax: 603-773-7740		email: al_legendre@fpl.com P.O.No: Quote No:42109	

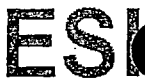
Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	Container			Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested Special Instructions:
						No	Size (mL)	Type (P/G/T)				
010	Effluent First Renewal	3/10/10-3/11/10	0900-0000	AB	C	3	3750	P	4 C	Water	N	MB7DCR,TS,TSS 1stRenewal Sample
011	Effluent First Renewal	3/10/10-3/11/10	0900-0000	AB	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,NI,Pb,Cu,Zn,Al,Ca,Mg;
012	Effluent First Renewal	3/10/10-3/11/10	0900-0000	AB	C	1	40	G	H2SO4	Water	N	TOC
013	Effluent First Renewal	3/10/10-3/11/10	0900-0000	AB	C	1	125	P	H2SO4	Water	N	NH3;
014	Effluent First Renewal	3/10/10-3/11/10	0900-0000	AB	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By:	Date: 3/11/10	Time: 1105	Received By:	Date: 3-11-10	Time: 1105
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: ' Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
015	Receiving Water First Renewal	3/10/10	0730	EF	G	6	3750	P	4 C	Water	N	MB7DCR 1stRenewal Diluent
016	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
017	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>John Fel Datta</i>	Date: 3/10/10 Time: 0930	Received By: <i>Tom Simon</i>	Date: 3/10/10 Time: 0530
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR



iroS; s, In
 Lafayette Road
 Hampton, NH 03842

voice: -926
 FAX: 603-862-521

Job 19577

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
018	Effluent Second Renewal	03/12/10 03/13/10	0900- 0600	<i>[Signature]</i>	C	4	3750	P	4 C	Water	N	MB7DCR,TS,TSS 2ndRenewal Sample
019	Effluent Second Renewal	03/12/10 03/13/10	0900- 0600	<i>[Signature]</i>	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
020	Effluent Second Renewal	3-12-10 3-17-10	0900- 0600	<i>[Signature]</i>	C	1	40	G	H2SO4	Water	N	TOC
021	Effluent Second Renewal	3-12-10 3-13-10	0900- 0600	<i>[Signature]</i>	C	1	125	P	H2SO4	Water	N	NH3;
022	Effluent Second Renewal	3-12-10 3-13-10	0900- 0600	<i>[Signature]</i>	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>[Signature]</i>	Date: 3-13-10	Time: 0905	Received By: <i>[Signature]</i>	Date: 3/13/10	Time: 0905
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

COC Number: A1006229



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested Special Instructions:
023	Receiving Water Second Renewal	3/12/10	1000	EF	G	6	3750	P	4 C	Water	N	MB7DCR 2ndRenewal Diluent
024	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
025	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>G.L. Felt</i>	Date: 3/12/10 Time: 1105	Received By: <i>[Signature]</i>	Date: 3/12/10 Time: 1105
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR

Regulatory Correspondence Review & Approval Record

LETTER REVIEW IS EXPECTED TO BE COMPLETE WITHIN 2 WORKING DAYS OF RECEIPT BY THE REVIEWER

Title: March 2010 Discharge Monitoring Reports

Agency: EPA

Letter Number: SBK-L-10070 Due Date: 4/15/2010

Licensing Lead A Legendre Phone No. 7773

Manager Responsible for Technical Accuracy: D. Robinson Signature: [Signature] Date: on DMR

Review Due Date: _____

	Reviewer	Signature	Date		Reviewer	Signature	Date
<input type="checkbox"/>	Licensing Manager	_____	_____	<input type="checkbox"/>	Reg Programs Manager	_____	_____
<input type="checkbox"/>	Operations	_____	_____	<input type="checkbox"/>	Legal	_____	_____
<input type="checkbox"/>	Engineering	_____	_____	<input type="checkbox"/>	Training	_____	_____
<input type="checkbox"/>	_____	_____	_____	<input type="checkbox"/>	PGM	_____	_____
<input type="checkbox"/>	_____	_____	_____	<input type="checkbox"/>	Asst PGM	_____	_____
<input type="checkbox"/>	Maintenance	_____	_____	<input type="checkbox"/>	Site VP	_____	_____
<input type="checkbox"/>	Corporate	_____	_____	<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____	<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	SORC Meeting No:	_____	SORC Signature:	_____	_____	_____	_____

CLONED LETTER: Yes No
(Cloned letters require a peer review)

Peer Review: [Signature]

Validation Review Yes No

By: _____
 Date: _____
 Method: _____

Does the letter contain commitments? Yes No
 Tracking CR Initiated CR Number _____
 Commitment Database Updated?

Confidential, Proprietary, or Safeguards letters are properly stamped or identified.

Admin Review [Signature] 4/13/10

- Letter Format Correct
- Signature and Date on Original Letter
- Letter Distribution Correct
- Oath or Affirmation Signature / Notarized on Original
- Date of letter & Notary are consistent

led to Agency (By/Date): _____

US Mail _____ UPS _____ Registered _____ Other _____

Sweeney, Shirley

From: Gebo, Sarah
Sent: Tuesday, April 13, 2010 6:52 AM
To: Hubbard, Leslie; Brown, June; Krol, Joyce; Sweeney, Shirley; Russell, Maureen; Clark, Kathleen
Subject: FW: 12 Sets of PPE needed for SNC visitors
Attachments: image001.jpg; image002.jpg; image003.jpg

FYI.... CID Numbers you may need some day!!

From: Sullivan, Sean
Sent: Tuesday, April 13, 2010 6:48 AM
To: Barr, David
Cc: Gebo, Sarah
Subject: RE: 12 Sets of PPE needed for SNC visitors

Dave,

I need a charge number. Once you get me that you can pick everything up.

hard hats-- CID 430362
safety glasses-- CID 418928
gloves-- CID 57 brown jersey/CID 58 grey pigskin

Sean

From: Barr, David
Sent: Monday, April 12, 2010 12:00 PM
To: Sullivan, Sean
Cc: Gebo, Sarah
Subject: 12 Sets of PPE needed for SNC visitors

Sean --

This email in a follow-up to our conversation. Thanks for assisting.

On Wednesday, I have a large group of Seacoast business leaders visiting Seabrook and going for a tour inside the plant. The Science & Nature Center's collection of PPE has been depleted, so it's time to restock.

We need 12 sets of the following:

- Hard hats with adjustable liner
- Safety glasses
- One-size-fits-all (cheap) gloves with yellow belt clips

As you mentioned, if you give me the CID #s for these items, I will be able to order replacements in the future.

The group will need the PPE Wed afternoon. I am happy to pick up the stuff on Wed morning.

Contact me if you have any questions, and thanks again for your help.

David

*→ Clips
→ Hearing Protection*



SEABROOK Nuclear Communications

David Barr | Education Program Manager – The Science & Nature Center
NextEra Energy Seabrook Station
PO Box 300, Lafayette Road, Seabrook, NH 03874
Office: 603.773.7197 | Mobile: 603.765.7289
Email: david.barr@nexteraenergy.com

SBK-L-10092

APRIL 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



May 14, 2010

SBK-L-10092

NPDES Permit No. NH0020338

United States Environmental Protection Agency
Water Enforcement OES4-SMR
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
April 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of April 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of April, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 30 days in April. No visible oil sheen, foam or floating solids were noted during the month.

No batch discharges were made during the month of April from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of April. No exceedences occurred.

Outfall 025A

One continuous discharge occurred during the month of April. No exceedences occurred.

Outfall 025B

Two continuous discharges occurred during the month of April. No exceedences occurred.

Outfall 025C

Five batch discharges occurred during the month of April. No exceedences occurred.

Outfall 025D

Four batch discharges occurred during the month of April. No exceedences occurred.


Outfall 027A

Three discharges were made from the Cooling Tower to support maintenance activities during the month of April. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10092

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

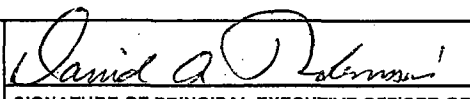
MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 04/01/2010 TO 04/30/2010

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 5-6-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	80	82	deg F	0	24/01	DA.
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.9	*****	8.0	SU	0	01/07	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DE C			
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DE C			
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.07	0.11	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	615	623	Mgal/d	*****	*****	*****	*****	0	24/01	ES.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	38	39	deg F	0	24/01	DA.
61576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.39 MO AVG	.41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	05/14/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
October 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT
Paul Freeman pmr 5-6-10

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 04/01/2010	TO 04/30/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge 61576 O.O See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	<i>NO DI C</i>					
	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	<small>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</small>	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>603 773-7496</i>	<i>05/14/2010</i>
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 04/01/2010 TO 04/30/2010

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman and 5-6-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Robinson</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	05/14/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
01-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 04/01/2010 TO 04/30/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 5-6-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	19311	21331	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	05/14/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
0-2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	04/01/2010	TO	04/30/2010

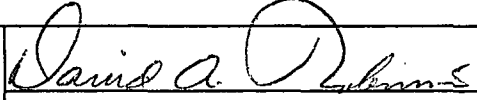
SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmd 5-6-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	582	1090	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.0	4.9	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	05/14/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form OMB 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmcl 5-6-10

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
04/01/2010 TO 04/30/2010

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	3083	11545	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO.AVG.	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.8	1.2	mg/L	0	07/WD	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO.AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO.AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Robinson</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
04/01/2010	FROM	04/30/2010	TO

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pml 5-6-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	92657	163442	g/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David G. O'Brien</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	05/14/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 (Rev. 01/06)
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pnd 5-6-10

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
04/01/2010	FROM	04/30/2010	TO

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	65628	100974	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Robinson</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	05/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 (Rev. 01/06)
OMB 2010-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 04/01/2010 TO 04/30/2010

WASTE HOLDUP SUMP
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmc 5-6-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	16612	18986	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.5	2.2	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Palmieri</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 360-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	04/01/2010	TO	04/30/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pml 5-6-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	13926	17721	gal/d	*****	*****	*****	*****	0	01/BA	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.4	3.1	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. DeBenedictis</i>	603 773-7486
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 04/01/2010	TO 04/30/2010

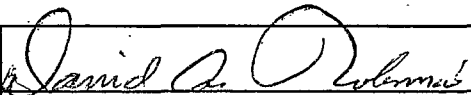
METAL CLEANING WASTES
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmh 5-6-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****		*****					
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE
Paul Freeman / Site Vice President			AREA Code	NUMBER	MM/DD/YYYY
TYPED OR PRINTED			603 773-7492	05/14/2010	

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 04/01/2010 TO 04/30/2010

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman *prl 5-6-10.*

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	106167	214501	gal/d	*****	*****	*****	*****	0	DL/DS	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	8.4	*****	8.4	SU	0	DL/DS	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	0.0	0.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Delmonico</i>	603 773-7426
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code NUMBER MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

MAY 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	GLC
File 0018	GLC
RMD	OAV



June 15, 2010

SBK-L-10110

NPDES Permit No. NH0020338

Discharge Monitoring Reports (OES4-SMR)
U.S. Environmental Protection Agency
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
May 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of May 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of May, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in May. No visible oil sheen, foam or floating solids were noted during the month.

During the seven day period of May 4 through May 10 one of the three ocean cooling water pumps was removed from service for scheduled maintenance. During this period with two pumps in operation, the elevated temperature difference between the Intake and Discharge Transition Structures which is authorized by the permit for up to fifteen days per year was complied with.

The daily maximum pH is reported as 8.3. The initial pH sample obtained from the Discharge Transition Structure on May 10 at 0905 AM yielded the 8.3 value. Subsequently as allowed by the permit a pH sample was obtained from the Intake Transition Structure to determine the naturally occurring pH at 0955 AM. The Intake transition Structure sample yielded a value of 8.2. A second set of pH samples were collected from both the Intake and Discharge Transition Structures at 1200 and the pH of both samples was reported as 8.0. It appears that a pH transient occurred in the offshore waters and that the second set of pH measurements were more indicative of pH values normally recorded. It was concluded that the Discharge Transition Structure pH value of 8.3 was equivalent to the naturally occurring intake water and that no exceedence occurred.

No batch discharges were made during the month of May from the Condensate Polisher System. As described in the NPDES Permit application discharges are monitored to ensure compliance with Outfall 001 requirements.

Outfall 001B

The second quarter Whole Effluent Toxicity (WET) tests were performed in May 2010. No toxicity was observed in the effluent bioassays. The complete WET test report prepared by EnviroSystems, Inc. is provided in Enclosure 2.

Sampling for the second quarter WET testing was performed under the following discharge scenarios:

- Day 1 (May 10 – May 11, 2010) included discharges from Outfalls 025A & 025B,
- Day 2 (May 12 – May 13, 2010) included a discharge from Outfall 025C,
- Day 3 (May 14 – May 15, 2010) included a discharge from Outfall 025D.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of May. No exceedences occurred.

Outfall 025A

Two continuous discharges occurred during the month of May. No exceedences occurred.

Outfall 025B

One continuous discharge occurred during the month of May. No exceedences occurred.

Outfall 025C

Six batch discharges occurred during the month of May. No exceedences occurred.

Outfall 025D

Three batch discharges occurred during the month of May. No exceedences occurred.


Outfall 027A

One discharge was made from the Cooling Tower to support maintenance activities during the month of May. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE 1 to SBK-L-10110

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 05/01/2010 TO 05/31/2010

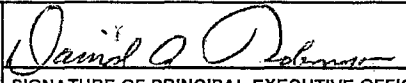
CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmc 6-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	83	87	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.6	*****	8.3	SU	0	06/30	GR
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.06	0.11	mg/L	0	01/01	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY MX	mg/L		Daily	GRAB
50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	632	663	Mgal/d	*****	*****	*****	*****	0	24/01	ES
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	36	40	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	06/14/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) See cover letter for explanation of pH 8.3 value.
REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 6-14-10

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

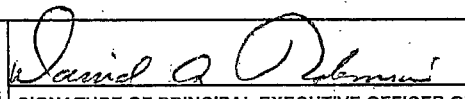
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
05/01/2010	FROM	05/31/2010	TO

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	44	45	deg F	0	24/01	DA.
31576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RECORD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE	DATE	
			603 773-7496	06/14/2010	
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
PAUL FREEMAN *6/10/2010*

NH0020338
PERMIT NUMBER

001-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
04/01/2010 TO 06/30/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
LC50 Static 48Hr Acute Mysid. Bahía	SAMPLE MEASUREMENT	*****	*****	*****	> 100	*****	*****	%	0	01/90	COMP24
TAA3E 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
LC50 Static 48Hr Acute Menidia	SAMPLE MEASUREMENT	*****	*****	*****	7100	*****	*****	%	0	01/90	COMP24
TAA6B 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Static 1Hr Fert. Chronic Arbacia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBH3A 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Stare 7Day Chronic Menidia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBP6B 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman / Site Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>Alexandre J.</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
			603 773-7773	06/10/2010	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PLEASE REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH ADDITIONAL PAGE FOR COMMENTS OR EXPLANATION OF VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 360-0004
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

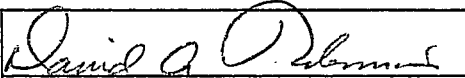
MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 05/01/2010 TO 05/31/2010

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 6-14-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
TYPED OR PRINTED			603 773-7496	06/14/2010

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB No. 20004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
05/01/2010	TO	05/31/2010

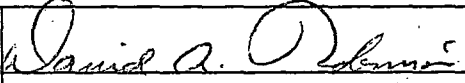
SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

CONTACT: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pnd 6-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	20625	24397	gal/d.	*****	*****	*****	*****	0	01/07	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY-MX	gal/d.	*****	*****	*****	*****		Monthly	ESTIMA.
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY-MX	mg/L		Weekly	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY-MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice-President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	06/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2000-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

AME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

ACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 05/01/2010 TO 05/31/2010

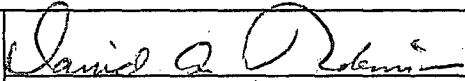
SECONDARY PLANT LEAKAGE VAULT2
External Outfall

No Discharge

ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT

Paul Freeman pmb 614-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	897	1779	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.6	3.7	mg/L	0	01/07	GR.
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	06/14/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 4
OMB No. 2000-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	05/01/2010	TO	05/31/2010

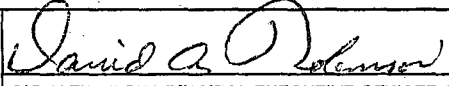
SECONDARY PLANT LEAKAGE VAULT3
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmd 6-14-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	119	434	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	5.0	11.6	mg/L	0	07/WD	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	06/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form A
OMB N-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
05/01/2010	FROM	05/31/2010	TO

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman *and* 6-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	48273	165717	gal/d.	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Dolan</i>	TELEPHONE	DATE
			AREA Code	NUMBER
			603 773-7496	06/14/2010

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

ERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD		
MM/DD/YYYY		MM/DD/YYYY
05/01/2010	TO	05/31/2010

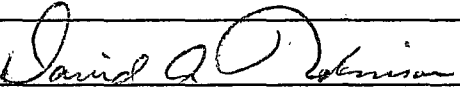
STEAM GEN. BLWDN DEMINERALIZE
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmh 6.14.10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	87734	87734	gal/d.	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d.	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR.
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO.AVG	100 DAILY.MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED			603 773-7496	06/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 10-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC

ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmh 6-14-10

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

MAJOR

WASTE HOLDUP SUMP

External Outfall

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
05/01/2010	FROM	05/31/2010	TO

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	14923	19275	gal/d.	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.4	1.9	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1 (Rev. 01/06)
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	05/01/2010	TO	05/31/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 6-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17914	18466	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.6	3.6	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7476	06/14/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pm2 6-14-10

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR:

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
05/01/2010	05/31/2010

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	450000 DAILY MX	gal/d.	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****		*****					
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>Paul Freeman</i>	603-773-7426
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 05/01/2010 TO 05/31/2010

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 6-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	104694	104694	gal/d	*****	*****	*****	*****	0	DL/DS	ES
	PERMIT REQUIREMENT	Req: Mon. MO AVG	Req: Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	8.3	*****	8.3	SU	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	.SU		Daily	GRAB
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	.5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual 34044 0 0 See Comments	SAMPLE MEASUREMENT	0.0	0.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA
	PERMIT REQUIREMENT	Req: Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	06/14/2010
TYPED OR PRINTED		AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

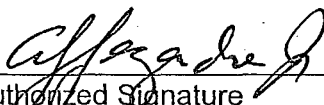
ENCLOSURE 2 to SBK-L-10110

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 6/10/2010
Date


Authorized Signature

Allen L. Legendre Jr., Principal Engineer
Print or Type Name and Title

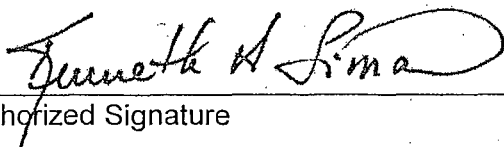
NextEra Energy Seabrook, LLC
Print or Type the Permittee's Name

NH 0020338
Print or Type the NPDES Permit No.

Laboratory Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 6/9/10
Date


Authorized Signature

Kenneth A. Simon
President - EnviroSystems, Incorporated

**TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
May 2010**

**NextEra Energy Seabrook Station LLC
Seabrook, New Hampshire
NPDES Permit Number NH0020338**

Prepared For

NextEra Energy Seabrook Station
Route 1
P.O. Box 300
Seabrook, New Hampshire 03874

Purchase Order Number: 02196759

By

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

May 2010
Reference Number SeabrookStation19693-10-05

STUDY NUMBER 19693

EXECUTIVE SUMMARY

The following summarizes the results of acute and chronic exposure bioassays performed during May 2010 to support the NPDES biomonitoring requirements of NextEra Energy Seabrook Station, Seabrook, New Hampshire. Acute and chronic definitive assays were completed using the marine species, *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*.

A. bahia were ≤ 5 days old at the start of the test. *M. beryllina* were 10 days old at the start of the test. *A. punctulata* were from cultures maintained by ESI. Original stock was obtained from commercial supply. Dilution water was receiving water collected off shore by Normandeau Associates, Bedford, New Hampshire.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the chronic and modified acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Exposure Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Americamysis bahia</i>	48 Hours	>100%	100%	Report	NA	Yes
<i>Menidia beryllina</i>	48 Hours	>100%	100%	Report	NA	Yes

Chronic Exposure Toxicity Evaluation

Species	Exposure	C-NOEC	LOEC	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Menidia beryllina</i>	7 Days	100%	>100%	Report	NA	Yes
<i>Arbacia punctulata</i>	60 Minutes	100%*	>100%	Report	NA	Yes

COMMENTS:

*The statistical analysis for *A. punctulata* fertilization determined the 50% test concentration was significantly less than the diluent control, however according to USEPA Region I policy it is not considered to be significantly less if >70%. Consequently, the C-NOEC is 100%.

**TOXICOLOGICAL EVALUATION
OF TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
May 2010**

NextEra Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338

1.0 INTRODUCTION

This report presents the results of acute and chronic toxicity tests completed on a series of composite effluent samples collected from NextEra Energy Seabrook Station, Seabrook, New Hampshire. Testing was based on programs and protocols developed by the US EPA (2002). A 48 hour static acute toxicity test was conducted using the mysid shrimp, *Americamysis bahia*, a 7 day modified acute and chronic toxicity test was conducted with the inland silverside, *M. beryllina*, and a 60 minute chronic fertilization assay was conducted with the purple sea urchin, *A. punctulata*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test organisms are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test organisms. Samples with high LC-50 values are less likely to cause significant environmental impacts. The no-effect concentration is also determined to provide information about the level of effluent which would have minimal acute effects in the environment. This Acute No Observed Effect Concentration (A-NOEC) is defined as the highest tested effluent concentration which causes no significant mortality. Chronic tests evaluate toxicity based on sublethal effects. Fertilization of *Arbacia punctulata* eggs or growth (weight) of *Menidia beryllina* are measured to determine effluent concentrations that have a significant impact on the organisms. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest concentration that had an effect (C-LOEC) and the highest concentration where no effect was observed (C-NOEC). *A. punctulata* fertilization data are also evaluated to determine the effluent concentration where a reduction in fertilization rates occurs. This is known as the Inhibition Concentration (IC).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

When necessary, *A. bahia* and *M. beryllina* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

Male and female *A. punctulata* are maintained in separate chambers as recommended by protocol (EPA 2002).

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. When necessary, effluent used in the *A. bahia* and *M. beryllina* assays was salinity adjusted to 25±2 ppt and the effluent used in the *A. punctulata* assay was salinity adjusted to 30±2 ppt using artificial sea salts according to protocol (EPA 2002). Effluent and receiving water samples that were received at or above a salinity of 25±2 ppt did not require salinity adjustment (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1

and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in effluent and diluent samples. Samples containing ≥ 0.02 mg/L TRC were treated with sodium thiosulfate (EPA 2002).

2.4 Bioassays

Test concentrations for the assays were 100%, 50%, 25%, 12.5%, and 6.25% effluent.

2.4.1 *Americamysis bahia* Acute Exposure Bioassay

The 48 hour static acute assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Test chambers were 250 mL glass beakers with 200 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Survival and dissolved oxygen were recorded daily in all replicates. Temperature, pH, and salinity were measured in one replicate of each test treatment daily.

2.4.2 *Menidia beryllina* Chronic Exposure Bioassay

The 7 day static renewal chronic exposure assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Fish were maintained in 600 mL beakers containing 500 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Prior to daily renewals, survival and dissolved oxygen in all replicates were recorded and pH, salinity and temperature were measured in one replicate of each test treatment. Dissolved oxygen, salinity, pH, and temperature were measured in one replicate of each new test treatment. Survival data was analyzed to assess acute toxicity after the initial 48 hours of exposure.

During the test, fish were fed ≤ 24 hour old *Artemia* nauplii twice a day. On Day 7 of the assay surviving fish were removed from test solutions, rinsed to remove any surface detritus and salts, and tranquilized using Finquel® brand tricaine methanesulfonate. Fish were placed on tared containers and dried for 24 hours at 104°C to obtain dry weight to the nearest 0.01 mg. To obtain final dry weight/fish used for statistical comparisons, the net dry weight was divided by the number of organisms introduced at the initiation of the assay.

2.4.3 *Arbacia punctulata* Chronic Fertilization Bioassay

Test chambers were 20 mL glass vials with 5 mL of test solution in each of 4 replicates. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted (see data appendix for final counts) and exposed to effluent solutions for 60 minutes. Eggs were introduced to sperm/effluent solutions and exposed for 20 minutes prior to the addition of preservative. Aliquots of preserved solution were counted to determine fertilized and unfertilized eggs.

2.5 Data Analysis

When necessary, statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. If survival in the highest test concentration is $>50\%$, the LC-50 is obtained by direct observation of the raw data. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results, Table 2, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS AND DISCUSSION

LC-50 and A-NOEC values from the *A. bahia* acute exposure assays are presented in Table 3. Data

from the *A. punctulata* fertilization assay are summarized in Table 4. Results of the chronic exposure assay completed using *M. beryllina* are provided in Table 5. A summary of water quality data collected during the assays is presented in Table 6. US EPA Attachment F toxicity test summary forms are included after the tables. Support data, including copies of laboratory bench sheets, can be found in Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria require $\geq 90\%$ survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate and the MSDp for fertilization to be $<25\%$ for *Arbacia punctulata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

3.3 *Menidia beryllina* Chronic Exposure Bioassay

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.500 mg/fish based on Day 7-survival, and the MSDp for biomass to be $<28\%$ for *Menidia beryllina* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 5 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls*. US EPA Region I Offices, Boston, Massachusetts.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms*. Third Edition. EPA-821-R-02-014.

**TABLE 1. Summary of Sample Collection Information.
NextEra Energy Seabrook Station Effluent Evaluation. May 2010.**

Sample Description	Type	Collection		Receipt		Arrival Temp °C
		Date	Time	Date	Time	
EFFLUENT						
Start	Comp	05/10-11/10	0900-0600	05/11/10	1035	4
1st Renewal	Comp	05/12-13/10	0900-0600	05/13/10	1000	7*
2nd Renewal	Comp	05/14-15/10	0900-0605	05/15/10	1055	9*
RECEIVING WATER						
Start	Grab	05/10/10	1000	05/10/10	1430	7*
1st Renewal	Grab	05/12/10	1100	05/12/10	1150	6
2nd Renewal	Grab	05/14/10	1235	05/14/10	1322	6

COMMENTS:

* Upon receipt, the temperature was outside of the range of 4±2°C recommended by the protocol. Samples were received with ice in the sample cooler.

**TABLE 2. Summary of Reference Toxicant Data.
NextEra Energy Seabrook Station Effluent Evaluation. May 2010.**

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
<i>A. bahia</i>						
04/22/10	Survival	LC-50 - 48 Hr	18.2	21.7	17.5 - 25.9	SDS (mg/L)
<i>M. beryllina</i>						
04/22/10	Survival	LC-50 - 48 Hr	7.9	7.1	3.3 - 10.9	SDS (mg/L)
04/21/10	Survival	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
04/21/10	Growth	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
<i>A. punctulata</i>						
04/15/10	Fertilization	C-NOEC	40.0	5.0	1.0 - 10.0	Copper (µg/L)
04/15/10	Fertilization	IC-25	55.4	15.4	0.0 - 60.7*	Copper (µg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

* Normal Acceptance Limits set at ±2 Std Dev of historic mean; maximum limits are ±3 Std of historic mean. The ±3 limit is acceptable, but considered high. If ±3 limit is utilized value is noted.

**TABLE 3. Summary of Acute Evaluation Results: *A. bahia*.
NextEra Energy Seabrook Station Effluent Evaluation. May 2010.**

Species	Exposure	PERCENT SURVIVAL						
		Lab	RW	6.25%	12.5%	25%	50%	100%
<i>A. bahia</i>	48 hours	95%	100%	100%	97.5%	97.5%	95%	95%

Species	Exposure	LC-50 COMPUTATION TECHNIQUE				A-NOEC
		Spearman-Kärber	Linear Regression	Nonlinear Regression		
<i>A. bahia</i>	48 Hours	NC	NC	NC	100%	

COMMENTS:

RW = Receiving Water used as diluent.

**TABLE 4. Summary of Chronic Bioassay Results: *A. punctulata*.
NextEra Energy Seabrook Station Effluent Evaluation. May 2010.**

	TREATMENTS						
	Lab	RW	6.25%	12.5%	25%	50%	100%
Mean % Fertilization	96.5%	93.0%	93.3%	88.8%	91.7%	92.9%	85.1%*
Significantly < Diluent	-	-	No	No	No	No	No*
Chronic No Observed Effect Concentration			100%*				
Lowest Observed Effect Concentration			100%				
IC-10:			>100%				
MSDp:			6.4%				

COMMENTS:

RW = Receiving Water used as diluent.

* The statistical analysis for *A. punctulata* fertilization determined the 50% test concentration was significantly less than the diluent control, however according to USEPA Region I policy it is not considered to be significantly less if >70%. Consequently, the C-NOEC is 100%.

TABLE 5. Summary of Chronic and Modified Acute Bioassay Results: *M. beryllina*. NextEra Energy Seabrook Station Effluent Evaluation. May 2010.

Effluent Conc.	Mean Percent Survival		Mean Biomass (mg/fish)	Is There a Significant Difference Based on	
	Day 2	Day 7		Survival (%)	Growth (Biomass)
LAB	100.0%	95.0%	1.23	-	-
RW	100.0%	92.5%	0.898	-	-
6.25%	100.0%	87.5%	0.965	No	No
12.5%	100.0%	85.0%	0.884	No	No
25.0%	100.0%	87.5%	0.980	No	No
50.0%	100.0%	95.0%	0.992	No	No
100.0%	100.0%	80.0%	0.994	No	No

LC-50 = >100%

MSDp = 22.1%

NOEC = 100.0% NOEC = 100.0%

COMMENTS:

RW = Receiving Water used as diluent.

Difference between diluent and treatment means considered to be significant when $p < 0.05$

Additional bioassay data and statistical analyses are provided in Appendix A.

TABLE 6. Initial Water Quality Data Summary. NextEra Energy Seabrook Station Effluent Evaluation. December 2009

PARAMETER	UNITS	EFFLUENT	RECEIVING WATER
Salinity	ppt	31	31
pH	SU	7.89	7.89
Total Residual Chlorine	mg/L	<0.02	<0.02
Total Solids	mg/L	35000	34000
Total Suspended Solids	mg/L	76	34
Ammonia	mg/L as N	<0.1	<0.1
Total Organic Carbon	mg/L	<0.4	<0.4
Aluminum, total	mg/L	<0.02	-
Cadmium, total	mg/L	<0.0007	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	0.003	-
Lead, total	mg/L	0.0005	-
Nickel, total	mg/L	<0.002	-
Zinc, total	mg/L	0.013	-

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 05/13/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 05/15/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input checked="" type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
	<input checked="" type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine
 Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____
 Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.
 Artificial sea salts mixed with deionized water
 Deionized water and hypersaline brine
 Other

EFFLUENT SAMPLING DATES: 05/12-13/10
 EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100
 Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 04/22/10 LC-50: 18.2 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS
Test Acceptability Criteria

Mean Control Survival: 100 %

LIMITS

LC-50: Report %
 A-NOEC: - %
 C-NOEC: Report %
 IC- - %

RESULTS

LC-50: >100% %
 Upper Limit: - %
 Lower Limit: - %
 Method: Direct Observation
 A-NOEC: 100 %
 C-NOEC: - %
 C-LOEC: - %
 IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 05/11/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 05/18/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input checked="" type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 05/10-11/10 05/12-13/10 05/14-15/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 04/22/10 LC-50: 7.9 mg/L Sodium Dodecyl Sulfate
04/21/10 NOEC: 5.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS Test Acceptability Criteria

Mean Control Survival: <u>92.5</u> %	Mean Dry Weight/fish <u>0.971</u> mg
	MSDp: <u>22.1</u> %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50 >100 %

Upper Limit: - %

Lower Limit: - %

Method: Direct Observation

A-NOEC: 100 %

C-NOEC: 100 %

C-LOEC: >100 %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 05/13/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 05/13/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input checked="" type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input checked="" type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Gulf of Maine
 Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____
 Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.
 Artificial sea salts mixed with deionized water
 Deionized water and hypersaline brine
 Other

EFFLUENT SAMPLING DATES: 05/12-13/10
 EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100
 Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 04/15/10 NOEC: 40.0 mg/L Copper
04/15/10 IC-25 55.4 mg/L Copper

PERMIT LIMITS AND TEST RESULTS
Test Acceptability Criteria

Proportion Fertilized: 93 % MSDp: 6.4 %

LIMITS

LC-50: Report %
 A-NOEC: - %
 C-NOEC: Report %
 IC- - %

RESULTS

LC-50: _____ %
 Upper Limit: _____ %
 Lower Limit: _____ %
 Method: Dunnett's
 A-NOEC: _____ %
 C-NOEC: 100 %
 C-LOEC: >100 %
 IC- 10 >100 %

APPENDIX A

DATA SHEETS AND STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Biomonitoring Testing	1
<i>A. bahia</i> Acute Bioassay Daily Observation Bench Sheets	2
<i>A. bahia</i> Survival and Growth Statistics	0
<i>A. bahia</i> Organism Culture Data	1
<i>M. beryllina</i> - 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>M. beryllina</i> Larval Fish Dry Weight Summary Sheet	1
<i>M. beryllina</i> Survival and Growth Statistics	5
<i>M. beryllina</i> Organism Culture Data	1
<i>A. punctulata</i> Fertilization Water Quality and Sperm Dilutions	1
<i>A. punctulata</i> Egg Count Data Sheet	1
<i>A. punctulata</i> Fertilization Statistics	4
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Analytical Chemistry Support Data Summary Report	2
Sample Receipt Record - Effluent and Diluent Samples	1
Chain of Custody Record	6
Total Appendix Pages	35

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i>	EPA-821-R-02-012
<i>Pimephales promelas</i>	EPA-821-R-02-012
<i>Americamysis bahia</i>	EPA-821-R-02-012
<i>Menidia beryllina</i> , <i>Cyprinodon variegatus</i>	EPA-821-R-02-012
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013, 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013, 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-013, 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-013, 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-013, 1008.0
<i>Champia parvula</i>	EPA-821-R-02-013, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20 th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20 th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20 th Edition - Method 5310C
Specific Conductance	Standard Methods 20 th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20 th Edition - Method 4500NH3G
pH	Standard Methods 20 th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20 th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20 th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20 th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20 th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19693		"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES							
CLIENT: NextEra Energy Seabrook Station	TEST ORGANISM: <i>A. bahia</i>		TRC	AMM	TS/TSS	TOC	T. Metals	pH	SALINITY
SAMPLE: EFFLUENT	ORGANISM SUPPLIER/BATCH/AGE: <i>See Organism Culture Sheet</i>	EFF	see M. beryllina						
DILUENT: Receiving Water		DIL							

SALINITY ADJUSTMENT RECORD : ML EFFLUENT + G SEA SALTS = 100% ACTUAL PERCENTAGE

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
LAB	A	10	10	10	8.9	6.3	6.9	8.09	7.90	7.95	24	24	24	30	30	30
	B	10	9	8	8.9	6.3	6.9									
	C	10	10	10	8.9	6.3	6.9									
	D	10	10	10	8.9	6.4	6.9									
Rec' Water	A	10	10	10	9.9	6.5	6.9	7.90	7.92	7.95	24	24	24	31	31	32
	B	10	10	10	9.9	6.7	7.0									
	C	10	10	10	9.9	6.7	7.0									
	D	10	10	10	9.9	6.7	7.0									
6.25%	A	10	10	10	9.8	6.6	7.0	7.91	7.91	7.93	24	24	24	31	31	32
	B	10	10	10	9.8	6.7	7.1									
	C	10	10	10	9.8	6.7	7.1									
	D	10	10	10	9.8	6.7	7.1									
12.5%	A	10	10	10	9.8	6.7	7.1	7.91	7.96	7.99	24	24	24	31	31	32
	B	10	10	9	9.8	6.8	7.1									
	C	10	10	10	9.8	6.7	7.2									
	D	10	10	10	9.8	6.7	7.2									
DATE	5/13/10	5/14/10	5/15	5/13/10	5/14/10	5/15										
TIME	1515	1510	1600	1450	1505	1610										
INITIALS	ve	wm	wm	ve	wm	ve										

‡ - Temperature in vessel.

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19683											"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES					
CLIENT: NextEra Energy Seabrook Station					TEST ORGANISM: <i>A. bahia</i>											
SAMPLE: EFFLUENT											See Page 1					
DILUENT: Receiving Water																
CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
25%	A	10	10	10	9.7	6.8	7.2	7.91	7.98	8.00	24	24	24	31	31	32
	B	10	9	9	9.7	6.7	7.2									
	C	10	10	10	9.7	6.7	7.2									
	D	10	10	10	9.7	6.7	7.2									
50%	A	10	10	10	9.7	6.6	7.3	7.90	7.96	7.98	24	24	24	31	32	32
	B	10	9	9	9.7	6.7	7.2									
	C	10	10	9	9.7	6.7	7.3									
	D	10	10	10	9.7	6.7	7.3									
100%	A	10	10	10	10.2	6.7	7.3	7.89	7.95	7.96	24	24	24	32	32	33
	B	10	10	9	10.2	6.7	7.3									
	C	10	10	10	10.2	6.7	7.3									
	D	10	9	9	10.2	6.7	7.3									
DATE	5/13/10	5/15/10	5/15	5/13/10	5/14/10	5/15										
TIME	1515	1510	1620	1456	1505	1610										
INITIALS	WC	WM	WM	WZ	WM	WB										

‡ - Temperature in vessel.



Rec: 5/15/10

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species AMERICAMYSIS bahia

Source: Lab reared Hatchery reared _____ Field collected _____

Hatch date 5-11-10 Receipt date _____

Lot number 051110MS Strain _____

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ≈ 30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater _____ Saltwater Other _____

Recirculating Flow through _____ Static _____

DIET: Flake food Phytoplankton _____ Trout chow

Artemia Rotifers _____ YCT _____ Other EUCAP SHRIMP DIET

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: EST # of Organisms 680+

Carrier: _____ Date shipped 5-13-10

Biologist: Mark Cosentino

Menidia beryllina 7 DAY CHRONIC ASSAY

STUDY		CLIENT		SAMPLE EFFLUENT						DILUENT RECEIVING WATER (RW)				FISH/BATCH		
19693		NextEra Energy Seabrook Station												See Organism Culture Sheet		
CONC	REP	NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
		0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	10	10	10	10	10	10	10	10	7.3	6.7	5.3	7.0	6.3	5.8	7.0
	B	10	10	10	10	10	9	9	8	7.1	6.7	5.1	7.0	6.0	5.7	7.0
	C	10	10	10	10	10	10	10	10	7.0	6.8	5.3	7.1	6.0	5.7	6.8
	D	10	10	10	10	10	10	10	10	7.6	6.8	5.4	7.1	6.1	5.9	7.0
RW	A	10	10	10	9	9	9	9	9	7.8	7.0	5.7	7.1	6.0	6.1	6.9
	B	10	10	10	10	10	9	9	8	7.6	7.1	5.7	7.2	6.0	6.2	7.0
	C	10	10	10	10	10	10	10	10	7.8	7.1	5.8	7.2	6.0	6.2	7.0
	D	10	10	10	10	10	10	10	10	7.7	7.1	5.8	7.2	6.0	6.2	7.1
6.25%	A	10	10	10	10	10	10	9	9	7.6	7.2	5.7	7.2	6.1	5.8	6.8
	B	10	10	10	10	9	9	8	8	7.4	7.2	5.6	7.2	6.0	5.9	6.9
	C	10	10	10	10	8	8	8	8	7.6	7.2	5.8	7.2	5.9	5.9	6.9
	D	10	10	10	10	10	10	10	10	7.8	7.2	5.8	7.2	5.9	6.0	7.0
12.5%	A	10	10	10	10	10	10	10	10	7.6	7.3	5.6	7.2	6.1	6.1	6.9
	B	10	10	10	10	10	9	8	8	7.7	7.3	5.7	7.2	6.1	6.2	6.9
	C	10	10	10	10	9	9	9	8	7.6	7.3	5.6	7.3	6.0	6.2	7.0
	D	10	10	10	10	10	10	10	8	7.7	7.3	5.6	7.3	6.1	6.2	7.0
25%	A	10	10	10	10	10	10	10	9	7.5	7.3	5.4	7.3	6.1	6.2	6.9
	B	10	10	10	10	10	10	9	8	7.5	7.3	5.5	7.3	6.1	6.2	6.7
	C	10	10	10	10	10	10	9	9	7.5	7.3	5.6	7.3	6.0	6.1	6.9
	D	10	10	10	10	10	10	9	9	7.6	7.3	5.7	7.4	6.0	6.0	7.0
50%	A	10	10	10	10	10	9	9	8	7.5	7.3	5.7	7.3	6.1	6.0	7.0
	B	10	10	10	10	10	10	10	10	6.9	7.3	5.7	7.3	6.1	5.9	6.8
	C	10	10	10	10	10	10	10	10	7.2	7.3	5.5	7.4	6.0	5.9	6.8
	D	10	10	10	10	10	10	10	10	7.4	7.3	5.6	7.3	5.9	5.9	6.8
100%	A	10	10	10	10	10	9	9	9	7.3	7.3	5.2	7.3	6.0	6.0	6.9
	B	10	10	10	10	10	9	9	8	7.2	7.3	5.6	7.3	5.9	6.0	7.0
	C	10	10	10	10	9	9	9	8	7.5	7.3	5.8	7.3	6.0	6.1	7.0
	D	10	10	10	10	10	8	8	7	7.2	7.3	5.8	7.3	5.9	6.1	7.0
INC TEMP °C:		25	25	26	26	26	26	26	26							
DATE:		5/11/10	5/12/10	5/13/10	5/14	5/15	5/16	5/17	5/18							
TIME:		1405	1110	1315	1305	1230	1515	1030	1005							
INITIALS:		SJ	uc	uc	WMM	UB	DM	DM	ST							

ADDITIONAL OLD WATER QUALITIES ON SEPARATE DATA SHEET.

Larval Fish Dry Weight Summary Sheet

Study:	19693	
Client:	Seabrook Station	
Date/Time/Init:	05/21/10 1145 NF	05/18/10 0725 JQ
Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	22.71	9.96
Lab B	22.68	10.36
Lab C	22.5	7.79
Lab D	17.23	7.8
RWA	17.24	8.97
RWB	18.34	10.32
RWC	17.23	7.27
RWD	18.79	9.13
6A	18.47	8.33
6B	17.28	8.25
6C	16.82	8.35
6D	20.43	9.47
12A	19.03	9.06
12B	16.56	9.08
12C	18.77	9.24
12D	17.54	9.18
25A	19.19	8.69
25B	20.51	10.89
25C	17.89	8.18
25D	19.08	9.71
50A	17.76	10.03
50B	19.58	8.84
50C	18.6	8.79
50D	20.16	8.77
100A	21.72	10.49
100B	19.53	8.49
100C	18.33	9.56
100D	18.58	9.84

CETIS Summary Report

Report Date: 01 Jun-10 17:51 (p 1 of 2)
 Test Code: 05-0183-3048/19693Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Batch ID: 10-3283-9078	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 11 May-10 14:05	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 18 May-10 10:05	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 20h	Source: ARO - Aquatic Research Organisms, NH	Age: 10 d

Sample ID: 20-3963-7384	Code: 19693	Client: NextEra Energy
Sample Date: 11 May-10 06:00	Material: Industrial Effluent	Project: Second Quarter WET Compliance Tes
Receive Date: 11 May-10 10:35	Source: Seabrook Station	
Sample Age: 8h (4 °C)	Station: NH0020338; Final Discharge	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-2055-5504	7d Proportion Survived	100	>100	N/A	16.9%	1	Dunnett's Multiple Comparison Test
05-8601-8691	Mean Dry Biomass-mg	100	>100	N/A	22.1%	1	Dunnett's Multiple Comparison Test
10-6861-5979	Mean Dry Weight-mg	100	>100	N/A	14.3%	1	Dunnett's Multiple Comparison Test

Test Acceptability							
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision	
13-2055-5504	7d Proportion Survived	Control Resp	0.925	0.8 - NL	Yes	Result Within Limits	
05-8601-8691	Mean Dry Biomass-mg	Control Resp	0.898	0.5 - NL	Yes	Result Within Limits	
05-8601-8691	Mean Dry Biomass-mg	PMSD	0.221	0.11 - 0.28	Yes	Result Within Limits	

7d Proportion Survived Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.925	0.889	0.961	0.8	1	0.0175	0.0957	10.4%	0.0%
0	Lab Water	4	0.95	0.913	0.987	0.8	1	0.0183	0.1	10.5%	-2.7%
6.25		4	0.875	0.839	0.911	0.8	1	0.0175	0.0957	10.9%	5.41%
12.5		4	0.85	0.813	0.887	0.8	1	0.0183	0.1	11.8%	8.11%
25		4	0.875	0.856	0.894	0.8	0.9	0.00913	0.05	5.71%	5.41%
50		4	0.95	0.913	0.987	0.8	1	0.0183	0.1	10.5%	-2.7%
100		4	0.8	0.77	0.83	0.7	0.9	0.0149	0.0816	10.2%	13.5%

Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.898	0.861	0.934	0.802	0.996	0.0178	0.0974	10.9%	0.0%
0	Lab Water	4	1.23	1.15	1.31	0.943	1.47	0.0398	0.218	17.7%	-37.0%
6.25		4	0.965	0.923	1.01	0.847	1.1	0.0204	0.112	11.6%	-7.49%
12.5		4	0.884	0.841	0.926	0.748	0.997	0.0206	0.113	12.8%	1.59%
25		4	0.98	0.962	0.998	0.937	1.05	0.00892	0.0488	4.98%	-9.16%
50		4	0.992	0.932	1.05	0.773	1.14	0.0291	0.16	16.1%	-10.5%
100		4	0.994	0.943	1.05	0.874	1.12	0.0251	0.138	13.8%	-10.8%

Mean Dry Weight-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.971	0.957	0.985	0.919	1	0.00696	0.0381	3.93%	0.0%
0	Lab Water	4	1.31	1.21	1.41	0.943	1.54	0.0488	0.268	20.5%	-34.7%
6.25		4	1.1	1.09	1.11	1.06	1.13	0.00599	0.0328	2.98%	-13.6%
12.5		4	1.04	1	1.08	0.935	1.19	0.0199	0.109	10.5%	-7.34%
25		4	1.12	1.09	1.15	1.04	1.2	0.0137	0.075	6.68%	-15.6%
50		4	1.04	1.01	1.07	0.966	1.14	0.0149	0.0814	7.83%	-7.13%
100		4	1.24	1.2	1.29	1.1	1.38	0.0212	0.116	9.33%	-28.0%

CETIS Summary Report

Report Date: 01 Jun-10 17:51 (p 2 of 2)
 Test Code: 05-0183-3048/19693Mb

Menidia beryllina 7-d Larval Survival and Growth Test

EnviroSystems, Inc.

7-d Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.9	0.8	1	1
0	Lab Water	1	0.8	1	1
6.25		0.9	0.8	0.8	1
12.5		1	0.8	0.8	0.8
25		0.9	0.8	0.9	0.9
50		0.8	1	1	1
100		0.9	0.8	0.8	0.7

Mean Dry Biomass-mg Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.827	0.802	0.996	0.966
0	Lab Water	1.27	1.23	1.47	0.943
6.25		1.01	0.903	0.847	1.1
12.5		0.997	0.748	0.953	0.836
25		1.05	0.962	0.971	0.937
50		0.773	1.07	0.981	1.14
100		1.12	1.1	0.877	0.874

Mean Dry Weight-mg Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.919	1	0.996	0.966
0	Lab Water	1.27	1.54	1.47	0.943
6.25		1.13	1.13	1.06	1.1
12.5		0.997	0.935	1.19	1.05
		1.17	1.2	1.08	1.04
50		0.966	1.07	0.981	1.14
100		1.25	1.38	1.1	1.25

CETIS Analytical Report

Report Date: 01 Jun-10 17:51 (p 2 of 3)
 Test Code: 05-0183-3048/19693Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 13-2055-5504	Endpoint: 7d Proportion Survived	CETIS Version: CETISv1.7.0
Analyzed: 01 Jun-10 17:50	Analysis: Parametric-Control vs Treatments	Official Results: Yes

Batch ID: 10-3283-9078	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 11 May-10 14:05	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 18 May-10 10:05	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 20h	Source: ARO - Aquatic Research Organisms, NH	Age: 10 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	16.9%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	0.814	2.41	0.225	0.5060	Non-Significant Effect
	12.5	1.19	2.41	0.225	0.3402	Non-Significant Effect
	25	0.87	2.41	0.225	0.4803	Non-Significant Effect
	50	-0.435	2.41	0.225	0.9301	Non-Significant Effect
	100	1.94	2.41	0.225	0.1160	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1258931	0.02517861	5	1.43	0.2596	Non-Significant Effect
Error	0.3159032	0.01755018	18			
Total	0.4417962	0.04272879	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	2	15.1	0.8494	Equal Variances
Distribution	Shapiro-Wilk Normality	0.98		0.8983	Normal Distribution

7d Proportion Survived Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.925	0.889	0.961	0.8	1	0.0178	0.0957	10.4%	0.0%
6.25		4	0.875	0.839	0.911	0.8	1	0.0178	0.0957	10.9%	5.41%
12.5		4	0.85	0.812	0.888	0.8	1	0.0186	0.1	11.8%	8.11%
25		4	0.875	0.856	0.894	0.8	0.9	0.00928	0.05	5.71%	5.41%
50		4	0.95	0.912	0.988	0.8	1	0.0186	0.1	10.5%	-2.7%
100		4	0.8	0.769	0.831	0.7	0.9	0.0152	0.0816	10.2%	13.5%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Wate	4	1.3	1.24	1.35	1.11	1.41	0.0273	0.147	11.3%	0.0%
6.25		4	1.22	1.16	1.27	1.11	1.41	0.0269	0.145	11.9%	5.89%
12.5		4	1.18	1.13	1.24	1.11	1.41	0.0283	0.152	12.9%	8.62%
25		4	1.21	1.19	1.24	1.11	1.25	0.0132	0.0709	5.85%	6.29%
50		4	1.34	1.28	1.39	1.11	1.41	0.0283	0.152	11.4%	-3.15%
100		4	1.11	1.07	1.15	0.991	1.25	0.0196	0.106	9.48%	14.0%

CETIS Analytical Report

Report Date: 01 Jun-10 17:51 (p 3 of 3)
Test Code: 05-0183-3048/19693Mb

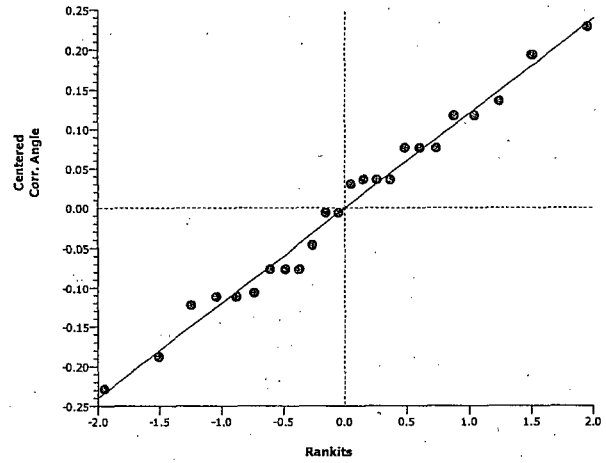
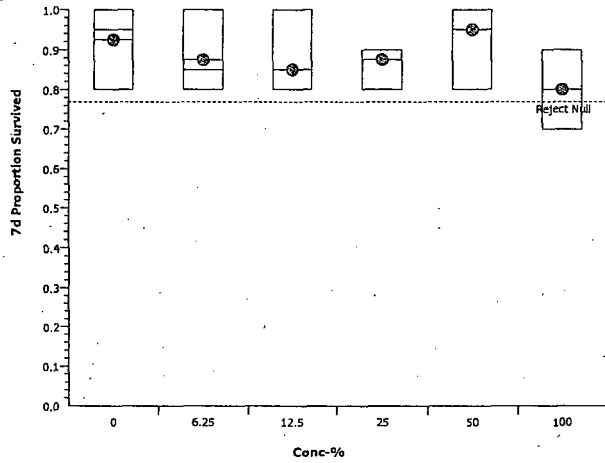
Menidia beryllina 7-d Larval Survival and Growth Test

EnviroSystems, Inc.

Analysis ID: 13-2055-5504 Endpoint: 7d Proportion Survived
Analyzed: 01 Jun-10 17:50 Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 01 Jun-10 17:51 (p 1 of 3)
 Test Code: 05-0183-3048/19693Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 05-8601-8691 Endpoint: Mean Dry Biomass-mg CETIS Version: CETISv1.7.0
 Analyzed: 01 Jun-10 17:51 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 10-3283-9078 Test Type: Growth-Survival (7d) Analyst:
 Start Date: 11 May-10 14:05 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 18 May-10 10:05 Species: Menidia beryllina Brine: Generic commercial salts
 Duration: 6d 20h Source: ARO - Aquatic Research Organisms, NH Age: 10 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run	100	>100	N/A	1	22.1%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	-0.816	2.41	0.198	0.9720	Non-Significant Effect
	12.5	0.173	2.41	0.198	0.7774	Non-Significant Effect
	25	-0.998	2.41	0.198	0.9826	Non-Significant Effect
	50	-1.14	2.41	0.198	0.9883	Non-Significant Effect
	100	-1.17	2.41	0.198	0.9893	Non-Significant Effect

ANOVA Table

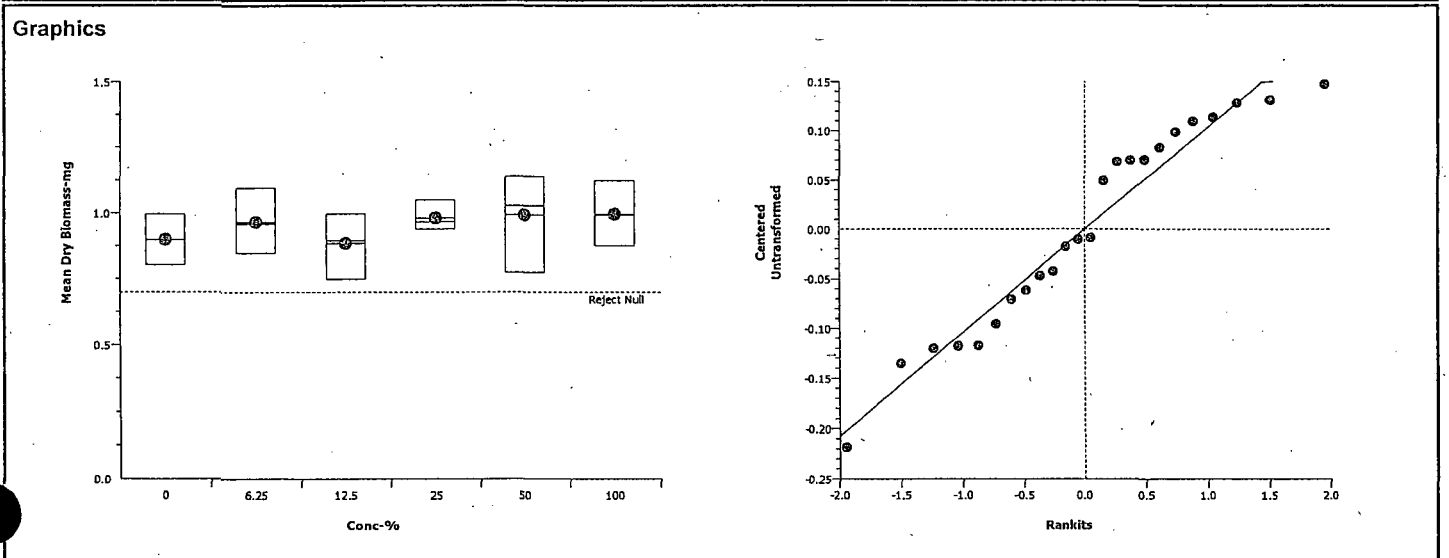
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0478983	0.00957966	5	0.705	0.6270	Non-Significant Effect
Error	0.2445415	0.01358564	18			
Total	0.2924398	0.0231653	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	3.42	15.1	0.6360	Equal Variances
Distribution	Shapiro-Wilk Normality	0.942		0.1806	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.898	0.861	0.935	0.802	0.996	0.0181	0.0974	10.9%	0.0%
6.25		4	0.965	0.923	1.01	0.847	1.1	0.0207	0.112	11.6%	-7.49%
12.5		4	0.884	0.841	0.926	0.748	0.997	0.021	0.113	12.8%	1.59%
25		4	0.98	0.961	0.999	0.937	1.05	0.00907	0.0488	4.98%	-9.16%
50		4	0.992	0.931	1.05	0.773	1.14	0.0296	0.16	16.1%	-10.5%
100		4	0.994	0.942	1.05	0.874	1.12	0.0256	0.138	13.8%	-10.8%





Rec.
5/11/10

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species MENIDIA BERYLLINA

Source: Lab reared Hatchery reared _____ Field collected _____

Hatch date 5-1-10 Receipt date _____

Lot number 042810173 Strain _____

Brood origination CAPE COD MA

II. Water Quality

Temperature 25 °C Salinity ≈30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater _____ Saltwater Other _____

Recirculating Flow through _____ Static _____

DIET: Flake food Phytoplankton _____ Trout chow _____

Artemia Rotifers YCT _____ Other FOCAL SHRIMP DIET

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: ESI # of Organisms 1000+

Carrier: _____ Date shipped 5-11-10

Biologist: Mark Ewing

Arbacia punctulata Chronic Fertilization Assay

STUDY: <u>19693</u>	CLIENT: NextEra Energy Seabrook Station	SAMPLE/DILUENT: EFFLUENT / RECEIVING WATER (RW)	DATE / INITIALS: <u>5/13/10</u> <u>LP</u>		
SALINITY ADJUSTMENT RECORD: <u>1000</u> ml EFFLUENT + <u>0</u> g SALT = 100% ACTUAL PERCENTAGE					
SALINITY ADJUSTMENT RECORD: (<u>1000</u>) ml DILUENT + <u>0</u> g SALT = 100% ACTUAL PERCENTAGE					
EFFLUENT CONCENTRATION)	D.O. (mg/L)	pH (SU)	TEMPERATURE (°C)	SALINITY (ppt)	TRC (mg/L)
"AS RECEIVED" EFFLUENT	<u>6.4</u>	<u>7.85</u>	<u>24</u>	<u>30.3</u>	<u><0.02</u>
"AS RECEIVED" RW DILUENT	<u>7.3</u>	<u>7.87</u>	<u>24</u>	<u>30.4</u>	<u><0.02</u>
LAB CONTROL	<u>6.8</u>	<u>8.10</u>	<u>21</u>	<u>30</u>	
RW	<u>6.8</u>	<u>7.90</u>	<u>21</u>	<u>30</u>	
6.25%	<u>6.8</u>	<u>7.90</u>	<u>21</u>	<u>30</u>	
12.5%	<u>6.8</u>	<u>7.90</u>	<u>21</u>	<u>30</u>	
25%	<u>6.8</u>	<u>7.90</u>	<u>21</u>	<u>30</u>	
50%	<u>6.8</u>	<u>7.90</u>	<u>21</u>	<u>31</u>	
100%	<u>6.5</u>	<u>7.88</u>	<u>21</u>	<u>32</u>	

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 110 X 10⁴ = SPM SOLUTION E = 1.10 X 10⁶

SPERM CONCENTRATIONS: SOLUTION E X 40 = SOLUTION A = 4.40 X 10⁷ SPM
 SOLUTION E X 20 = SOLUTION B = 2.20 X 10⁶ SPM
 SOLUTION E X 5 = SOLUTION C = 5.50 X 10⁶ SPM

FINAL COUNTS:

FINAL SPERM COUNT: 4.40 X 10⁷
 FINAL EGG COUNT: 7.200

Sampling Date _____ Time _____

Bottles Pulled: EFFLUENT DILUENT
 TOC
 METALS N/A
 AMM
 TS/S

TEST TIMES:

SPERM COLLECTED: 1241
 EGGS COLLECTED: 1211
 SPERM ADDED: 1461
 EGGS ADDED: 1501
 FIXATIVE ADDED: 1521

Meters Used

DO meter # 23 DO probe # 20 pH meter # 470 pH probe # 92 S/C meter # YSI300 S/C probe # YSI300
 SALINITY meter # YSI300 Temp. (thermometer or probe #) YSI300

Arbacia punctulata Chronic Fertilization Assay

STUDY	CLIENT	SAMPLE/DILUENT			DATE
10693	NextEra Energy Seabrook Station	EFFLUENT / RECEIVING WATER (RW)			5/14/10
EFFLUENT CONC.	REPLICATE VIAL				
	<u>1</u> FERT/TOTAL	<u>2</u> FERT/TOTAL	<u>3</u> FERT/TOTAL	<u>4</u> FERT/TOTAL	
LAB	100 / 104	104 / 108	102 / 104	101 / 106	
RW	100 / 105	90 / 102	97 / 106	100 / 103	
6.25%	96 / 102	92 / 101	104 / 112	98 / 103	
12.5%	94 / 113	96 / 105	97 / 102	94 / 110	
25%	98 / 104	97 / 107	95 / 106	94 / 102	
50%	93 / 103	103 / 106	98 / 108	97 / 104	
100%	94 / 107	87 / 104	90 / 102	92 / 114	

INITIALS: ST

CETIS Summary Report

Report Date: 01 Jun-10 18:11 (p 1 of 1)
 Test Code: 02-7556-6552/19693Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Batch ID: 09-6996-7557	Test Type: Fertilization	Analyst:
Start Date: 13 May-10 14:01	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 13 May-10 15:21	Species: Arbacia punctulata	Brine: Generic commercial salts
Duration: 80m	Source: In-House Culture	Age:

Sample ID: 17-4351-1722	Code: 19693	Client: NextEra Energy
Sample Date: 13 May-10 06:00	Material: Industrial Effluent	Project: Second Quarter WET Compliance Tes
Receive Date: 13 May-10 10:00	Source: Seabrook Station	
Sample Age: 8h (7 °C)	Station: NH0020338; Final Discharge	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
07-3827-6397	Proportion Fertilized	50	100	70.7	6.37%	2	Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
15-8414-3588	Proportion Fertilized	EC10	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-3827-6397	Proportion Fertilized	Control Resp	0.93	0.7 - 1	Yes	Result Within Limits
15-8414-3588	Proportion Fertilized	Control Resp	0.93	0.7 - 1	Yes	Result Within Limits
07-3827-6397	Proportion Fertilized	PMSD	0.0637	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.93	0.915	0.945	0.882	0.971	0.0072	0.0394	4.24%	0.0%
0	Lab Water	4	0.965	0.96	0.969	0.953	0.981	0.00214	0.0117	1.21%	-3.69%
6.25		4	0.933	0.926	0.94	0.911	0.951	0.00319	0.0175	1.87%	-0.31%
12.5		4	0.888	0.868	0.908	0.832	0.951	0.00996	0.0546	6.14%	4.54%
25		4	0.917	0.909	0.924	0.896	0.942	0.00365	0.02	2.18%	1.45%
50		4	0.929	0.917	0.94	0.903	0.972	0.00576	0.0315	3.4%	0.16%
100		4	0.851	0.838	0.865	0.807	0.882	0.00657	0.036	4.23%	8.5%

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.952	0.882	0.915	0.971
0	Lab Water	0.962	0.963	0.981	0.953
6.25		0.941	0.911	0.929	0.951
12.5		0.832	0.914	0.951	0.855
25		0.942	0.907	0.896	0.922
50		0.903	0.972	0.907	0.933
100		0.879	0.837	0.882	0.807

CETIS Analytical Report

Report Date: 01 Jun-10 18:11 (p 1 of 2)
 Test Code: 02-7556-6552/19693Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 07-3827-6397 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 01 Jun-10 18:10 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 09-6996-7557 Test Type: Fertilization Analyst:
 Start Date: 13 May-10 14:01 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 13 May-10 15:21 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 80m Source: In-House Culture Age:

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	50	100	70.7	2	6.37%

Dunnnett's Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water		6.25	0.0197	2.41	0.108	0.8275	Non-Significant Effect
		12.5	1.65	2.41	0.108	0.1829	Non-Significant Effect
		25	0.711	2.41	0.108	0.5531	Non-Significant Effect
		50	0.113	2.41	0.108	0.7980	Non-Significant Effect
		100*	3	2.41	0.108	0.0153	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05839489	0.01167898	5	2.89	0.0437	Significant Effect
Error	0.07276225	0.004042347	18			
Total	0.1311571	0.01572132	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	3.89	15.1	0.5654	Equal Variances
Distribution	Shapiro-Wilk Normality	0.962		0.4869	Normal Distribution

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.93	0.915	0.945	0.882	0.971	0.00732	0.0394	4.24%	0.0%
6.25		4	0.933	0.926	0.94	0.911	0.951	0.00324	0.0175	1.87%	-0.31%
12.5		4	0.888	0.867	0.909	0.832	0.951	0.0101	0.0546	6.14%	4.54%
25		4	0.917	0.909	0.924	0.896	0.942	0.00372	0.02	2.18%	1.45%
50		4	0.929	0.917	0.941	0.903	0.972	0.00586	0.0315	3.4%	0.16%
100		4	0.851	0.837	0.865	0.807	0.882	0.00668	0.036	4.23%	8.5%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Wate	4	1.31	1.28	1.34	1.22	1.4	0.0147	0.0792	6.04%	0.0%
6.25		4	1.31	1.3	1.32	1.27	1.35	0.00646	0.0348	2.65%	0.07%
12.5		4	1.24	1.2	1.27	1.15	1.35	0.0169	0.0908	7.34%	5.66%
25		4	1.28	1.27	1.29	1.24	1.33	0.00691	0.0372	2.91%	2.44%
50		4	1.31	1.28	1.33	1.25	1.4	0.0126	0.068	5.2%	0.39%
100		4	1.18	1.16	1.2	1.12	1.22	0.00932	0.0502	4.27%	10.3%

Arbacia Sperm Cell Fertilization Test

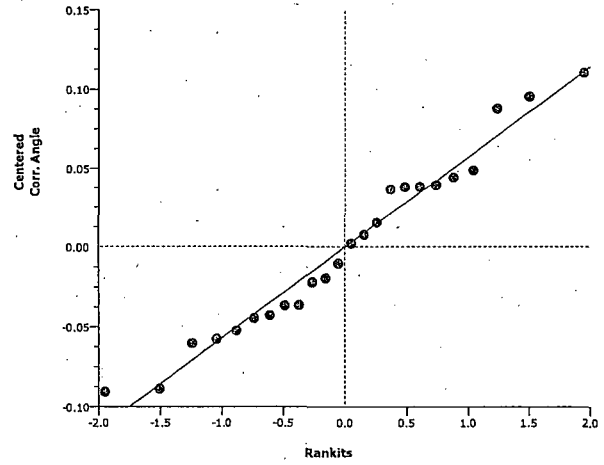
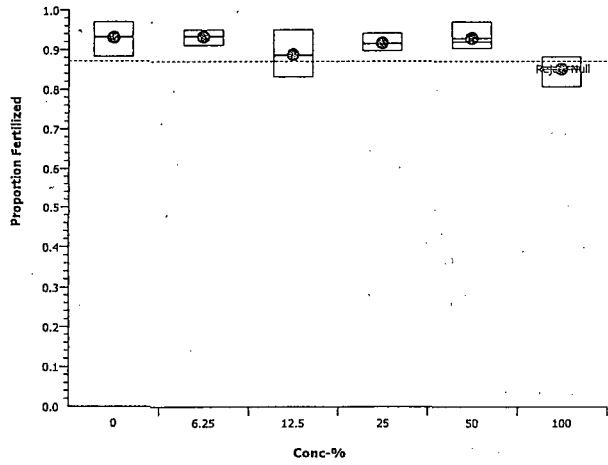
EnviroSystems, Inc.

Analysis ID: 07-3827-6397
Analyzed: 01 Jun-10 18:10

Endpoint: Proportion Fertilized
Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 01 Jun-10 18:11 (p 1 of 1)
 Test Code: 02-7556-6552/19693Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 15-8414-3588 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 01 Jun-10 18:10 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Batch ID: 09-6996-7557 Test Type: Fertilization Analyst:
 Start Date: 13 May-10 14:01 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 13 May-10 15:21 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 80m Source: In-House Culture Age:

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

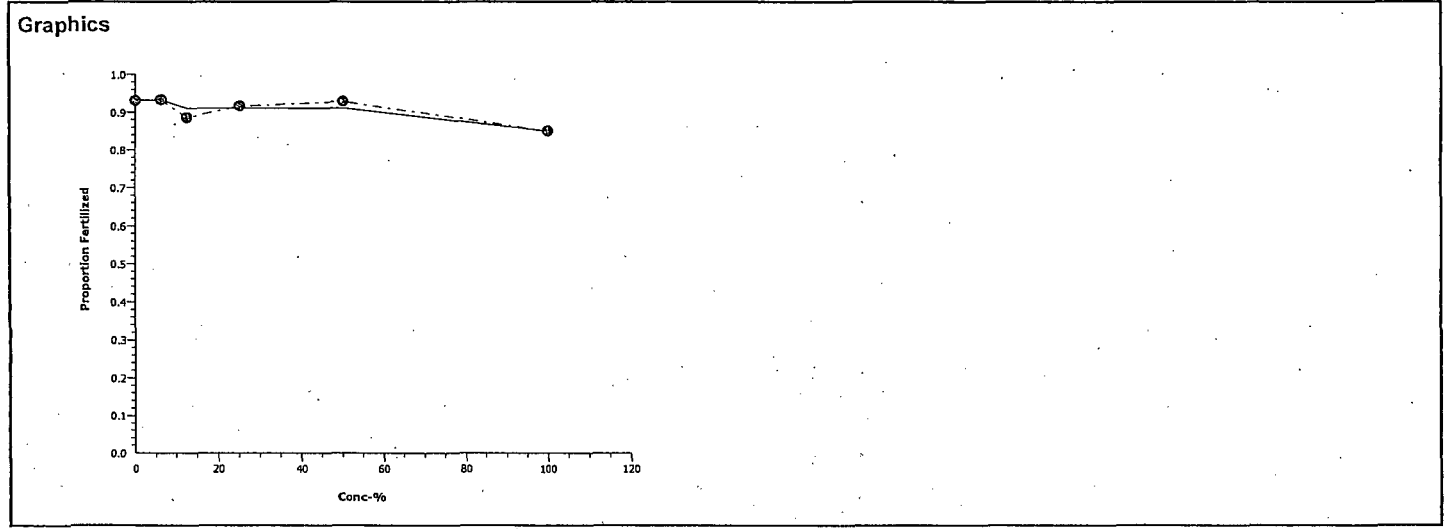
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC10	>100	N/A	N/A	<1	N/A	N/A

Proportion Fertilized Summary Calculated Variate(A/B)

Conc-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Receiving Water	4	0.93	0.882	0.971	0.0072	0.0394	4.24%	0.0%	387	416
6.25		4	0.933	0.911	0.951	0.00319	0.0175	1.87%	-0.31%	390	418
12.5		4	0.888	0.832	0.951	0.00996	0.0546	6.14%	4.54%	381	430
25		4	0.917	0.896	0.942	0.00365	0.02	2.18%	1.45%	384	419
50		4	0.929	0.903	0.972	0.00576	0.0315	3.4%	0.16%	391	421
100		4	0.851	0.807	0.882	0.00657	0.036	4.23%	8.5%	363	427

Proportion Fertilized Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Receiving Water	0.952	0.882	0.915	0.971
6.25		0.941	0.911	0.929	0.951
12.5		0.832	0.914	0.951	0.855
25		0.942	0.907	0.896	0.922
50		0.903	0.972	0.907	0.933
100		0.879	0.837	0.882	0.807



M. beryllina 7 Day Chronic Assay

STUDY: 19693	CLIENT: NextEra Energy Seabrook Station	SAMPLE: EFFLUENT	DILUENT: RECEIVING WATER (RW)
DAY 0 (START) DATE: 05/11/10	DAY 2 (1 ST RENEWAL) DATE: 5/13/10	DAY 4 (2 ND RENEWAL) DATE: 5/15/10	

CHEMISTRIES SAMPLED

CHEMISTRY	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
AMM	004	-008	013	016	021	024
TS/TSS	005	-009	014	017	022	025
TOC	003	-007	012	/	020	/
METALS	002	/	011	/	019	/

AS RECEIVED & SALINITY ADJUSTED WATER QUALITIES

AS REC'D	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	31.7 [#] @ 5/11/10	31.1	30.3	30.4	31.1	30.2
Dissolved Oxygen (mg/L)	9.2	7.5	6.4	7.3	8.8	7.6
pH (SU)	7.89	7.89	7.85	7.87	7.88	7.94
TRC (mg/L)	40.02	<0.02	40.02	<0.02	40.02	<0.02
SAL. ADJ.	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	/	/	/	/	/	25 @ 5/15/10
Dissolved Oxygen (mg/L)	/	/	/	/	/	6.5
pH (SU)	/	/	/	/	/	/
TRC (mg/L)	/	/	/	/	/	/

SALINITY ADJUSTMENT RECORD

	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
SAMPLE mLs	/	/	/	/	/	/
SEA SALT g (A-)	/	/	/	/	/	/
TOTAL mLs	/	/	/	/	/	/
ACTUAL %	100%	100%	100%	100%	100%	
DATE:	5/11/10	05/10/10	5/13/10	5/12/10	5/16/10	5/14/10
TIME:	1125	1430	1055	1415	1130	1630
INITIALS:	SJ	RAM	JQ	LB	LB	SJ

SALTWATER CHRONIC ASSAY - NEW WATER QUALITIES

STUDY: 19693		CLIENT: NextEra Energy Seabrook Station							SAMPLE: EFFLUENT		DILUENT: RECEIVING WATER (RW)					
NEW DISSOLVED OXYGEN (mg/L)									NEW SALINITY (ppt)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	8.1	7.7	6.7	6.9	6.8	8.7	7.3	29	29	30	30	29	29	29	
RW	A	9.2	8.2	8.1	7.5	6.5	9.1	8.1	31	31	31	30	30	31	31	
6.25%	A	8.8	8.1	7.0	7.0	6.5	9.1	7.8	31	31	31	31	31	31	31	
12.5%	A	8.4	7.8	7.1	7.1	6.5	9.1	7.6	31	31	31	31	31	31	31	
25%	A	8.4	7.6	7.2	7.0	6.6	9.1	7.6	31	31	31	31	31	31	31	
50%	A	8.3	7.5	7.2	7.1	6.7	9.1	7.7	31	31	31	31	31	31	31	
100%	A	8.8	7.6	7.7	7.3	6.8	9.2	7.9	31	31	32	32	32	32	32	
NEW pH (SU)									NEW TEMPERATURE (°C)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	7.95	7.75	7.96	7.94	7.95	7.93	7.94	24	24	24	24	24	25	25	
RW	A	7.86	7.77	7.83	7.84	7.91	7.75	7.86	24	24	24	25	25	25	25	
6.25%	A	7.86	7.76	7.84	7.84	7.91	7.75	7.85	24	24	24	25	25	25	25	
12.5%	A	7.85	7.75	7.85	7.86	7.91	7.75	7.85	24	24	24	25	25	25	25	
25%	A	7.82	7.73	7.85	7.86	7.93	7.75	7.83	24	24	24	25	24	25	25	
50%	A	7.76	7.69	7.85	7.87	7.91	7.73	7.82	24	24	24	25	24	25	25	
100%	A	7.61	7.55	7.82	7.84	7.86	7.68	7.79	25	24	24	25	24	25	25	
INC TEMP (°C)		25	25	26	26	26	26	26								
DATE:		5/11/10	5/12	5/13/10	5/14	5/15	5/16	5/17								
TIME:		1315	1220	1410	1335	1815	1620	1850								
INITIALS:		MM	SJ	MC	MM	LB	DM	DM								

SALTWATER CHRONIC ASSAY - OLD WATER QUALITIES

STUDY:		CLIENT:							SAMPLE:		DILUENT:						
19693		NextEra Energy Seabrook Station							EFFLUENT		RECEIVING WATER (RW)						
OLD TEMPERATURE (°C)									OLD SALINITY (ppt)								
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7		
LAB	A	24	24	24	24	24	24	24	30	30	30	30	30	30	30		
RW	A	24	24	24	24	24	24	24	31	32	31	31	31	31	31		
6.25%	A	24	24	24	24	24	24	24	32	32	31	31	31	31	31		
12.5%	A	24	24	24	24	24	24	24	32	32	31	31	31	31	31		
25%	A	24	24	24	24	24	24	24	32	32	32	31	31	31	31		
50%	A	24	24	24	24	24	24	24	32	32	32	32	31	31	31		
100%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	31		
OLD pH (SU)																	
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7		
LAB	A	7.85	7.82	7.85	7.78	7.75	7.81	7.81									
RW	A	7.86	7.83	7.82	7.78	7.75	7.81	7.84									
6.25%	A	7.83	7.82	7.80	7.79	7.75	7.80	7.82									
12.5%	A	7.86	7.83	7.82	7.82	7.79	7.83	7.84									
25%	A	7.82	7.80	7.80	7.79	7.80	7.84	7.83									
50%	A	7.82	7.82	7.84	7.82	7.80	7.84	7.84									
100%	A	7.76	7.73	7.78	7.79	7.75	7.83	7.85									
DATE:		5/12/10	5/13/10	5/14	5/15	5/16	5/17	5/18									
TIME:		1050	1300	1250	1225	1515	1400	0950									
INITIALS:		KL	KL	WM	LB	DM	DM	SJ									

DILUTIONS PREPARATIONS

STUDY: 19693	CLIENT: NextEra Energy Seabrook Station	
SPECIES: <i>A. bahia</i>		
Diluent: Receiving Water (RW)	Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	800
RW	0	↓
6.25%	50	
12.5%	100	
25%	200	
50%	400	
100%	800	800
INITIALS:	KL	
TIME:	1425	
DATE:	5/13/10	

DILUTIONS PREPARATION

STUDY: 19693		CLIENT: NextEra Energy Seabrook Station					
SPECIES: <i>M. beryllina</i>			TEST: chronic renewal				
START		Day: 0		Day: 1		Day:	
Diluent: RW		Sample: E0, D0		Sample: E0, D0		Sample:	
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Day
Lab	0	2000	0	1600			0
RW	0		0				1
6.25%	125		100				2
12.5%	250		200				3
25%	500		400				4
50%	1000		800				5
100%	2000	↓	1600	↓			6
				↓			7
1 st Renewal		Day: 2		Day:		Day:	
Diluent: RW		Sample: E1, D1		Sample:		Sample:	
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600			
RW	0		0				
6.25%	100		100				
12.5%	200		200				
25%	400		400				
50%	800		800				
100%	1600	↓	1600	↓			
2 nd Renewal		Day: 4		Day: 5		Day: 6	
Diluent: RW		Sample: E2, D2		Sample: E2, D2		Sample: E2, D2	
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	
Lab	0	1600	0	1600	0	1600	
RW	0		0		0		
6.25%	100		100		100		
12.5%	200		200		200		
25%	400		400		400		
50%	800		800		800		
100%	1600	↓	1600	↓	1600	↓	

RW = Receiving Water
Brine Shrimp: A - 2611

DILUTIONS PREPARATIONS

STUDY: 19693	CLIENT: NextEra Energy Seabrook Station	
SPECIES: <i>A. punctulata</i>		
Diluent: Receiving Water (RW)	Day: 0 Start	
	Sample: E1, D1	
Concentration %	Vol. Eff. (mls)	Final Vol. (mls)
Lab	0	100
RW	0	↓
6.25%	6.25	
12.5%	12.5	
25%	25	
50%	50	
100%	100	
INITIALS:	UB	
TIME:	1125	
DATE:	5/13/10	

RECORD OF METERS USED

STUDY: 19693	CLIENT: NextEra Energy Seabrook		
A. bahia			
Exposure (Hours)			
	0	24	48
Water Quality Station #	1	1	2
Temperature thermometer or probe #	YS300	YS300	YS300
Initials / Date	VC 5/13/10	MM 5/14	UB 5/15

Water Quality Station #1		Water Quality Station #2	
DO meter #	24	DO meter #	23
DO probe #	89	DO probe #	20
pH meter #	1097	pH meter #	470
pH probe #	90	pH probe #	92
S/C meter #	YS300	S/C meter #	YS300
S/C probe #	↓	S/C probe #	↓
Salinity meter #	↓	Salinity meter #	↓

RECORD OF METERS USED

M. beryllina Chronic

STUDY: 19693	CLIENT: NextEra Energy Seabrook Station							
NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	1	1	1	1	2	1	1	/ / /
Temperature thermometer or probe #	YS1300	YS1300	YS1300	YS1300	YS1300	YS1300	YS1300	/ / /
Initials	WM	SJ	vc	WM	UP	DM	AM	/ / /
OLD WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	/ / /	1	2	2	2	1	1	1
Temperature thermometer or probe #	/ / /	YS1300	YS1300	YS1300	YS1300	YS1300	YS1300	YS1300
Initials	/ / /	vc	vc	@NS 5N	UB	DM	DM	SJ
Date	/ / /	5/12/10	5/13/10	5/13/10	5/15/10	5-16	5/17	5/18

Water Quality Station #1		Water Quality Station #2	
DO meter #	24	DO meter #	23
DO probe #	89	DO probe #	20
pH meter #	1047	pH meter #	470
pH probe #	90	pH probe #	92
S/C meter #	YS1300	S/C meter #	YS1300
S/C probe #	↓	S/C probe #	↓
Salinity meter #	↓	Salinity meter #	↓

Report No: 19693
Project: Seabrook Station

SDG:

Sample ID: Effluent Start
Matrix: Water
Sampled: 05/11/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19693-005	35000	50	mg/L	05/12/10	05/13/10	JQ /SM2540B
Total suspended solids	19693-005	76	10	mg/L	05/11/10	05/12/10	JQ /SM 2540D
Ammonia-N	19693-004	ND	0.1	mg/L as N	05/13/10	05/13/10	JLH/SM 4500-NH3 G
Total organic carbon	19693-003	ND	0.4	mg/L	05/15/10	05/15/10	KAJ/SM 5310 C
Aluminum, total	19693-002	ND	0.02	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Cadmium, total	19693-002	ND	0.0007	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Calcium, total	19693-002	360	0.3	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Chromium, total	19693-002	ND	0.002	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Copper, total	19693-002	0.003	0.002	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Lead, total	19693-002	0.0005	0.0005	mg/L	05/21/10	05/27/10	JLH/EPA 200.8
Magnesium, total	19693-002	920	0.07	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Nickel, total	19693-002	ND	0.002	mg/L	05/21/10	05/21/10	JLH/EPA 200.8
Zinc, total	19693-002	0.013	0.002	mg/L	05/21/10	05/21/10	JLH/EPA 200.8

Sample ID: Effluent First Renewal
Matrix: Water
Sampled: 05/13/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19693-013	ND	0.1	mg/L as N	05/14/10	05/14/10	KAJ/SM 4500-NH3 G

Sample ID: Effluent Second Renewal
Matrix: Water
Sampled: 05/15/10 0605

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19693-021	ND	0.1	mg/L as N	05/27/10	05/27/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

Report No: 19693
Project: Seabrook Station

SDG:

Sample ID: Receiving Water Start
Matrix: Water
Sampled: 05/10/10 1000

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	19693-009	34000	50	mg/L	05/12/10	05/13/10	JQ /SM2540B
Total suspended solids	19693-009	34	10	mg/L	05/11/10	05/12/10	JQ /SM 2540D
Ammonia-N	19693-008	ND	0.1	mg/L as N	05/13/10	05/13/10	JLH/SM 4500-NH3 G
Total organic carbon	19693-007	ND	0.4	mg/L	05/15/10	05/15/10	KAJ/SM 5310 C

Sample ID: Receiving Water First Renewal
Matrix: Water
Sampled: 05/12/10 1100

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19693-016	ND	0.1	mg/L as N	05/13/10	05/13/10	JLH/SM 4500-NH3 G

Sample ID: Receiving Water Second Renewal
Matrix: Water
Sampled: 05/14/10 1235

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19693-024	ND	0.1	mg/L as N	05/27/10	05/27/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

ESI

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 19693			CLIENT: SEABROOK STATION			
SAMPLE RECEIPT INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Sample Receipt Date & Time:	5/11/10 1035	05/10/10 1430	5/13/10 1030	5/12/10 1150	5/15/10	5/14/10 1522
Received By:	NER	RAM	WJM	NR	WJM	PK
Delivered Via:	Client	Normandeau	Client	Normandeau	Client	Normandeau
Logged Into Lab By:	ST	RAM	JQ	LB	LB	ST
Date & Time Logged In:	5/11/10 1125	05/10/10 1430	5/13/10 1045	5/12/10 1415	5/15/10 1120	5/14/10 1630
SAMPLE CONDITION INFORMATION						
	Start Sample		First Renewal		Second Renewal	
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
Chain of Custody?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Chain of Custody Signed?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Chain of Custody Complete?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Date?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Time?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Sample Type?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Custody Seal in Place?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Shipping Container Intact?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
Temp Blank Temperature:	4°C	7°C	7°C	6°C	9°C	6°C
DOES CLIENT NEED NOTIFICATION OF TEMP?	NO		NO		NO	
Sample Arrived on Ice?	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No	<input checked="" type="checkbox"/> Yes or No
COMMENTS:	See coc	see coc.	see coc	see coc	see coc	See coc



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com	P.O.No: Quote No:42109

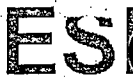
Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
001	Effluent Start	5/10/10- 5/11/10	0900- 0600	n	C	3	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartSample
002	Effluent Start	5/10/10- 5/11/10	0900- 0600	n	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
003	Effluent Start	5/10/10- 5/11/10	0900- 0600	n	C	1	40	G	H2SO4	Water	N	TOC
004	Effluent Start	5/10/10- 5/11/10	0900- 0600	n	C	1	125	P	H2SO4	Water	N	NH3;
005	Effluent Start	5/10/10- 5/11/10	0900- 0600	n	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>[Signature]</i>	Date: 5-11-10	Time: 1035	Received By: <i>Nancy E. Rota</i>	Date: 5/11/10	Time: 1035
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments: _____

ERR



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
006	Receiving Water Start	5/10/10	1000	CB	G	6	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartDiluent
007	Receiving Water Start	↓	↓	↓	↓	1	40	G	H2SO4	Water	N	TOC
008	Receiving Water Start	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
009	Receiving Water Start	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>Ch. R.</i>	Date: 5/10/10	Time: 1430	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received at Lab By: <i>Renee M. ...</i>	Date: 5/10/10	Time: 1430

Comments:

ERR



CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com	P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
010	Effluent First Renewal	5-12-10 5-13-10	0900 0600	JRS	G	3	3750	P	4 C	Water	N	MB7DCR,TS,TSS 1stRenewal Sample
011	Effluent First Renewal	5-12-10 5-17-10	0900 0600	JRS	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
012	Effluent First Renewal	5-12-10 5-13-10	0900 0600	JRS	C	1	40	G	H2SO4	Water	N	TOC
013	Effluent First Renewal	5-12-10 5-13-10	0900 0600	JRS	C	1	125	P	H2SO4	Water	N	NH3;
014	Effluent First Renewal	5-12-10 5-13-10	0900 0600	JRS	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: John R Szwec	Date: 5-13-10	Time: 1000	Received By: [Signature]	Date: 5/13/10	Time: 1000
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments: _____

ERR

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
015	Receiving Water First Renewal	5-12-10	1100	MHW	G	6	3750	P	4 C	Water	N	MB7DCR 1stRenewal Diluent
016	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
017	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TSS

Relinquished By: <i>Milby Hewitt</i>	Date: 5-12-10 Time: 1150	Received By: <i>Nancy E. Rose</i>	Date: 5/12/10 Time: 1150
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
018	Effluent Second Renewal	5-14-10 5-15-10	0900 0605	JRS	C	4	3750	P	4 C	Water	N	MB7DCR,TS,TSS 2ndRenewal Sample
019	Effluent Second Renewal	5-14-10 5-15-10	0900 0605	JRS	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
020	Effluent Second Renewal	5-14-10 5-15-10	0900 0605	JRS	C	1	40	G	H2SO4	Water	N	TOC
021	Effluent Second Renewal	5-14-10 5-15-10	0900 0605	JRS	C	1	125	P	H2SO4	Water	N	NH3;
022	Effluent Second Renewal	5-14-10 5-15-10	0900 0605	JRS	C	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>Jan R Lyve</i> Date: 5-15-10 Time: 1055	Received By: <i>WAD</i> Date: 5/15/10 Time: 1058
Relinquished By: _____ Date: _____ Time: _____	Received at Lab By: _____ Date: _____ Time: _____

Comments: _____
 ERR

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station	
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105	Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre	
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com	P.O.No: ' Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
023	Receiving Water Second Renewal	5/14/10	1235	EE/dote	G	6	3750	P	4 C	Water	N	MB7DCR 2ndRenewal Diluent
024	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	H2SO4 *	Water	N	NH3;
025	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

Relinquished By: <i>Al Legendre</i>	Date: 5/14/10 Time: 1322	Received By: <i>P. Karbe</i>	Date: 5/14/10 Time: 1322
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments: * Preserved upon receipt at EnviroSystems Inc

ERR

JUNE 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



July 14, 2010

SBK-L-10128

NPDES Permit No. NH0020338

Discharge Monitoring Reports (OES4-SMR)
U.S. Environmental Protection Agency
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
June 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of June 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A, 026A and 027A had no flow during the month of June, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 30 days in June. No exceedences occurred. No visible oil sheen, foam or floating solids were noted during the month.

No discharges were made during the month of June from the Condensate Polisher System.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of June. No exceedences occurred.

Outfall 025A

Three continuous discharges occurred during the month of June. No exceedences occurred.

Outfall 025B

Three continuous discharges occurred during the month of June. No exceedences occurred.

Outfall 025C

Five batch discharges occurred during the month of June. No exceedences occurred.

Outfall 025D

Five batch discharges occurred during the month of June. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10128

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD				
MM/DD/YYYY		TO	MM/DD/YYYY	
FROM	06/01/2010	TO	06/30/2010	

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman *and 7-12-10*

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****	83	85	deg F	0	24/01	DA.
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.8	*****	7.9	SU	0	01/07	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI C			
01289 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
Biocides	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	NO DI C			
01289 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.07	0.16	mg/L	0	01/01	GR
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	661	663	Mgal/d	*****	*****	*****	*****	0	24/01	ES.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	35	35	deg F	0	24/01	DA.
61576 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>Paul Freeman</i>	603 773-7494
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 06/01/2010	TO 06/30/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

Paul Freeman pmd 7-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS				
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****							
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. DeB...</i>		603 773-7496	07/14/2010
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmd 7-12-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE		DATE
Paul Freeman / Site Vice President		603 773-7496		07/12/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 40-0004
OM 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pml 7.12.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17,445	20,234	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>Paul Freeman</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 40-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmd 7-12-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	408	690	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d.	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.5	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER:	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Quinn</i>	603-773-7498
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman and 7-12-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	343	876	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO.AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.5	2.8	mg/L	0	07/03	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/03	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED		<i>David A. DeMars</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM 06/01/2010 TO 06/30/2010

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmr 7-12-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	94754	158371	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>Paul Freeman</i>	603 773-7476
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010


STEAM GEN. BLWDN DEMINERALIZE
External Outfall

ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT

No Discharge

Paul Freeman pmed 7-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	55706	129001	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	02/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE
			603 773-7496	07/14/2010	AREA Code
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 340-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 06/01/2010 TO 06/30/2010

WASTE HOLDUP SUMP
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmc 7-12-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	18 039	19 889	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.9	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	07/12/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
October 2004 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC

ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

FACILITY: NEXTERA ENERGY SEABROOK LLC

LOCATION: SEABROOK STATION
SEABROOK, NH 03874

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmr 7-12-10

NH0020338	025-D
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

MAJOR

WASTE TEST/RECOVERY TEST TANKS

External Outfall

No Discharge

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM 06/01/2010	TO	06/30/2010	

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17 345	18 381	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.5	6.1	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. [Signature]</i>	603 775-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 7-12-10

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 06/01/2010	TO 06/30/2010

METAL CLEANING WASTES
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate.	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****		*****					
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED		<i>David A. [Signature]</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 713-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
01/20/06 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 06/01/2010 TO 06/30/2010

COOLING TOWER BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmr 7-5-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	.6 MINIMUM	*****	.9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	.5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE		DATE
Paul Freeman / Site Vice President		602 773-7496		07/12/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

JULY 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



August 12, 2010

SBK-L-10139

NPDES Permit No. NH0020338

Discharge Monitoring Reports (OES4-SMR)
U.S. Environmental Protection Agency
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
July 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of July 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A and 026A had no flow during the month of July, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in July. No visible oil sheen, foam or floating solids were noted during the month. No exceedences occurred.

No discharges were made during the month of July from the Condensate Polisher System.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of July. No exceedences occurred.

Outfall 025A

Three continuous discharges occurred during the month of July. No exceedences occurred.

Outfall 025B

Three continuous discharges occurred during the month of July. No exceedences occurred.

Outfall 025C

Four batch discharges occurred during the month of July. No exceedences occurred.

Outfall 025D

Five batch discharges occurred during the month of July. No exceedences occurred.

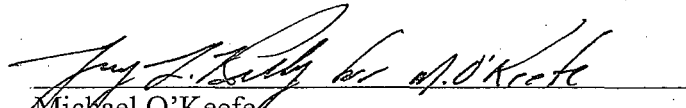
Outfall 027A

Two discharges were made from the Cooling Tower to support maintenance activities during the month of July. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC


Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10139

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 07/01/2010	TO 07/31/2010

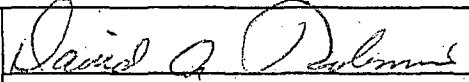
CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmr 8-10-10.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	86	91	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO-AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.9	*****	8.0	SU	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	0.06	0.11	mg/L	0	32/30	GR	
	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	665	667	Mgal/d	*****	*****	*****	*****	0	24/01	ES
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	35	35	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
			603 773-7496	08/12/2010	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
EPA No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY	TO	MM/DD/YYYY	
FROM 07/01/2010		07/31/2010	

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

Paul Freeman pmd 8.10.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****	<i>NO DI</i>		<i>C</i>			
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO-AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. Polansky</i>	603 773-7496	08/11/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 07/01/2010	TO 07/31/2010

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmel 8-10-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon: MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon: MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE	
Paul Freeman / Site Vice President		<i>David A. DeMarco</i>	603 773-7496	08/11/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmr 8-10-10

NH0020338	022-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 07/01/2010	TO 07/31/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	18466	24554	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	6.0	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED		<i>Paul Freeman</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 07/01/2010 TO 07/31/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmd 8.10.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	550	946	gal/d	*****	*****	*****	*****	0	01/07	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.0	2.0	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David J. Robinson</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
6. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 07/01/2010 TO 07/31/2010

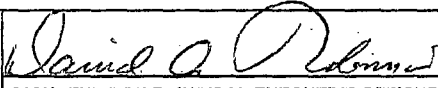
SECONDARY PLANT LEAKAGE VAULT3
External Outfall

ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT

Paul Freeman pmd 8-10-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	108	322	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req: Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.9	3.7	mg/L	0	07/WD	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	07/WD	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President			603 773-7496	08/10/2010	
TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 07/01/2010 TO 07/31/2010

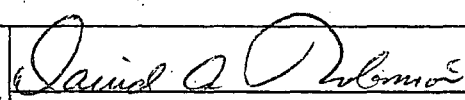
STEAM GENERATOR BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmd 8.10.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	60304	151962	gal/d.	*****	*****	*****	*****	0	99/99	ES.
00056 10 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.3	0.9	mg/L	0	01/BA	GR
00530 10 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE	
Paul Freeman / Site Vice President TYPED OR PRINTED			603 773-7496	08/10/2010	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 07/01/2010 TO 07/31/2010

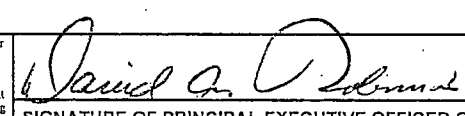
WASTE HOLDUP SUMP
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman and 8.10.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	19212	25052	gal/d	*****	*****	*****	*****	0	01/BA	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.5	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	08/11/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-D
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY
FROM 07/01/2010 TO 07/31/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmr 8-10-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17394	18245	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.1	2.7	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED		<i>David A. Roberts</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE DETERMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 07/01/2010 TO 07/31/2010

METAL CLEANING WASTES
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pm2 8.10.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>David A. DeB...</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM 07/01/2010 TO 07/31/2010

COOLING TOWER BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman *pmf 8-10-10*

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	95767	119600	gal/d	*****	*****	*****	*****	0	DL/DS	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	8.3	*****	8.4	SU	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.0	mg/L	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	.5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual 34044 0 0 See Comments	SAMPLE MEASUREMENT	0.0	6.0	lb/d	*****	*****	*****	*****	0	DL/DS	CA
	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President TYPED OR PRINTED		<i>David A. DeB...</i> SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	603 773-7496 AREA Code NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.



September 15, 2010

SBK-L-10158

NPDES Permit No. NH0020338

Discharge Monitoring Reports (OES4-SMR)
U.S. Environmental Protection Agency
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
August 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of August 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A, 024A and 026A had no flow during the month of August, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-CI D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 31 days in August. No visible oil sheen, foam or floating solids were noted during the month. No exceedences occurred.

No discharges were made during the month of August from the Condensate Polisher System.

Outfall 001B

The third quarter Whole Effluent Toxicity (WET) tests were performed in August 2010. No toxicity was observed in the effluent bioassays. The complete WET test report prepared by EnviroSystems, Inc. is provided in Enclosure 2.

Sampling for the third quarter WET testing was performed under the following discharge scenarios:

- Day 1 (August 16 – August 17, 2010) included discharges from Outfalls 025A, 025C & 025D,
- Day 2 (August 18 – August 19, 2010) included a discharge from Outfall 025A & 025B,
- Day 3 (August 20 – August 21, 2010) included a discharge from Outfall 025C & 025D.

Outfalls 022, 023 and 024

Discharges were made from the oil/water separator vaults (Outfalls 022 and 023) throughout the month of August. There was no flow recorded at Outfall 024 during the month of August. No exceedences occurred.

Outfall 025A

Four continuous discharges occurred during the month of August. No exceedences occurred.

Outfall 025B

Two continuous discharges occurred during the month of August. No exceedences occurred.

Outfall 025C

Five batch discharges occurred during the month of August. No exceedences occurred.

Outfall 025D

Four batch discharges occurred during the month of August. No exceedences occurred.

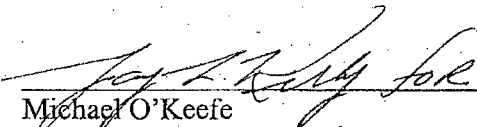
Outfall 027A

Two discharges were made from the Cooling Tower during the month of August. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

AUGUST 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08

ENCLOSURE 1 to SBK-L-10158

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
08/01/2010 TO 08/31/2010

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman, vice president pmd 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	91	99	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.9	*****	7.9	SU.	0	01/07	GR
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	(NO DL) S			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	(NO DL) C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.06	0.13	mg/L	0	01/01	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	.15 MO AVG	.2 DAILY MX	mg/L		Daily	GRAB
50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	669	674	Mgal/d.	*****	*****	*****	*****	0	24/01	ES.
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	35	35	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman, Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. DeBarnis</i>	TELEPHONE	DATE
			603-773-7496	09/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pm2 9/13/10

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****						
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman Vice President</i>	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Delmonico</i>	TELEPHONE	DATE
			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0064

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338	001-B
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 07/01/2010	TO 09/30/2010

CIRCULATING WATER SYSTEM
External Outfall

ATTN: GENE ST. PIERRE VICE PRESIDENT

PAUL FREEMAN

9/14/2010

FROM

TO

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
LC50 Static 48Hr Acute Mysid. Bahia	SAMPLE MEASUREMENT	*****	*****	*****	>100	*****	*****	%	0	01/90	COMP24
TAA3E 1.0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
LC50 Static 48Hr Acute Menidia	SAMPLE MEASUREMENT	*****	*****	*****	>100	*****	*****	%	0	01/90	COMP24
TAA6B 1.0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Static 1Hr Fert. Chronic Arbacia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBH3A 1.0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24
Noel Statre 7Day Chronic Menidia	SAMPLE MEASUREMENT	*****	*****	*****	100	*****	*****	%	0	01/90	COMP24
TBP6B 1.0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	Req. Mon. DAILY MN	*****	*****	%		Quarterly	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman Site Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Paul Freeman</i>	TELEPHONE	DATE	
			603773-7773	09/14/2010	
			AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PLEASE REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH ADDITIONAL PAGE FOR COMMENTS OR EXPLANATION OF VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	003-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

BACK-FLUSHING OPERATION
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pml 9-13-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	50000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David A. Robinson</i>	TELEPHONE	DATE
<i>Paul Freeman Vice President</i>			603 773-7496	09/14/2010
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman and 9-13-10

NH0020338	022-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	17739	23263	gal/d.	*****	*****	*****	*****	0	01/07	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
00530 1-0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman Vice President</i>	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Johnson</i>	TELEPHONE	DATE
			603 773-7496	09/14/2010
TYPED OR PRINTED			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	08/01/2010	TO	08/31/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pm2 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	374	1012	gpd	*****	*****	*****	*****	0	01/07	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.8	1.4	mg/L	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Robinson</i>	TELEPHONE	DATE
			603 773-7496	09/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

024-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY MM/DD/YYYY
FROM 08/01/2010 TO 08/31/2010

SECONDARY PLANT LEAKAGE VAULT3
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pml 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. O'Brien</i>	TELEPHONE	DATE
			603 773-7496	09/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	025-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
08/01/2010	08/31/2010

STEAM GENERATOR BLOWDOWN
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pml 9/13/10

FROM

TO

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	82803	189299	gal/d.	*****	*****	*****	*****	0	99/99	ES.
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0-0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman, Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Johnson</i>	TELEPHONE	DATE
			603 773-7496	09/14/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	025-B
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874

MAJOR

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pm2 9/13/10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	66378	78157	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman, Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Johnson</i>	TELEPHONE	DATE
			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	025-C
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

WASTE HOLDUP SUMP
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmr 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	17812	19307	gal/d.	*****	*****	*****	*****	0	01/BA	ES.
	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended 00530 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.6	5.2	mg/L	0	01/BA	GR.
	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease 00556 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman, Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David O. Quinn</i>	TELEPHONE	DATE
			603 773-7496	09/14/2010
		AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	025-D
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT

Paul Freeman pmc 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	15296	18017	gal/d.	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	3.1	5.1	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman, Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Robinson</i>	TELEPHONE	DATE
			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
08/01/2010 TO 08/31/2010

METAL CLEANING WASTES
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pm2 9/13/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****							
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****							
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****		30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****							
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****		15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****							
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****		1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****							
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****		1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <i>Paul Freeman, Vice President</i> TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE 603 773-7496	DATE 09/14/2010
			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Robinson</i>

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmh 9.14.10

NH0020338	027-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08/01/2010	TO 08/31/2010

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate 00056 1 0 Effluent Gross	SAMPLE MEASUREMENT	44374	60147	gal/d.	*****	*****	*****	*****	0	DL/DS	ES
	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d.	*****	*****	*****	*****		Daily	ESTIMA
pH 00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	8.3	*****	8.5	SU	0	DL/DS	GR
	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual 34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	0.4	mg/L	0	05/30	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual 34044 0 0 See Comments	SAMPLE MEASUREMENT	0.1	0.2	lb/d	*****	*****	*****	*****	0	05/30	CA
	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
<i>Paul Freeman Vice President</i>		<i>David A. O'Brien</i>	603 773-7496
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

ENCLOSURE 2 to SBK-L-10158

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 9/14/2010
Date

Allen L. Legendre Jr
Authorized Signature

Allen L. Legendre Jr / Principal Engineer
Print or Type Name and Title

NextEra Energy Seabrook LLC
Print or Type the Permittee's Name

NH 0020338
Print or Type the NPDES Permit No.

Laboratory Certification

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 9/7/10
Date

Kenneth A. Simon
Authorized Signature

Kenneth A. Simon
President - EnviroSystems, Incorporated

**TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
August 2010**

**NextEra Energy Seabrook Station LLC
Seabrook, New Hampshire
NPDES Permit Number NH0020338**

Prepared For

NextEra Energy Seabrook Station
Route 1
P.O. Box 300
Seabrook, New Hampshire 03874

Purchase Order Number: 02196759

By

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

August 2010
Reference Number SeabrookStation20062-10-08

STUDY NUMBER 20062

EXECUTIVE SUMMARY

The following summarizes the results of acute and chronic exposure bioassays performed during August 2010 to support the NPDES biomonitoring requirements of NextEra Energy Seabrook Station, Seabrook, New Hampshire. Acute and chronic definitive assays were completed using the marine species, *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*.

A. bahia were ≤ 5 days old at the start of the test. *M. beryllina* were 10 days old at the start of the test. *A. punctulata* were from cultures maintained by ESI. Original stock was obtained from commercial supply. Dilution water was receiving water collected off shore in the Atlantic Ocean by Normandeau Associates, Bedford, New Hampshire.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the chronic and modified acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Exposure Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Americamysis bahia</i>	48 Hours	>100%	100%	Report	NA	Yes
<i>Menidia beryllina</i>	48 Hours	>100%	100%	Report	NA	Yes

Chronic Exposure Toxicity Evaluation

Species	Exposure	C-NOEC	LOEC	Permit Limit (C-NOEC)	Effluent Meets Permit Limit	Assay Meets Protocol Requirements
<i>Menidia beryllina</i>	7 Days	100%	>100%	Report	NA	Yes
<i>Arbacia punctulata</i>	60 Minutes	100%	>100%	Report	NA	Yes

**TOXICOLOGICAL EVALUATION
OF TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
August 2010**

NextEra Energy Seabrook Station
Seabrook, New Hampshire
NPDES Permit Number NH0020338

1.0 INTRODUCTION

This report presents the results of acute and chronic toxicity tests completed on a series of composite effluent samples collected from NextEra Energy Seabrook Station, Seabrook, New Hampshire. Testing was based on programs and protocols developed by the US EPA (2002). A 48 hour static acute toxicity test was conducted using the mysid shrimp, *Americamysis bahia*, a 7 day modified acute and chronic toxicity test was conducted with the inland silverside, *M. beryllina*, and a 60 minute chronic fertilization assay was conducted with the purple sea urchin, *A. punctulata*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test organisms are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test organisms. Samples with high LC-50 values are less likely to cause significant environmental impacts. The no-effect concentration is also determined to provide information about the level of effluent which would have minimal acute effects in the environment. This Acute No Observed Effect Concentration (A-NOEC) is defined as the highest tested effluent concentration which causes no significant mortality. Chronic tests evaluate toxicity based on sublethal effects. Fertilization of *Arbacia punctulata* eggs or growth (weight) of *Menidia beryllina* are measured to determine effluent concentrations that have a significant impact on the organisms. Using Analysis of Variance techniques to evaluate the data, it is possible to determine the lowest concentration that had an effect (C-LOEC) and the highest concentration where no effect was observed (C-NOEC). *A. punctulata* fertilization data are also evaluated to determine the effluent concentration where a reduction in fertilization rates occurs. This is known as the Inhibition Concentration (IC).

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

When necessary, *A. bahia* and *M. beryllina* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

Male and female *A. punctulata* are maintained in separate chambers as recommended by protocol (EPA 2002).

2.3 Effluent, Receiving Water and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. When necessary, effluent used in the *A. bahia* and *M. beryllina* assays was salinity adjusted to 25±2 ppt and the effluent used in the *A. punctulata* assay was salinity adjusted to 30±2 ppt using artificial sea salts according to protocol (EPA 2002). Effluent and receiving water samples that were received at or above a salinity of 25±2 ppt did not require salinity adjustment (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1.

NextEra Energy Seabrook Station Effluent Evaluation, August 2010.
Study Number 20062.

and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in effluent and diluent samples. Samples containing ≥ 0.02 mg/L TRC were treated with sodium thiosulfate (EPA 2002).

2.4 Bioassays

Test concentrations for the assays were 100%, 50%, 25%, 12.5%, and 6.25% effluent.

2.4.1 *Americamysis bahia* Acute Exposure Bioassay

The 48 hour static acute assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Test chambers were 250 mL glass beakers with 200 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Survival and dissolved oxygen were recorded daily in all replicates. Temperature, pH, and salinity were measured in one replicate of each test treatment daily.

2.4.2 *Menidia beryllina* Chronic Exposure Bioassay

The 7 day static renewal chronic exposure assay was conducted at $25 \pm 1^\circ\text{C}$ with a photoperiod of 16:8 hours light:dark. Fish were maintained in 600 mL beakers containing 500 mL of test solution in each of 4 replicates containing 10 organisms/replicate. Prior to daily renewals, survival and dissolved oxygen in all replicates were recorded and pH, salinity and temperature were measured in one replicate of each test treatment. Dissolved oxygen, salinity, pH, and temperature were measured in one replicate of each new test treatment. Survival data was analyzed to assess acute toxicity after the initial 48 hours of exposure.

During the test, fish were fed ≤ 24 hour old *Artemia* nauplii twice a day. On Day 7 of the assay surviving fish were removed from test solutions, rinsed to remove any surface detritus and salts, and tranquilized using Finquel® brand tricaine methanesulfonate. Fish were placed on tared containers and dried for 24 hours at 104°C to obtain dry weight to the nearest 0.01 mg. To obtain final dry weight/fish used for statistical comparisons, the net dry weight was divided by the number of organisms introduced at the initiation of the assay.

2.4.3 *Arbacia punctulata* Chronic Fertilization Bioassay

Test chambers were 20 mL glass vials with 5 mL of test solution in each of 4 replicates. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted (see data appendix for final counts) and exposed to effluent solutions for 60 minutes. Eggs were introduced to sperm/effluent solutions and exposed for 20 minutes prior to the addition of preservative. Aliquots of preserved solution were counted to determine fertilized and unfertilized eggs.

2.5 Data Analysis

When necessary, statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. If survival in the highest test concentration is $>50\%$, the LC-50 is obtained by direct observation of the raw data. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results, Table 2, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS AND DISCUSSION

LC-50 and A-NOEC values from the *A. bahia* acute exposure assays are presented in Table 3. Data

from the *A. punctulata* fertilization assay are summarized in Table 4. Results of the chronic exposure assay completed using *M. beryllina* are provided in Table 5. A summary of water quality data collected during the assays is presented in Table 6. US EPA Attachment F toxicity test summary forms are included after the tables. Support data, including copies of laboratory bench sheets, can be found in Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria require $\geq 90\%$ survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate and the MSDp for fertilization to be $<25\%$ for *Arbacia punctulata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 4 for test acceptability.

3.3 *Menidia beryllina* Chronic Exposure Bioassay

Minimum test acceptability criteria require 80% control survival, a mean dry weight of 0.500 mg/fish based on Day 7 survival, and the MSDp for biomass to be $<28\%$ for *Menidia beryllina* (EPA 2002). Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 5 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls*. US EPA Region I Offices, Boston, Massachusetts.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Estuarine and Marine Organisms*. Third Edition. EPA-821-R-02-014.

**TABLE 1. Summary of Sample Collection Information.
NextEra Energy Seabrook Station Effluent Evaluation. August 2010.**

Sample Description	Type	Collection		Receipt		Arrival Temp °C
		Date	Time	Date	Time	
EFFLUENT						
Start	Comp	08/16-17/10	0900-0600	08/17/10	0915	2
1st Renewal	Comp	08/18-19/10	0900-0600	08/19/10	0925	2
2nd Renewal	Comp	08/20-21/10	0900-0600	08/21/10	0941	3
RECEIVING WATER						
Start	Grab	08/16/10	1030	08/16/10	1115	10*
1st Renewal	Grab	08/18/10	1540	08/18/10	1640	7*
2nd Renewal	Grab	08/20/10	1000	08/20/10	1045	14*

COMMENTS:

* Upon receipt, the temperature was outside of the range of 4±2°C recommended by the protocol. Samples were received with ice in the sample cooler. In addition, the start receiving water was inadvertently diluted to 25 ppt upon receipt, but was adjusted to 30.8 ppt prior to test initiation.

**TABLE 2. Summary of Reference Toxicant Data.
NextEra Energy Seabrook Station Effluent Evaluation. August 2010.**

Date	Endpoint	Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant	
<i>A. bahia</i>						
06/23/10	Survival	LC-50 - 48 Hr	22.5	21.9	17.9 - 25.9	SDS (mg/L)
<i>M. beryllina</i>						
05/19/10	Survival	LC-50 - 48 Hr	2.5	7.1	1.4 - 12.8	SDS (mg/L)
05/25/10	Survival	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
05/25/10	Growth	C-NOEC	5.0	5.0	2.5 - 10.0	SDS (mg/L)
<i>A. punctulata</i>						
06/10/10	Fertilization	C-NOEC	1.0	10.0	5.0 - 20.0*	Copper (µg/L)
06/10/10	Fertilization	IC-25	8.9	17.6	0.0 - 50.4	Copper (µg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

* Normal Acceptance Limits set at ±2 Std Dev of historic mean; maximum limits are ±3 Std of historic mean. The ±3 limit is acceptable, but considered high. If ±3 limit is utilized value is noted.

**TABLE 3. Summary of Acute Evaluation Results: *A. bahia*.
NextEra Energy Seabrook Station Effluent Evaluation. August 2010.**

Species	Exposure	PERCENT SURVIVAL						
		Lab	RW	6.25%	12.5%	25%	50%	100%
<i>A. bahia</i>	48 hours	95%	100%	97.5%	100%	100%	97.5%	97.5%

Species	Exposure	LC-50 COMPUTATION TECHNIQUE				A-NOEC
		Spearman-Kärber	Linear Regression	Nonlinear Regression		
<i>A. bahia</i>	48 Hours	NC	NC	NC	100%	

COMMENTS:
RW = Receiving Water used as diluent.

**TABLE 4. Summary of Chronic Bioassay Results: *A. punctulata*.
NextEra Energy Seabrook Station Effluent Evaluation. August 2010.**

	TREATMENTS						
	Lab	RW	6.25%	12.5%	25%	50%	100%
Mean % Fertilization	96.1%	94.7%	94.1%	90.8%	92.1%	91.1%	90.6%
Significantly < Diluent	-	-	No	No	No	No	No
Chronic No Observed Effect Concentration			100%				
Lowest Observed Effect Concentration			100%				
IC-10:			>100%				
MSDp:			4.3%				

COMMENTS:
RW = Receiving Water used as diluent.

TABLE 5. Summary of Chronic and Modified Acute Bioassay Results: *M. beryllina*. NextEra Energy Seabrook Station Effluent Evaluation. August 2010.

Effluent Conc.	Mean Percent Survival		Mean Biomass (mg/fish)	Is There a Significant Difference Based on	
	Day 2	Day 7		Survival (%)	Growth (Biomass)
LAB	100.0%	95.0%	1.19	-	-
RW	100.0%	97.5%	1.35	-	-
6.25%	100.0%	95.0%	1.38	No	No
12.5%	100.0%	97.5%	1.30	No	No
25.0%	100.0%	100.0%	1.35	No	No
50.0%	100.0%	95.0%	1.40	No	No
100.0%	100.0%	95.0%	1.41	No	No

LC-50 = >100%

MSDp = 14.3%

NOEC = 100.0% NOEC = 100.0%

COMMENTS:

RW = Receiving Water used as diluent.

Difference between diluent and treatment means considered to be significant when $p < 0.05$

Additional bioassay data and statistical analyses are provided in Appendix A.

TABLE 6. Initial Water Quality Data Summary. NextEra Energy Seabrook Station Effluent Evaluation. December 2009

PARAMETER	UNITS	EFFLUENT	RECEIVING WATER
Salinity	ppt	31	31
pH	SU	7.83	7.89
Total Residual Chlorine	mg/L	<0.02	<0.02
Total Solids	mg/L	39000	40000
Total Suspended Solids	mg/L	64	34
Ammonia	mg/L as N	<0.1	<0.1
Total Organic Carbon	mg/L	<0.4	<0.4
Aluminum, total	mg/L	0.029	-
Cadmium, total	mg/L	<0.0007	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	0.003	-
Lead, total	mg/L	<0.0005	-
Nickel, total	mg/L	<0.002	-
Zinc, total	mg/L	<0.002	-

COMMENTS:

Additional water quality and analytical support data are provided in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 08/19/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/21/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input checked="" type="checkbox"/> Acute	<u><i>Pimephales promelas</i></u>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<u><i>Ceriodaphnia dubia</i></u>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<u><i>Daphnia pulex</i></u>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input checked="" type="checkbox"/> <u><i>Americamysis bahia</i></u>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<u><i>Cyprinodon variegatus</i></u>	<input type="checkbox"/> Unchlorinated	
	<u><i>Menidia beryllina</i></u>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<u><i>Arbacia punctulata</i></u>		
	<u><i>Champia parvula</i></u>		
	<u><i>Selenastrum capricornutum</i></u>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Atlantic Ocean

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 08/18-19/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 06/23/10 LC-50: 22.5 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: 100 %

LIMITS	RESULTS
LC-50: <u>Report</u> %	LC-50 <u>>100%</u> %
A-NOEC: <u>-</u> %	Upper Limit: <u>-</u> %
C-NOEC: <u>Report</u> %	Lower Limit: <u>-</u> %
IC- <u>-</u> %	Method: <u>Direct Observation</u>
	A-NOEC: <u>100</u> %
	C-NOEC: <u>-</u> %
	C-LOEC: <u>-</u> %
	IC- <u>-</u> %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 08/17/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/24/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input checked="" type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Atlantic Ocean

Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____

Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

Artificial sea salts mixed with deionized water

Deionized water and hypersaline brine

Other

EFFLUENT SAMPLING DATES: 08/16-17/10 08/18-19/10 08/20-21/10

EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100

Permit Limit Concentration: Report %

Was the effluent salinity adjusted? No If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 05/19/10 LC-50: 2.5 mg/L Sodium Dodecyl Sulfate
05/25/10 NOEC: 5.0 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: <u>97.5</u> %	Mean Dry Weight/fish <u>1.39</u> mg
	MSDp: <u>14.3</u> %

LIMITS

LC-50: Report %

A-NOEC: - %

C-NOEC: Report %

IC- - %

RESULTS

LC-50 >100 %

Upper Limit: - %

Lower Limit: - %

Method: Direct Observation

A-NOEC: 100 %

C-NOEC: 100 %

C-LOEC: >100 %

IC- - %

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: NextEra Energy -Seabrook Station TEST START DATE: 08/19/10
 NPDES PERMIT NO.: NH0020338 TEST END DATE: 08/19/10

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
<input type="checkbox"/> Acute	<input type="checkbox"/> <i>Pimephales promelas</i>	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input checked="" type="checkbox"/> Chronic	<input type="checkbox"/> <i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input type="checkbox"/> Modified Chronic (Reporting Acute Values)	<input type="checkbox"/> <i>Daphnia pulex</i>	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flow-thru
<input type="checkbox"/> 24 Hour Screen	<input type="checkbox"/> <i>Americamysis bahia</i>	<input type="checkbox"/> Chlorinated on Site	<input type="checkbox"/> Other
	<input type="checkbox"/> <i>Cyprinodon variegatus</i>	<input type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> <i>Menidia beryllina</i>	<input checked="" type="checkbox"/> No Detectable Chlorine Upon Receipt	
	<input checked="" type="checkbox"/> <i>Arbacia punctulata</i>		
	<input type="checkbox"/> <i>Champia parvula</i>		
	<input type="checkbox"/> <i>Selenastrum capricornutum</i>		

DILUTION WATER:

Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: Atlantic Ocean
 Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: _____
 Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.
 Artificial sea salts mixed with deionized water
 Deionized water and hypersaline brine
 Other

EFFLUENT SAMPLING DATES: 08/18-19/10
 EFFLUENT CONCENTRATIONS TESTED (%): 6.25; 12.5; 25.0; 50.0; 100
 Permit Limit Concentration: Report %

Was the effluent salinity adjusted? NO If yes, to what level? _____ ppt

REFERENCE TOXICANT TEST DATE: 06/10/10 NOEC: 1.0 mg/L Copper
06/10/10 IC-25 8.9 mg/L Copper

PERMIT LIMITS AND TEST RESULTS
Test Acceptability Criteria

Proportion Fertilized:	<u>94.7</u> %	MSDp:	<u>4.3</u> %
LIMITS		RESULTS	
LC-50:	<u>Report</u> %	LC-50	<u> </u> %
A-NOEC:	<u> </u> %	Upper Limit:	<u> </u> %
C-NOEC:	<u>Report</u> %	Lower Limit:	<u> </u> %
IC- _____	<u> </u> %	Method:	<u>Dunnett's</u>
		A-NOEC:	<u> </u> %
		C-NOEC:	<u>100</u> %
		C-LOEC:	<u>>100</u> %
		IC- 10	<u>>100</u> %

APPENDIX A

DATA SHEETS AND STATISTICAL SUPPORT

Contents	Number of Pages
Methods Used in NPDES Biomonitoring Testing	1
<i>A. bahia</i> Acute Bioassay Daily Observation Bench Sheets	2
<i>A. bahia</i> Survival and Growth Statistics	0
<i>A. bahia</i> Organism Culture Data	1
<i>M. beryllina</i> - 7 Day Chronic Assay Daily Observation Bench Sheet	1
<i>M. beryllina</i> Larval Fish Dry Weight Summary Sheet	1
<i>M. beryllina</i> Survival and Growth Statistics	5
<i>M. beryllina</i> Organism Culture Data	1
<i>A. punctulata</i> Fertilization Water Quality and Sperm Dilutions	1
<i>A. punctulata</i> Egg Count Data Sheet	1
<i>A. punctulata</i> Fertilization Statistics	4
Water Quality Bench Sheets	3
Dilution Preparation Bench Sheets and Instrument Use Logs	5
Analytical Chemistry Support Data Summary Report	2
Sample Receipt Record - Effluent and Diluent Samples	1
Chain of Custody Record	6
Total Appendix Pages	35

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
<i>Ceriodaphnia dubia</i> , <i>Daphnia pulex</i>	EPA-821-R-02-012
<i>Pimephales promelas</i>	EPA-821-R-02-012
<i>Americamysis bahia</i>	EPA-821-R-02-012
<i>Menidia beryllina</i> , <i>Cyprinodon variegatus</i>	EPA-821-R-02-012
Chronic Exposure Bioassays:	
<i>Ceriodaphnia dubia</i>	EPA-821-R-02-013, 1002.0
<i>Pimephales promelas</i>	EPA-821-R-02-013, 1000.0
<i>Cyprinodon variegatus</i>	EPA-821-R-02-013, 1004.0
<i>Menidia beryllina</i>	EPA-821-R-02-013, 1006.0
<i>Arbacia punctulata</i>	EPA-821-R-02-013, 1008.0
<i>Champia parvula</i>	EPA-821-R-02-013, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20 th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20 th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20 th Edition - Method 5310C
Specific Conductance	Standard Methods 20 th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20 th Edition - Method 4500NH3G
pH	Standard Methods 20 th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20 th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20 th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20 th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20 th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 20062		"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES															
CLIENT: NextEra Energy Seabrook Station		TEST ORGANISM: A. bahia		TRC		AMM		TS/TSS		TOC		T. Metals		pH		SALINITY	
SAMPLE: EFFLUENT		ORGANISM SUPPLIER/BATCH/AGE: See Organism Culture Sheet		EFF		DIL											
DILUENT: Receiving Water																	
SALINITY ADJUSTMENT RECORD:		See M. Perryling		100% ACTUAL PERCENTAGE		100% ACTUAL PERCENTAGE											
CONC	REP	SURVIVAL			DO (mg/L)			PH (SU)			TEMP (°C) †			SALINITY (ppt)			
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48	
LAB	A	10	10	10	7.5	6.4	7.5	7.96	8.02	7.99	24	24	24	31	30	82	
	B	10	10	10	7.5	6.5	7.4										
	C	10	10	9	7.5	6.5	7.4										
	D	10	9	9	7.5	6.5	7.5										
Rec' Water	A	10	10	10	8.0	6.6	7.5	7.25	7.88	7.93	25	24	24	31	32	83	
	B	10	10	10	8.0	6.7	7.5										
	C	10	10	10	8.0	6.7	7.8										
	D	10	10	10	8.0	6.7	7.4										
6.25%	A	10	10	10	8.0	6.7	7.6	7.31	7.89	7.93	25	25	24	31	32	83	
	B	10	10	10	8.0	6.7	7.5										
	C	10	10	10	8.0	6.8	7.6										
	D	10	9	9	8.0	6.7	7.6										
12.5%	A	10	10	10	7.8	6.9	7.6	7.34	7.91	7.95	25	24	24	31	32	83	
	B	10	10	10	7.8	6.8	7.7										
	C	10	10	10	7.8	6.7	7.7										
	D	10	10	10	7.8	6.7	7.6										
DATE	8/14/10	8/20/10	8/21	8/19/10	8/20/10	8/21											
TIME	1510	1420	1645	1500	1410	1630											
INITIALS	vc	vc	LB	SS	vc	LB											

ACUTE BIOASSAY DATA SUMMARY

STUDY: 20062										"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES						
CLIENT: NextEra Energy Seabrook Station					TEST ORGANISM: <i>A. bahia</i>											
SAMPLE: EFFLUENT										See Page 1						
DILUENT: Receiving Water																
CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C) ‡			SALINITY (ppt)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
25%	A	10	10	10	7.7	6.7	7.6	7.40	7.40	7.91	25	25	24	31	32	33
	B	10	10	10	7.7	6.5	7.4									
	C	10	10	10	7.7	6.6	7.4									
	D	10	10	10	7.7	6.7	7.3									
50%	A	10	10	10	7.7	6.8	7.2	7.52	7.93	7.89	25	24	24	31	32	33
	B	10	10	10	7.7	6.7	7.1									
	C	10	10	10	7.7	6.7	7.1									
	D	10	9	9	7.7	6.7	6.9									
100%	A	10	9	9	7.8	6.8	6.9	7.78	8.00	7.90	25	24	24	32	32	34
	B	10	10	10	7.8	6.8	7.0									
	C	10	10	10	7.8	6.7	7.1									
	D	10	10	10	7.8	6.7	7.1									
DATE	8/19/10	8/20/10	8/21	8/19/10	8/20/10	8/21										
TIME	1510	1435	1645	1500	1420	1630										
INITIALS	ve	ve	LB	SJ	ve	LB										

‡ - Temperature in vessel.



Aquatic Research Organisms

DATA SHEET

Rec
8/19/10

I. Organism History

Species AMERICAMYSIS bahia

Source: Lab reared Hatchery reared Field collected

Hatch date 8-17-10 Receipt date

Lot number 08710MS Strain

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ~30 ppt D.O. ppm

pH 7.8 su Hardness ppm Alkalinity ppm

III. Culture Conditions

Freshwater Saltwater Other

Recirculating Flow through Static

DIET: Flake food Phytoplankton Trout chow

Artemia Rotifers YCT Other Encaps. Shrimps DIET

Prophylactic treatments:

Comments:

IV. Shipping Information

Client: EST # of Organisms 320+

Carrier: Date shipped 8-19-10

Biologist: Mark Cavagnaro

Menidia beryllina 7 DAY CHRONIC ASSAY

STUDY 200102		CLIENT NextEra Energy Seabrook Station			SAMPLE EFFLUENT					DILUENT RECEIVING WATER (RW)			FISH/BATCH <i>See Organism Culture Sheet</i>			
		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
CONC	REP	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	10	10	10	10	10	10	10	10	5.4	5.6	5.6	6.42	6.2	6.4	4.8
	B	10	10	10	10	10	10	9	9	5.6	5.4	5.6	6.42	6.3	6.5	4.6
	C	10	10	10	10	10	9	9	9	5.7	5.3	5.6	6.42	6.3	6.4	5.2
	D	10	10	10	10	10	10	10	10	5.7	5.3	5.7	6.42	6.1	6.4	5.3
RW	A	10	10	10	10	10	10	10	9	5.5	5.3	5.7	6.43	6.4	6.6	3.9
	B	10	10	10	10	10	10	10	10	5.6	5.2	5.6	6.53	6.4	6.6	4.2
	C	10	10	10	10	10	10	10	10	5.5	5.2	5.6	6.42	6.6	6.6	4.7
	D	10	10	10	10	10	10	10	10	5.6	5.2	5.4	6.53	6.6	6.5	4.9
6.25%	A	10	10	10	10	10	10	10	10	5.4	5.1	5.6	6.53	6.7	6.6	3.7
	B	10	10	10	10	10	10	10	10	5.4	4.9	5.6	6.53	6.5	6.5	4.2
	C	10	10	10	10	10	9	9	8	5.5	5.0	5.6	6.43	6.5	6.5	4.6
	D	10	10	10	10	10	10	10	10	5.5	5.1	5.6	6.42	6.6	6.5	4.7
12.5%	A	10	10	10	10	10	10	10	10	5.7	5.1	5.3	6.41	6.4	6.5	4.7
	B	10	10	10	10	10	10	10	10	5.6	4.9	5.3	6.42	6.4	6.4	4.8
	C	10	10	10	10	9	9	9	9	5.7	4.8	5.6	6.53	6.5	6.4	4.8
	D	10	10	10	10	10	10	10	10	5.7	5.1	5.7	6.54	6.5	6.5	3.9
25%	A	10	10	10	10	10	10	10	10	5.8	5.4	5.9	6.44	6.5	6.4	4.7
	B	10	10	10	10	10	10	10	10	5.6	5.3	5.7	6.45	6.5	6.4	4.7
	C	10	10	10	10	10	10	10	10	5.4	5.1	5.6	6.44	6.4	6.4	4.6
	D	10	10	10	10	10	10	10	10	5.4	5.0	5.6	6.5	6.5	6.4	4.6
50%	A	10	10	10	10	9	9	9	8	5.6	5.1	5.4	6.54	6.4	6.3	4.9
	B	10	10	10	10	10	10	10	10	5.4	4.9	5.5	6.54	6.4	6.4	4.8
	C	10	10	10	10	10	10	10	10	5.4	4.9	5.4	6.42	6.3	6.4	4.6
	D	10	10	10	10	10	10	10	10	5.6	5.1	5.5	6.42	6.3	6.4	4.1
100%	A	10	10	10	10	10	10	10	10	5.8	5.3	5.0	6.4	6.3	6.3	4.5
	B	10	10	10	10	10	10	10	10	5.7	5.0	5.1	6.43	6.2	6.3	4.8
	C	10	10	10	10	10	10	10	10	5.6	4.9	5.4	6.43	6.3	6.3	5.1
	D	10	10	10	9	9	9	9	8	5.6	5.0	5.6	6.4	6.4	6.3	5.2
INC TEMP °C:		25	25	25	25	25	25	25	25							
DATE:		8/17/10	8/18	8/19	8/20	8/21	8/22	8/23	8/24							
TIME:		1510	1255	1515	1155	1715	1225	1345	0925							
INITIALS:		LB	SS	ST	ST	LB	DM	DM	m							

ADDITIONAL OLD WATER QUALITIES ON SEPARATE DATA SHEET.

Larval Fish Dry Weight Summary Sheet

Study: 20062

Client: Seabrook Station

Date/Time/Init: 08/25/10 1515 CS 08/23/10 1335 CS

Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	23.87	10.94
Lab B	20.21	8.19
Lab C	19.05	9.71
Lab D	24.43	10.95
RWA	24.36	10.3
RWB	22.16	7.83
RWC	20.34	8.17
RWD	21.67	8.29
6A	25.04	11.09
6B	24.28	11.32
6C	20.75	8.36
6D	25.01	9.21
12A	22.78	9.21
12B	21.49	8.81
12C	24.12	10.83
12D	20.38	7.74
25A	19.4	6.6
25B	24.56	9.88
25C	21.91	7.53
25D	19.31	7.24
50A	25.04	10.77
50B	24.7	10.08
50C	24.67	11.72
50D	21.73	7.59
100A	26.33	10.41
100B	23.82	9.72
100C	26.76	12.8
100D	20.03	7.73

CETIS Summary Report

Report Date: 31 Aug-10 14:33 (p 1 of 2)
 Test Code: 02-4112-0897/20062Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Batch ID: 00-7246-8043	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 17 Aug-10 15:10	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water
Ending Date: 24 Aug-10 09:25	Species: Menidia beryllina	Brine: Generic commercial salts
Duration: 6d 18h	Source: ARO - Aquatic Research Organisms, NH	Age: 10 d

Sample ID: 15-9655-8364	Code: 20062	Client: NextEra Energy
Sample Date: 17 Aug-10 09:00	Material: Industrial Noncontact Water	Project: Third Quarter WET Compliance Test
Receive Date: 17 Aug-10 09:15	Source: Seabrook Station	
Sample Age: 6h (2 °C)	Station: NH0020338; Final Discharge	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
08-1026-5972	7d Proportion Survived	100	>100	N/A	13.0%	1	Steel Many-One Rank Test
08-7940-0304	Mean Dry Biomass-mg	100	>100	N/A	14.3%	1	Dunnnett's Multiple Comparison Test
12-1569-7227	Mean Dry Weight-mg	100	>100	N/A	17.2%	1	Dunnnett's Multiple Comparison Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
08-1026-5972	7d Proportion Survived	Control Resp	0.975	0.8 - NL	Yes	Result Within Limits
08-7940-0304	Mean Dry Biomass-mg	Control Resp	1.35	0.5 - NL	Yes	Result Within Limits
08-7940-0304	Mean Dry Biomass-mg	PMSD	0.143	0.11 - 0.28	Yes	Result Within Limits

7d Proportion Survived Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
0	Lab Water	4	0.95	0.928	0.972	0.9	1	0.0105	0.0577	6.08%	2.56%
6.25		4	0.95	0.913	0.987	0.8	1	0.0183	0.1	10.5%	2.56%
12.5		4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	0.0%
25		4	1	1	1	1	1	0	0	0.0%	-2.56%
50		4	0.95	0.913	0.987	0.8	1	0.0183	0.1	10.5%	2.56%
100		4	0.95	0.913	0.987	0.8	1	0.0183	0.1	10.5%	2.56%

Mean Dry Biomass-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.35	1.31	1.38	1.22	1.43	0.0176	0.0963	7.14%	0.0%
0	Lab Water	4	1.19	1.13	1.26	0.934	1.35	0.0335	0.184	15.4%	11.4%
6.25		4	1.38	1.32	1.43	1.24	1.58	0.0273	0.15	10.9%	-2.15%
12.5		4	1.3	1.29	1.32	1.26	1.36	0.00839	0.0459	3.52%	3.26%
25		4	1.35	1.3	1.39	1.21	1.47	0.0229	0.125	9.28%	0.02%
50		4	1.4	1.37	1.43	1.29	1.46	0.0132	0.0726	5.18%	-3.78%
100		4	1.41	1.35	1.46	1.23	1.59	0.027	0.148	10.5%	-4.34%

Mean Dry Weight-mg Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.39	1.33	1.44	1.22	1.56	0.0267	0.146	10.5%	0.0%
0	Lab Water	4	1.25	1.2	1.31	1.04	1.35	0.0266	0.146	11.6%	9.66%
6.25		4	1.45	1.41	1.5	1.3	1.58	0.0243	0.133	9.16%	-4.86%
12.5		4	1.34	1.3	1.38	1.26	1.48	0.0182	0.0999	7.44%	3.33%
25		4	1.35	1.3	1.39	1.21	1.47	0.0229	0.125	9.28%	2.83%
50		4	1.49	1.41	1.57	1.29	1.78	0.0381	0.209	14.0%	-7.29%
100		4	1.48	1.45	1.52	1.4	1.59	0.0176	0.0962	6.48%	-6.94%

CETIS Summary Report

Report Date: 31 Aug-10 14:33 (p 2 of 2)
 Test Code: 02-4112-0897/20062Mb

Menidia beryllina 7-d Larval Survival and Growth Test						EnviroSystems, Inc.
7d Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	0.9	1	1	1	
0	Lab Water	1	0.9	0.9	1	
6.25		1	1	0.8	1	
12.5		1	1	0.9	1	
25		1	1	1	1	
50		0.8	1	1	1	
100		1	1	1	0.8	
Mean Dry Biomass-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.41	1.43	1.22	1.34	
0	Lab Water	1.29	1.2	0.934	1.35	
6.25		1.4	1.3	1.24	1.58	
12.5		1.36	1.27	1.33	1.26	
25		1.28	1.47	1.44	1.21	
50		1.43	1.46	1.29	1.41	
100		1.59	1.41	1.4	1.23	
Mean Dry Weight-mg Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	1.56	1.43	1.22	1.34	
0	Lab Water	1.29	1.34	1.04	1.35	
6.25		1.4	1.3	1.55	1.58	
12.5		1.36	1.27	1.48	1.26	
25		1.28	1.47	1.44	1.21	
50		1.78	1.46	1.29	1.41	
100		1.59	1.41	1.4	1.54	

CETIS Analytical Report

Report Date: 31 Aug-10 14:34 (p 2 of 3)
 Test Code: 02-4112-0897/20062Mb

Menidia beryllina 7-d Larval Survival and Growth Test							EnviroSystems, Inc.				
Analysis ID:	08-1026-5972	Endpoint:	7d Proportion Survived	CETIS Version:	CETISv1.7.0						
Analyzed:	31 Aug-10 14:33	Analysis:	Nonparametric-Control vs Treatments	Official Results:	Yes						
Batch ID:	00-7246-8043	Test Type:	Growth-Survival (7d)	Analyst:							
Start Date:	17 Aug-10 15:10	Protocol:	EPA/821/R-02-014 (2002)	Diluent:	Receiving Water						
Ending Date:	24 Aug-10 09:25	Species:	Menidia beryllina	Brine:	Generic commercial salts						
Duration:	6d 18h	Source:	ARO - Aquatic Research Organisms, NH	Age:	10 d						
Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD			
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	13.0%			
Steel Many-One Rank Test											
Control	vs	Conc-%	Test Stat	Critical	Ties	P-Value	Decision(5%)				
Receiving Water		6.25	17.5	10	1	0.7867	Non-Significant Effect				
		12.5	18	10	2	0.8333	Non-Significant Effect				
		25	20	10	1	0.9516	Non-Significant Effect				
		50	17.5	10	1	0.7867	Non-Significant Effect				
		100	17.5	10	1	0.7867	Non-Significant Effect				
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision(5%)			
Between	0.01886499		0.003772998		5	0.273	0.9221	Non-Significant Effect			
Error	0.2489633		0.01383129		18						
Total	0.2678283		0.01760429		23						
ANOVA Assumptions											
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)						
Variances	Mod Levene Equality of Variance	0.273	4.25	0.9221	Equal Variances						
Distribution	Shapiro-Wilk Normality	0.717		<0.0001	Non-normal Distribution						
7d Proportion Survived Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%
6.25		4	0.95	0.912	0.988	0.8	1	0.0186	0.1	10.5%	2.56%
12.5		4	0.975	0.956	0.994	0.9	1	0.00928	0.05	5.13%	0.0%
25		4	1	1	1	1	1	0	0	0.0%	-2.56%
50		4	0.95	0.912	0.988	0.8	1	0.0186	0.1	10.5%	2.56%
100		4	0.95	0.912	0.988	0.8	1	0.0186	0.1	10.5%	2.56%
Angular (Corrected) Transformed Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%
6.25		4	1.34	1.28	1.39	1.11	1.41	0.0283	0.152	11.4%	2.59%
12.5		4	1.37	1.34	1.4	1.25	1.41	0.0151	0.0815	5.94%	0.0%
25		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	-2.97%
50		4	1.34	1.28	1.39	1.11	1.41	0.0283	0.152	11.4%	2.59%
100		4	1.34	1.28	1.39	1.11	1.41	0.0283	0.152	11.4%	2.59%

CETIS Analytical Report

Report Date: 31 Aug-10 14:34 (p 3 of 3)
Test Code: 02-4112-0897/20062Mb

Menidia beryllina 7-d Larval Survival and Growth Test

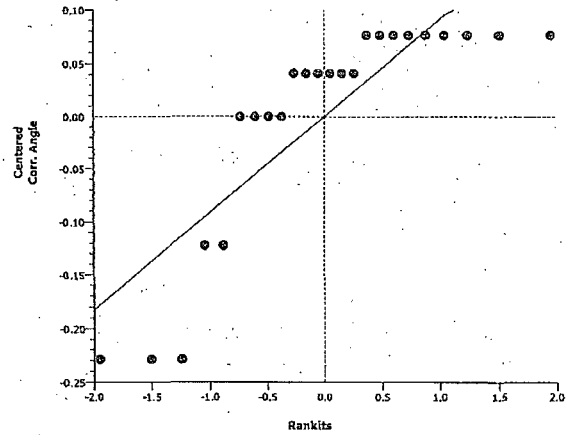
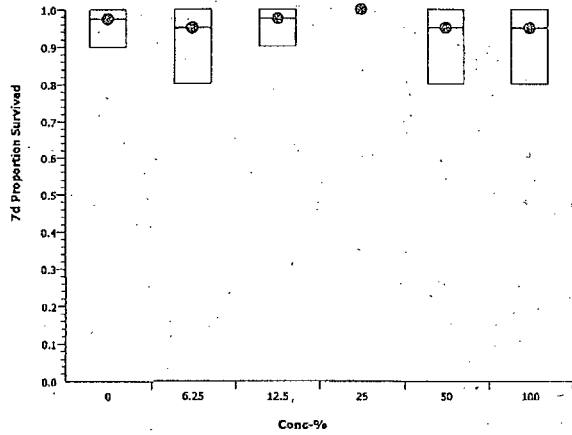
EnviroSystems, Inc.

Analysis ID: 08-1026-5972
Analyzed: 31 Aug-10 14:33

Endpoint: 7d Proportion Survived
Analysis: Nonparametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 31 Aug-10 14:33 (p 1 of 3)
 Test Code: 02-4112-0897/20062Mb

Menidia beryllina 7-d Larval Survival and Growth Test EnviroSystems, Inc.

Analysis ID: 08-7940-0304 Endpoint: Mean Dry Biomass-mg CETIS Version: CETISv1.7.0
 Analyzed: 31 Aug-10 14:33 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 00-7246-8043 Test Type: Growth-Survival (7d) Analyst:
 Start Date: 17 Aug-10 15:10 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 24 Aug-10 09:25 Species: Menidia beryllina Brine: Generic commercial salts
 Duration: 6d 18h Source: ARO - Aquatic Research Organisms, NH Age: 10 d.

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run	100	>100	N/A	1	14.3%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	-0.363	2.41	0.192	0.9182	Non-Significant Effect
	12.5	0.551	2.41	0.192	0.6253	Non-Significant Effect
	25	0.00313	2.41	0.192	0.8324	Non-Significant Effect
	50	-0.638	2.41	0.192	0.9564	Non-Significant Effect
	100	-0.732	2.41	0.192	0.9653	Non-Significant Effect

ANOVA Table

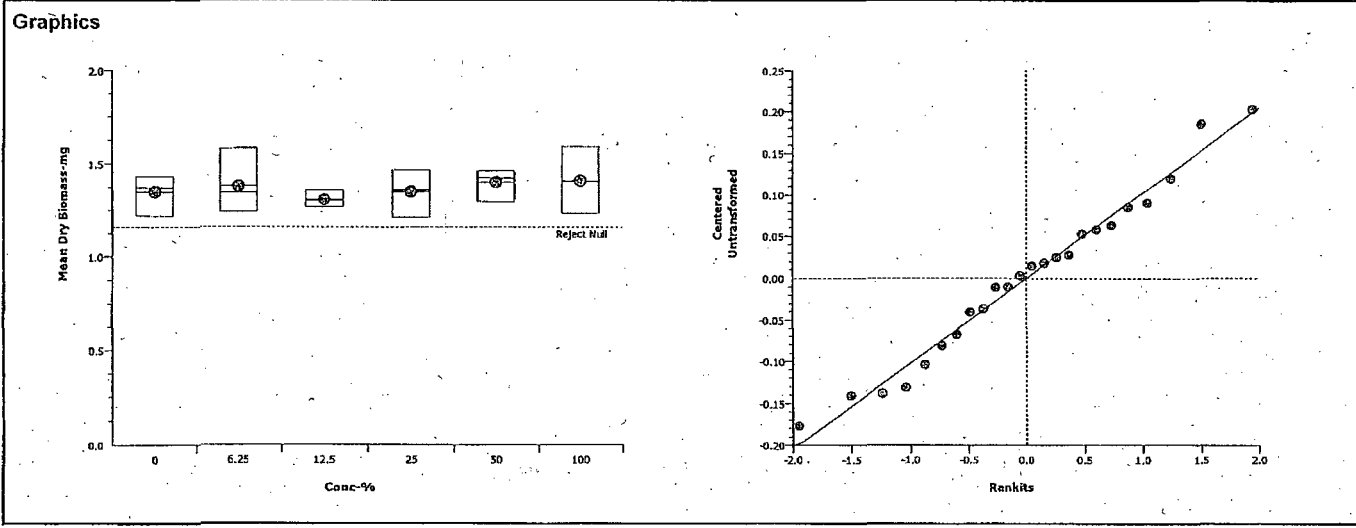
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02927923	0.005855846	5	0.459	0.8016	Non-Significant Effect
Error	0.2297967	0.01276648	18			
Total	0.2590759	0.01862233	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	4.51	15.1	0.4782	Equal Variances
Distribution	Shapiro-Wilk Normality	0.977		0.8396	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	1.35	1.31	1.39	1.22	1.43	0.0179	0.0963	7.14%	0.0%
6.25		4	1.38	1.32	1.43	1.24	1.58	0.0278	0.15	10.9%	-2.15%
12.5		4	1.3	1.29	1.32	1.26	1.36	0.00853	0.0459	3.52%	3.26%
25		4	1.35	1.3	1.4	1.21	1.47	0.0232	0.125	9.28%	0.02%
50		4	1.4	1.37	1.43	1.3	1.46	0.0135	0.0726	5.18%	-3.78%
100		4	1.41	1.35	1.46	1.23	1.59	0.0275	0.148	10.5%	-4.34%





Aquatic Research Organisms

DATA SHEET

Rec
8-17-10

I. Organism History

Species PLECIDIA beryllina

Source: Lab reared Hatchery reared _____ Field collected _____

Hatch date 8-7-10 Receipt date _____

Lot number 080410MB Strain _____

Brood origination CAPE COD MA

II. Water Quality

Temperature 25 °C Salinity ~30 ppt D.O. _____ ppm

pH 7.8 su Hardness _____ ppm Alkalinity _____ ppm

III. Culture Conditions

Freshwater _____ Saltwater Other _____

Recirculating Flow through _____ Static _____

DIET: Flake food Phytoplankton _____ Trout chow _____

Artemia Rotifers YCT _____ Other Escap. Shrimp Diet

Prophylactic treatments: _____

Comments: _____

IV. Shipping Information

Client: ESI # of Organisms 680+

Carrier: _____ Date shipped 8-17-10

Biologist: Mark [Signature]

Arbacia punctulata Chronic Fertilization Assay

STUDY: 20062	CLIENT: NextEra Energy Seabrook Station	SAMPLE/DILUENT: EFFLUENT / RECEIVING WATER (RW)	DATE / INITIALS: 8/19/16 LB		
SALINITY ADJUSTMENT RECORD: 1000 ml EFFLUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
SALINITY ADJUSTMENT RECORD: 1000 ml DILUENT + 0 g SALT = 100% ACTUAL PERCENTAGE					
EFFLUENT CONCENTRATION)	D.O. (mg/L)	pH (SU)	TEMPERATURE (°C)	SALINITY (ppt)	TRC (mg/L)
"AS RECEIVED" EFFLUENT	9.0	7.61		31.5	<0.02
"AS RECEIVED" RW DILUENT	8.2	6.32		30.5	<0.02
LAB CONTROL	7.5	7.87	21	30	
RW	7.8	7.26	21	31	
6.25%	8.0	7.30	21	31	
12.5%	8.0	7.34	21	31	
25%	7.9	7.41	21	31	
50%	7.9	7.56	21	31	
100%	8.3	7.82	21	32.1 ^{OW}	

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 116 x 10⁴ = SPM SOLUTION E = 1.16 x 10⁶

SPERM CONCENTRATIONS: SOLUTION E X 40 = SOLUTION A = 4.64 x 10⁷ SPM
 SOLUTION E X 20 = SOLUTION B = 2.32 x 10⁷ SPM
 SOLUTION E X 5 = SOLUTION C = 5.80 x 10⁶ SPM

FINAL COUNTS:

FINAL SPERM COUNT: 4.64 x 10⁷
 FINAL EGG COUNT: 2500

Sampling Date _____ Time _____

Bottles Pulled: EFFLUENT DILUENT
 TOC
 METALS N/A
 AMM
 TS/S

TEST TIMES:

SPERM COLLECTED: 1410
 EGGS COLLECTED: 1410
 SPERM ADDED: 1511
 EGGS ADDED: 1611
 FIXATIVE ADDED: 1631

Meters Used

DO meter # 23 DO probe # 90 pH meter # 476 pH probe # 92 S/C meter # YS130D S/C probe # YS130D
 SALINITY meter # YS136D Temp. (thermometer or probe #) YS130D

***Arbacia punctulata* Chronic Fertilization Assay**

STUDY	CLIENT	SAMPLE/DILUENT			DATE
20062	NextEra Energy Seabrook Station	EFFLUENT / RECEIVING WATER (RW)			8/20/10
EFFLUENT CONC.	REPLICATE VIAL				
	<u>1</u> FERT/TOTAL	<u>2</u> FERT/TOTAL	<u>3</u> FERT/TOTAL	<u>4</u> FERT/TOTAL	
LAB	100/103	100/104	99/102	97/103	
RW	94/102	98/102	100/105	101/106	
6.25%	92/100	95/100	98/103	96/102	
12.5%	91/100	88/101	93/102	95/101	
25%	94/102	93/106	103/108	97/104	
50%	101/106	97/106	102/116	96/107	
100%	95/106	96/102	94/105	97/109	

INITIALS: SJ

CETIS Summary Report

Report Date: 31 Aug-10 14:43 (p 1 of 1)
 Test Code: 03-7890-3291/20062Ap

Arbacia Sperm Cell Fertilization Test							EnviroSystems, Inc.				
Batch ID:	10-4482-6114	Test Type:	Fertilization	Analyst:							
Start Date:	19 Aug-10 15:11	Protocol:	EPA/821/R-02-014 (2002)	Diluent:	Receiving Water						
Ending Date:	19 Aug-10 16:31	Species:	Arbacia punctulata	Brine:	Generic commercial salts						
Duration:	80m	Source:	In-House Culture	Age:							
Sample ID:	04-7383-5728	Code:	20062	Client:	NextEra Energy						
Sample Date:	19 Aug-10 06:00	Material:	Industrial Noncontact Water	Project:	Third Quarter WET Compliance Test						
Receive Date:	19 Aug-10 09:25	Source:	Seabrook Station								
Sample Age:	9h (2 °C)	Station:	NH0020338; Final Discharge								
Comparison Summary											
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method				
04-1236-9517	Proportion Fertilized	100	>100	N/A	4.29%	1	Dunnett's Multiple Comparison Test				
Point Estimate Summary											
Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method				
04-8832-3048	Proportion Fertilized	EC10	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)				
Test Acceptability											
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision					
04-1236-9517	Proportion Fertilized	Control Resp	0.947	0.7 - 1	Yes	Result Within Limits					
04-8832-3048	Proportion Fertilized	Control Resp	0.947	0.7 - 1	Yes	Result Within Limits					
04-1236-9517	Proportion Fertilized	PMSD	0.0429	NL - 0.25	No	Result Within Limits					
Proportion Fertilized Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.947	0.94	0.953	0.922	0.961	0.00316	0.0173	1.83%	0.0%
0	Lab Water	4	0.961	0.956	0.966	0.942	0.971	0.00249	0.0137	1.42%	-1.51%
6.25		4	0.941	0.935	0.946	0.92	0.951	0.00265	0.0145	1.54%	0.66%
12.5		4	0.908	0.898	0.919	0.871	0.941	0.00519	0.0284	3.13%	4.06%
25		4	0.921	0.909	0.933	0.877	0.954	0.00588	0.0322	3.5%	2.7%
50		4	0.911	0.899	0.923	0.879	0.953	0.00574	0.0314	3.45%	3.78%
100		4	0.906	0.897	0.915	0.89	0.941	0.00436	0.0239	2.63%	4.36%
Proportion Fertilized Detail											
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Receiving Water	0.922	0.961	0.952	0.953						
0	Lab Water	0.971	0.962	0.971	0.942						
6.25		0.92	0.95	0.951	0.941						
12.5		0.91	0.871	0.912	0.941						
25		0.922	0.877	0.954	0.933						
50		0.953	0.915	0.879	0.897						
100		0.896	0.941	0.895	0.89						

CETIS Analytical Report

Report Date: 31 Aug-10 14:43 (p 1 of 2)
 Test Code: 03-7890-3291/20062Ap

Arbacia Sperm Cell Fertilization Test EnviroSystems, Inc.

Analysis ID: 04-1236-9517 Endpoint: Proportion Fertilized CETIS Version: CETISv1.7.0
 Analyzed: 31 Aug-10 14:43 Analysis: Parametric-Control vs Treatments Official Results: Yes

Batch ID: 10-4482-6114 Test Type: Fertilization Analyst:
 Start Date: 19 Aug-10 15:11 Protocol: EPA/821/R-02-014 (2002) Diluent: Receiving Water
 Ending Date: 19 Aug-10 16:31 Species: Arbacia punctulata Brine: Generic commercial salts
 Duration: 80m Source: In-House Culture Age:

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	4.29%

Dunnett's Multiple Comparison Test

Control	vs Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Receiving Water	6.25	0.428	2.41	0.0806	0.6785	Non-Significant Effect
	12.5	2.22	2.41	0.0806	0.0708	Non-Significant Effect
	25	1.48	2.41	0.0806	0.2332	Non-Significant Effect
	50	2.04	2.41	0.0806	0.0969	Non-Significant Effect
	100	2.38	2.41	0.0806	0.0528	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02221606	0.004443212	5	1.98	0.1306	Non-Significant Effect
Error	0.04038953	0.002243863	18			
Total	0.06260559	0.006687075	23			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	1.76	15.1	0.8811	Equal Variances
Distribution	Shapiro-Wilk Normality	0.974		0.7587	Normal Distribution

Proportion Fertilized Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Water	4	0.947	0.94	0.953	0.922	0.961	0.00322	0.0173	1.83%	0.0%
6.25		4	0.941	0.935	0.946	0.92	0.951	0.00269	0.0145	1.54%	0.66%
12.5		4	0.908	0.898	0.919	0.871	0.941	0.00528	0.0284	3.13%	4.06%
25		4	0.921	0.909	0.934	0.877	0.954	0.00598	0.0322	3.5%	2.7%
50		4	0.911	0.899	0.923	0.879	0.953	0.00583	0.0314	3.45%	3.78%
100		4	0.906	0.897	0.915	0.89	0.941	0.00443	0.0239	2.63%	4.36%

Angular (Corrected) Transformed Summary

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Receiving Wate	4	1.34	1.33	1.35	1.29	1.37	0.00683	0.0368	2.75%	0.0%
6.25		4	1.33	1.31	1.34	1.28	1.35	0.00551	0.0297	2.24%	1.07%
12.5		4	1.27	1.25	1.28	1.2	1.32	0.00916	0.0493	3.9%	5.55%
25		4	1.29	1.27	1.31	1.21	1.35	0.0109	0.0588	4.55%	3.71%
50		4	1.27	1.25	1.29	1.22	1.35	0.0109	0.0586	4.6%	5.11%
100		4	1.26	1.24	1.28	1.23	1.33	0.00812	0.0437	3.47%	5.94%

CETIS Analytical Report

Report Date: 31 Aug-10 14:43 (p 2 of 2)
Test Code: 03-7890-3291/20062Ap

Arbacia Sperm Cell Fertilization Test

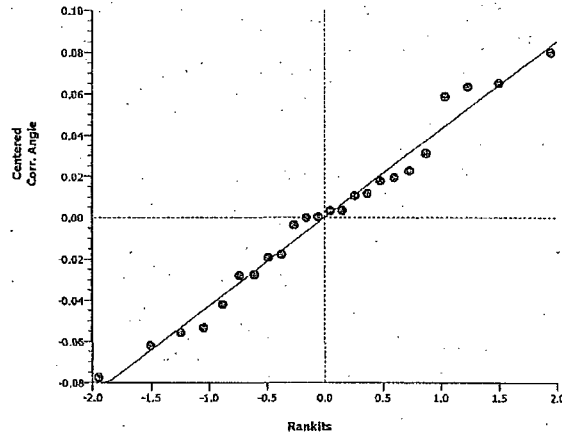
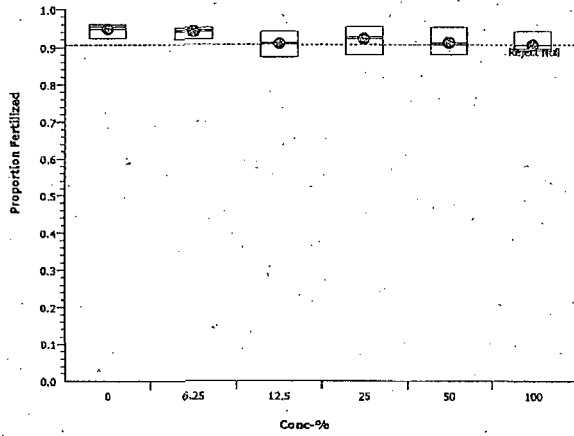
EnviroSystems, Inc.

Analysis ID: 04-1236-9517
Analyzed: 31 Aug-10 14:43

Endpoint: Proportion Fertilized
Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0
Official Results: Yes

Graphics



CETIS Analytical Report

Report Date: 31 Aug-10 14:43 (p 1 of 1)
 Test Code: 03-7890-3291/20062Ap

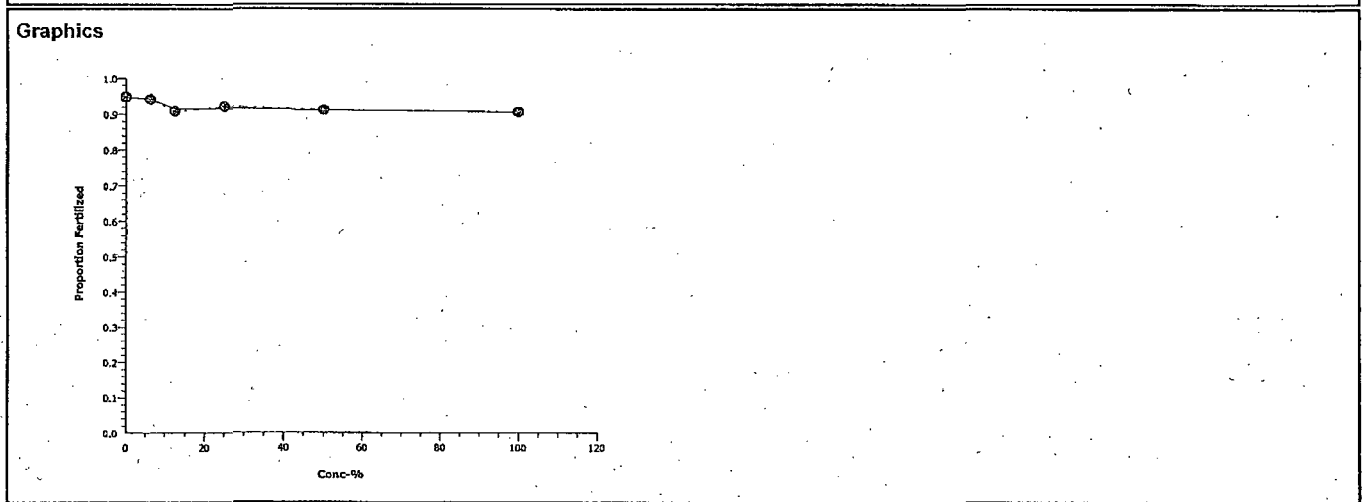
Arbacia Sperm Cell Fertilization Test			EnviroSystems, Inc.		
Analysis ID: 04-8832-3048	Endpoint: Proportion Fertilized	CETIS Version: CETISv1.7.0			
Analyzed: 31 Aug-10 14:43	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes			
Batch ID: 10-4482-6114	Test Type: Fertilization	Analyst:			
Start Date: 19 Aug-10 15:11	Protocol: EPA/821/R-02-014 (2002)	Diluent: Receiving Water			
Ending Date: 19 Aug-10 16:31	Species: Arbacia punctulata	Brine: Generic commercial salts			
Duration: 80m	Source: In-House Culture	Age:			

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates						
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC10	>100	N/A	N/A	<1	N/A	N/A

Proportion Fertilized Summary			Calculated Variate(A/B)									
Conc-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B	
0	Receiving Water	4	0.947	0.922	0.961	0.00316	0.0173	1.83%	0.0%	393	415	
6.25		4	0.941	0.92	0.951	0.00265	0.0145	1.54%	0.66%	381	405	
12.5		4	0.908	0.871	0.941	0.00519	0.0284	3.13%	4.06%	367	404	
25		4	0.921	0.877	0.954	0.00588	0.0322	3.5%	2.7%	387	420	
50		4	0.911	0.879	0.953	0.00574	0.0314	3.45%	3.78%	396	435	
100		4	0.906	0.89	0.941	0.00436	0.0239	2.63%	4.36%	382	422	

Proportion Fertilized Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Receiving Water	0.922	0.961	0.952	0.953	
6.25		0.92	0.95	0.951	0.941	
12.5		0.91	0.871	0.912	0.941	
25		0.922	0.877	0.954	0.933	
50		0.953	0.915	0.879	0.897	
100		0.896	0.941	0.895	0.89	



M. beryllina 7 Day Chronic Assay

STUDY: 2006.2	CLIENT: NextEra Energy Seabrook Station	SAMPLE: EFFLUENT	DILUENT: RECEIVING WATER (RW)
DAY 0 (START) DATE: 8/16/10	DAY 2 (1 ST RENEWAL) DATE: 8/19/10	DAY 3 (2 ND RENEWAL) DATE: 8/21/10	

CHEMISTRIES SAMPLED

CHEMISTRY	START EFFLUENT	START DILUENT	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
AMM	004	008	013	016	021 024 Am	024
TS/TSS	005	009	014	017	022 02 Am	025
TOC	003	007	012		020	
METALS	002	XXXXXXXXXX	011		019	

AS RECEIVED & SALINITY ADJUSTED WATER QUALITIES

AS REC'D	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	31.2	30.9	31.5	30.5	30.8	30.7
Dissolved Oxygen (mg/L)	8.8	8.0	9.0	8.2	8.5	7.7
pH (SU)	7.83	7.89	7.61	6.32	7.79	7.78
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SAL. ADJ.	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT
SALINITY	31	30	32	31	32	31
Dissolved Oxygen (mg/L)	8.4	8.0	7.6	7.2	6.8 7.2	7.1
pH (SU)	7.83 7.86 Am	7.96	7.70	7.38	7.85	7.87
TRC (mg/L)	—	—	—	—	—	—

SALINITY ADJUSTMENT RECORD

	START EFFLUENT	START DILUENT *	1 ST EFFLUENT	1 ST DILUENT	2 ND EFFLUENT	2 ND DILUENT
SAMPLE mLs	20,000	20,000	20,000	20,000	20,000	20,000
SEA SALT g (A-)	6500	6500 mL DILUENT	6500	6500	6500	6500
TOTAL mLs	26,500	26,500	26,500	26,500	26,500	26,500
ACTUAL %	100%	75.47	100%		100%	
DATE:	8/17/10	8/16/10	8/19/10	8/18/10	8/21/10	8/20/10
TIME:	1055	1345	1105	1725	1220	1430
INITIALS:	LB	DM	ST	LB	LB	Am

CAR #

SALTWATER CHRONIC ASSAY - NEW WATER QUALITIES

STUDY: 20062		CLIENT: NextEra Energy Seabrook Station							SAMPLE: EFFLUENT		DILUENT: RECEIVING WATER (RW)					
NEW DISSOLVED OXYGEN (mg/L)									NEW SALINITY (ppt)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	7.3	7.8	7.2	7.1	7.3	7.2	7.2	31	31	31	30	31	31	31	
RW	A	7.3	8.0	7.2	7.0	7.1	7.1	7.1	30	31	31	31	31	31	31	
6.25%	A	7.4	8.2	7.2	7.2	7.1	6.9	7.0	31	31	31	32	32	32	32	
12.5%	A	7.4	8.1	7.2	7.2	7.1	6.8	7.0	30	31	31	31	32	32	32	
25%	A	7.3	8.0	7.3	7.1	7.0	6.9	7.0	31	30	31	32	32	32	32	
50%	A	7.4	8.3	7.4	7.1	7.1	6.9	6.9	31	31	31	31	32	32	32	
100%	A	7.7	8.4	7.6	7.2	7.2	6.8	6.8	31	31	32	32	32	32	32	
NEW pH (SU)									NEW TEMPERATURE (°C)							
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
LAB	A	8.013	8.01	7.82	7.78	8.08	7.92	7.86	24	24	24	24	24	24	24	
RW	A	7.96	7.96	7.38	7.30	7.87	7.83	7.80	26	25	25	25	24	24	24	
6.25%	A	7.97	7.96	7.15	7.37	7.87	7.83	7.78	26	25	25	25	24	24	24	
12.5%	A	7.97	7.95	7.13	7.43	7.87	7.83	7.78	26	25	25	25	24	24	24	
25%	A	7.96	7.93	7.31	7.48	7.87	7.83	7.78	26	25	25	25	24	24	24	
50%	A	7.93	7.91	7.51	7.57	7.87	7.82	7.78	26	25	25	25	24	24	24	
100%	A	7.86	7.83	7.70	7.74	7.85	7.80	7.77	26	25	25	25	25	24	24	
INC TEMP (°C):		25	25	25	25	25	25	25								
DATE:		8/17/08	8/18	8/19	8/20	8/21	8/22	8/23								
TIME:		1435	1335	1545	1230	1730	1245	1430								
INITIALS:		LB	SJ	SJ	SJ	LB	DM	DM								

SALTWATER CHRONIC ASSAY - OLD WATER QUALITIES

STUDY: 20062		CLIENT: NextEra Energy Seabrook Station							SAMPLE: EFFLUENT		DILUENT: RECEIVING WATER (RW)				
OLD TEMPERATURE (°C)									OLD SALINITY (ppt)						
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	24	24	24	24	24	24	24	31	31	31	32	31	31	31
RW	A	24	24	24	24	24	24	24	31	31	32	32	32	32	32
6.25%	A	24	24	24	24	24	24	24	31	31	32	32	32	32	32
12.5%	A	24	24	24	24	24	24	24	31	31	32	32	32	32	32
25%	A	24	24	24	24	24	24	24	31	31	32	32	32	32	32
50%	A	24	24	24	24	24	24	24	31	31	32	32	32	32	32
100%	A	24	24	24	24	24	24	24	32	32	32	32	32	32	32
OLD pH (SU)															
CONC	REP	1	2	3	4	5	6	7	1	2	3	4	5	6	7
LAB	A	7.82	7.90	7.83	7.82	7.86	7.80	7.80							
RW	A	7.84	7.77	7.98	7.70	7.77	7.74	7.60							
6.25%	A	7.86	7.69	7.47	7.69	7.77	7.74	7.62							
12.5%	A	7.86	7.71	7.48	7.73	7.78	7.74	7.74							
25%	A	7.88	7.76	7.58	7.75	7.80	7.75	7.75							
50%	A	7.85	7.72	7.65	7.75	7.79	7.74	7.65							
100%	A	7.79	7.69	7.70	7.77	7.74	7.72	7.80							
DATE:		8/18/10	8/19	8/20	8/21	8/22	8/23	8/24/10							
TIME:		1205	1445	1130	1655	1210	1345	0910							
INITIALS:		JS	JS	vc	LB	DM	DM	vc							

DILUTIONS PREPARATIONS

STUDY: 20062		CLIENT: NextEra Energy Seabrook Station	
SPECIES: <i>A. bahia</i>			
Diluent: Receiving Water (RW)		Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)	
Lab	0	8000 ^(B)	
RW	0	↓	
6.25%	50		
12.5%	100		
25%	200		
50%	400		
100%	800		
INITIALS:		SJ	
TIME:		1455	
DATE:		8/19/10	

DILUTIONS PREPARATION

STUDY: 2006Z		CLIENT: NextEra Energy Seabrook Station								
SPECIES: <i>M. beryllina</i>			TEST: chronic renewal							
START	Day: 0		Day: 1		Day:					
Diluent: RW	Sample: E0, D0		Sample: E0, D0		Sample:					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Day	Date	Time	Init
Lab	0	2000	0	1600			0	8/17/10	1425	LB
RW	0	↓	0	↓			1	8/18	1320	SJ
6.25%	125	↓	100	↓			2	8/19	1540	SJ
12.5%	250	↓	200	↓			3	8/20	1220	SJ
25%	500	↓	400	↓			4	8/21	1730	LB
50%	1000	↓	800	↓			5	8/22	1230	OM
100%	2000	↓	1600	↓			6	8/23	1410	D
							7			
1 st Renewal	Day: 2		Day: 3		Day:		RW = Receiving Water Brine Shrimp: A - 26ell			
Diluent: RW	Sample: E1, D1		Sample: E1, D1		Sample:					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.				
Lab	0	1600	0	1600						
RW	0	↓	0	↓						
6.25%	100	↓	100	↓						
12.5%	200	↓	200	↓						
25%	400	↓	400	↓						
50%	800	↓	800	↓						
100%	1600	↓	1600	↓						
2 nd Renewal	Day: 4		Day: 5		Day: 6					
Diluent: RW	Sample: E2, D2		Sample: E2, D2		Sample: E2, D2					
Concentration	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.	Vol. Eff.	Final Vol.				
Lab	0	1600	0	1600	0	1600				
RW	0	↓	0	↓	0	↓				
6.25%	100	↓	100	↓	100	↓				
12.5%	200	↓	200	↓	200	↓				
25%	400	↓	400	↓	400	↓				
50%	800	↓	800	↓	800	↓				
100%	1600	↓	1600	↓	1600	↓				

DILUTIONS PREPARATIONS

STUDY: 20062	CLIENT: NextEra Energy Seabrook Station	
SPECIES: <i>A. punctulata</i>		
Diluent: Receiving Water (RW)	Day: 0 Start	
	Sample: E1, D1	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	100
RW	0	↓
6.25%	6.25	
12.5%	12.5	
25%	25	
50%	50	
100%	100	
INITIALS:	LB	
TIME:	1300	
DATE:	8/19/10	

RECORD OF METERS USED

STUDY: 20062		CLIENT: NextEra Energy Seabrook	
<i>A bahia</i>			
Exposure (Hours)			
	0	24	48
Water Quality Station #	2	2	2
Temperature thermometer or probe #	YSI30D	YSI30D	YSI30D
Initials / Date	JT 8/19/10	wa 8/20/10	LB 8/21

Water Quality Station #1		Water Quality Station #2	
DO meter #	/	DO meter #	23
DO probe #		DO probe #	90
pH meter #		pH meter #	470
pH probe #		pH probe #	92
S/C meter #		S/C meter #	YSI30D
S/C probe #		S/C probe #	↓
Salinity meter #		Salinity meter #	↓

RECORD OF METERS USED
M. beryllina Chronic

STUDY: 200102		CLIENT: NextEra Energy Seabrook Station						
NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	2	2	1	1	2	1	1	/
Temperature thermometer or probe #	YS130D	YS130D	YS130D	YS130D	YS130D	YS130D	YS130D	/
Initials	LB	SJ	SJ	SJ	LB	DM	DM	/
OLD WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #	/	2	2	2	2	1	1	1
Temperature thermometer or probe #	/	YS130D	YS130D	YS130D	YS130D	YS130D	YS130D	YS130D
Initials	/	SJ	SJ	KC	LB	DM	DM	DM
Date	8/17/10	8/18	8/19	8/20	8/21	8/22	8/23	8/24

Water Quality Station #1		Water Quality Station #2	
DO meter #	24	DO meter #	23
DO probe #	89	DO probe #	90
pH meter #	1097	pH meter #	470
pH probe #	90	pH probe #	92
S/C meter #	YS130D	S/C meter #	YS130D
S/C probe #	↓	S/C probe #	↓
Salinity meter #		Salinity meter #	

Report No: 20062
Project: Seabrook Station

SDG:

Sample ID: Effluent Start
Matrix: Water
Sampled: 08/17/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	20062-005	39000	O 50	mg/L	08/17/10	08/18/10	JQ /SM2540B
Total suspended solids	20062-005	64	10	mg/L	08/17/10	08/18/10	JQ /SM 2540D
Ammonia-N	20062-004	ND	0.1	mg/L as N	08/17/10	08/17/10	JLH/SM 4500-NH3 G
Total organic carbon	20062-003	ND	0.4	mg/L	08/18/10	08/18/10	EAL/SM 5310 C
Aluminum, total	20062-002	0.029	0.02	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Cadmium, total	20062-002	ND	0.0007	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Calcium, total	20062-002	360	0.2	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Chromium, total	20062-002	ND	0.002	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Copper, total	20062-002	0.003	0.002	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Lead, total	20062-002	ND	0.0005	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Magnesium, total	20062-002	1000	0.05	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Nickel, total	20062-002	ND	0.002	mg/L	08/31/10	08/31/10	JLH/EPA 200.8
Zinc, total	20062-002	ND	0.002	mg/L	08/31/10	08/31/10	JLH/EPA 200.8

Sample ID: Effluent First Renewal
Matrix: Water
Sampled: 08/19/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	20062-013	ND	0.1	mg/L as N	08/19/10	08/19/10	JLH/SM 4500-NH3 G

Sample ID: Effluent Second Renewal
Matrix: Water
Sampled: 08/21/10 0600

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	20062-021	ND	0.1	mg/L as N	08/27/10	08/27/10	JLH/SM 4500-NH3 G

Notes:

O = A constant weight was not obtained due to laboratory mishap. Results may be used with due consideration.

ND = Not Detected

ESI

Report No: 20062
Project: Seabrook Station

SDG:

Sample ID: Receiving Water Start
Matrix: Water
Sampled: 08/16/10 1030

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	20062-009	40000	O 50	mg/L	08/17/10	08/18/10	JQ /SM2540B
Total suspended solids	20062-009	34	10	mg/L	08/17/10	08/18/10	JQ /SM 2540D
Ammonia-N	20062-008	ND	0.1	mg/L as N	08/17/10	08/17/10	JLH/SM 4500-NH3 G
Total organic carbon	20062-007	ND	0.4	mg/L	08/18/10	08/18/10	EAL/SM 5310 C

Sample ID: Receiving Water First Renewal
Matrix: Water
Sampled: 08/18/10 1540

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	20062-016	ND	0.1	mg/L as N	08/19/10	08/19/10	JLH/SM 4500-NH3 G

Sample ID: Receiving Water Second Renewal
Matrix: Water
Sampled: 08/20/10 1000

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	20062-024	ND	0.1	mg/L as N	08/27/10	08/27/10	JLH/SM 4500-NH3 G

Notes:

O = A constant weight was not obtained due to laboratory mishap. Results may be used with due consideration.

ND = Not Detected

ESI

SAMPLE RECEIPT RECORD FOR CHRONIC TOXICITY EVALUATIONS

STUDY #: 20062				CLIENT: SEABROOK STATION			
SAMPLE RECEIPT INFORMATION							
	Start Sample		First Renewal		Second Renewal		
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT	
Sample Receipt Date & Time:	8/17/10 0915	8/16/10 1155	8/19/10 0925	8/18/10 1440	8/21/10 0944	8/20/10	
Received By:	STK	JQ	GL	LB	KC	DAN	
Delivered Via:	Client	Normandeau	Client	Normandeau	Client	Normandeau	
Logged Into Lab By:	LB	DM	LB	LB	LB	AM	
Date & Time Logged In:	8/17/10 1055	8/16/10 1345	8/19/10 1130	8/18/10 1725	8/21/10 1215	8/20/10 1430	
SAMPLE CONDITION INFORMATION							
	Start Sample		First Renewal		Second Renewal		
	EFFLUENT	DILUENT	EFFLUENT	DILUENT	EFFLUENT	DILUENT	
Chain of Custody?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Chain of Custody Signed?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Chain of Custody Complete?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Sample Date?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Sample Time?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Sample Type?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Custody Seal in Place?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Shipping Container Intact?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
Temp Blank Temperature:	20°C	18°C	2°C	7°C	3°C	14°C	
DOES CLIENT NEED NOTIFICATION OF TEMP?	NO		NO		NO		
Sample Arrived on Ice?	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No	
COMMENTS:	See COC	See COC	See COC	See COC	See COC	See COC	



EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 20062

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done In field L=Lab to do	Analyses Requested/ Special Instructions:
001	Effluent Start	8/16/10 8/17/10	0900 0600	B	C	3	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartSample
002	Effluent Start	8/16/10 8/17/10	0900 0600	B	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
003	Effluent Start	8/16/10 8/17/10	0900 0600	B	C	1	40	G	H2SO4	Water	N	TOC
004	Effluent Start	8/16/10 8/17/10	0900 0600	B	C	1	125	P	H2SO4	Water	N	NH3;
005	Effluent Start	8/16/10 8/17/10	0900 0600	B	C	1	125	P	4 C	Water	N	TS,TSS
006	Receiving Water Start					6	3750	P	4 C	Water	N	MB7DCR,AB48AD,AP01CR StartDiluent
007	Receiving Water Start					1	40	G	H2SO4	Water	N	TOC
008	Receiving Water Start					1	125	P	H2SO4	Water	N	NH3;
009	Receiving Water Start					1	125	P	4 C	Water	N	TS,TSS

ES
8/13/10

Relinquished By: <i>[Signature]</i>	Date: 8-17-10 Time: 0915	Received By: <i>[Signature]</i>	Date: 8/17/10 Time: 0915
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR



Environmental Systems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3521
FAX: 603-926-3521

Job

5506 d

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
001	Effluent Start					3	3750	P	4 C	Water	N	MB7DCR, AB48AD, AP01CR Start Sample
002	Effluent Start					1	250	P	HNO3	Water	N	Total Metals Cd, Cr, Ni, Pb, Cu, Zn, Al, Ca, Mg;
003	Effluent Start					1	40	G	H2SO4	Water	N	TOC
004	Effluent Start					1	125	P	H2SO4	Water	N	NH3;
005	Effluent Start					1	125	P	4 C	Water	N	TS, TSS
006	Receiving Water Start					6	3750	P	4 C	Water	N	MB7DCR, AB48AD, AP01CR Start Diluent
007	Receiving Water Start	8/16/10	1030	CB/AF	G	1	40	G	H2SO4	Water	N	TOC
008	Receiving Water Start	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
009	Receiving Water Start	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS, TSS

Relinquished By: <i>Al Legendre</i>	Date: 8/16/10 Time: 11:15	Received By: <i>John P. Jones</i>	Date: 8/16/10 Time: 11:15
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR

COC Number: A1008791



EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 926-3345
FAX: 603-926-3521

ESI Job No:

20062

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
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Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@epi.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	Container No	Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
010	Effluent First Renewal	8-18-10 8-19-10	0900- 0600	JRS	C	3	3750	P	4 C	Water	N	MB7DCR,TS,TSS 1stRenewal Sample
011	Effluent First Renewal	8-18-10 8-19-10	0900- 0600	JRS	C	1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
012	Effluent First Renewal	8-18-10 8-19-10	0900- 0600	JRS	C	1	40	G	H2SO4	Water	N	TOC
013	Effluent First Renewal	8-18-10 8-19-10	0900- 0600	JRS	C	1	125	P	H2SO4	Water	N	NH3;
014	Effluent First Renewal	8-18-10 8-19-10	0900- 0600	JRS	C	1	125	P	4 C	Water	N	TS,TSS
015	Receiving Water First Renewal					6	3750	P	4 C	Water	N	MB7DCR 1stRenewal Diluent
016	Receiving Water First Renewal					1	125	P	H2SO4	Water	N	NH3;
017	Receiving Water First Renewal					1	125	P	4 C	Water	N	TS,TSS

Relinquished By: John R Szwec	Date: 8-19-10	Time: 0925	Received By: H.L. Gann	Date: 8/19/10	Time: 9:25
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

COC Number: A1006792



viroS ns, Ir
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3521
FAX: 603-926-3521

EST JOP IND 4/10/10

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
010	Effluent First Renewal					3	3750	P	4 C	Water	N	MB7DCR.TS.TSS 1stRenewal Sample
011	Effluent First Renewal					1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;
012	Effluent First Renewal					1	40	G	H2SO4	Water	N	TOC
013	Effluent First Renewal					1	125	P	H2SO4	Water	N	NH3;
014	Effluent First Renewal					1	125	P	4 C	Water	N	TS.TSS
015	Receiving Water First Renewal	8-18-10	1540	ET	G	6	3750	P	4 C	Water	N	MB7DCR 1stRenewal Diluent
016	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
017	Receiving Water First Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS.TSS

8/18/10

Relinquished By: <i>Ed Fel...</i>	Date: 8/18/10	Time: 1640	Received By: <i>Jim B...</i>	Date: 8/18/10	Time: 1640
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

COC Number: A1006792



EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 20062

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al_legendre@fpl.com P.O.No: Quote No:42109

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com- posite (G/C)	No	Container Size (mL)	Type (P/G/T)	Field Preser- vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested/ Special Instructions:
018	Effluent Second Renewal	8-20-10	0600	JRS	C	4	3750	P	4 C	Water	N	MB7DCR, TS, TSS 2ndRenewal Sample
019	Effluent Second Renewal	8-20-10	0600	JRS	C	1	250	P	HNO3	Water	N	Total Metals Cd, Cr, Ni, Pb, Cu, Zn, Al, Ca, Mg;
020	Effluent Second Renewal	8-20-10	0600	JRS	C	1	40	G	H2SO4	Water	N	TOC
021	Effluent Second Renewal	8-20-10	0600	JRS	C	1	125	P	H2SO4	Water	N	NH3;
022	Effluent Second Renewal	8-20-10	0600	JRS	C	1	125	P	4 C	Water	N	TS, TSS
023	Receiving Water Second Renewal					6	3750	P	4 C	Water	N	MB7DCR 2ndRenewal Diluent
024	Receiving Water Second Renewal					1	125	P	H2SO4	Water	N	NH3;
025	Receiving Water Second Renewal					1	125	P	4 C	Water	N	TS, TSS

8/13/10

Relinquished By: John R Szwec	Date: 8-21-10	Time: 0941	Received By: [Signature]	Date: 8/21/10	Time: 0941
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

COC Number: A1006793



roSy, Inc
1 Lafayette Road
Hampton, NH 03842

VOICE: 603-926-3521
FAX: 603-926-3521

002

CHAIN OF CUSTODY DOCUMENTATION

Client: Seabrook Station	Contact: Al Legendre	Project Name: Seabrook Station
Report to: Al Legendre	Address: P.O. Box 300	Project Number: P0105 Task: 0001
Invoice to: Al Legendre	Address: Seabrook, NH 03874	Project Manager: Al Legendre
Voice: 603-773-7773	Fax: 603-773-7740	email: al.legendre@fpl.com P.O.No: Quote No:42109

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	Container No	Container Size (mL)	Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested Special Instructions:
018	Effluent Second Renewal					4	2750	P	4 C	Water	N	MB7DCR,TS,TSS 2ndRenewal Sample
019	Effluent Second Renewal					1	250	P	HNO3	Water	N	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg
020	Effluent Second Renewal					1	40	G	H2SO4	Water	N	TOC
021	Effluent Second Renewal					1	125	P	H2SO4	Water	N	NH3;
022	Effluent Second Renewal					1	125	P	4 C	Water	N	TS,TSS
023	Receiving Water Second Renewal	8/20/10	1000	CB	G	6	3750	P	4 C	Water	N	MB7DCR 2ndRenewal Diluent
024	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	H2SO4	Water	N	NH3;
025	Receiving Water Second Renewal	↓	↓	↓	↓	1	125	P	4 C	Water	N	TS,TSS

8/23/10

Relinquished By: <i>CS</i>	Date: 8/20/10	Time: 1045	Received By: <i>J. D. M...</i>	Date: 8/20/10	Time: 1045
Relinquished By:	Date:	Time:	Received at Lab By:	Date:	Time:

Comments:

ERR

SEPTEMBER 2010 DISCHARGE MONITORING REPORTS

Fernandez, A.	e-mail
Mashhadi, M.	e-mail
Dryden, M. S.	e-mail
Brown, A.	e-mail
Robinson, D. A.	e-mail
Harvey, P. J.	e-mail
Letter Distribution	e-mail

Dullea, P. M.	e-mail/49-CH
File 0003	01-48
File 0018	01-48
RMD	02-08



October 15, 2010

SBK-L-10176

NPDES Permit No. NH0020338

Discharge Monitoring Reports (OES4-SMR)
U.S. Environmental Protection Agency
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Seabrook Station
September 2010 Discharge Monitoring Reports

NextEra Energy Seabrook, LLC, the operator of Seabrook Station, has enclosed Discharge Monitoring Reports (DMR) for the month of September 2010. The enclosed DMRs are submitted pursuant to Part I.B of the referenced NPDES permit. Seabrook Station Chemistry Department personnel performed the required analyses.

This report is submitted for all discharge numbers. Outfalls 003A, 026A and 027A had no flow during the month of September, as indicated by the presence of a no discharge code, "C", in the "No Discharge" block.

The following methods were used to perform analyses, applying the listed Minimum Detectable Levels (MDLs) where applicable:

<u>Analysis</u>	<u>Method</u>	<u>MDL</u>
Total Residual Oxidants	Std. Methods (18 th) 4500-Cl ⁻ D	0.05 mg/L
pH	Std. Methods (18 th) 4500-H ⁺ B	--
Oil & Grease	EPA Method 1664A	5.0 mg/L
Nonfilterable Residue (TSS)	Std. Methods (18 th) 2540 D	0.3 mg/L

Outfall 001A

Discharges were made from the Circulating Water System (Outfall 001) for 30 days in September. No visible oil sheen, foam or floating solids were noted during the month. No exceedences occurred.

No discharges were made during the month of September from the Condensate Polisher System.

Outfalls 022, 023, 024

Discharges were made from the oil/water separator vaults (Outfalls 022, 023, and 024) throughout the month of September. There was no flow from Outfall 24 in the fourth week of the month as stated in the DMR comments. No exceedences occurred.

Outfall 025A

Seven continuous discharges occurred during the month of September. No exceedences occurred.

Outfall 025B

Three continuous discharges occurred during the month of September. No exceedences occurred.

Outfall 025C

Three batch discharges occurred during the month of September. No exceedences occurred.


Outfall 025D

Five batch discharges occurred during the month of September. No exceedences occurred.

If you have questions on this matter, please contact me at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC



Michael O'Keefe
Licensing Manager

cc: New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

ENCLOSURE to SBK-L-10176

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

001-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
FROM 09/01/2010 TO 09/30/2010

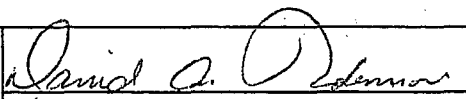
CIRCULATING WATER SYSTEM
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmd 10.14.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
00011 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	90	90	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AV MN	Req. Mon. DAILY MX	deg F		Continuous	RCORDR
00400 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	7.7	*****	7.9	SU	0	01/07	GR.
	PERMIT REQUIREMENT	*****	*****	*****	6.5 MINIMUM	*****	8 MAXIMUM	SU		Weekly	GRAB
01289 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	3 DAILY MX	mg/L		When Discharging	GRAB
01289 0 0 See Comments	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	NO DI	C			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	4.3 DAILY MX	mg/L		When Discharging	CALCTD
34044 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.07	0.13	mg/L	0	01/01	GR
	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	2 DAILY MX	mg/L		Daily	GRAB
50050 1 0 Effluent Gross	SAMPLE MEASUREMENT	664	672	Mgal/d.	*****	*****	*****	*****	0	24/01	ES
	PERMIT REQUIREMENT	720 MO AVG	720 DAILY-MX	Mgal/d	*****	*****	*****	*****		Continuous	ESTIMA
61576 1 0 Effluent Gross	SAMPLE MEASUREMENT	*****	*****	*****	*****	35	36	deg F	0	24/01	DA.
	PERMIT REQUIREMENT	*****	*****	*****	*****	39 MO AVG	41 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	10/15/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE INFORMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

For use by EPA and States
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 10.14.10

NH0020338	001-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM 09/01/2010	TO	09/30/2010	

CIRCULATING WATER SYSTEM
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temp. diff. between intake and discharge	SAMPLE MEASUREMENT	*****	*****	*****	*****						
61576 0 0 See Comments	PERMIT REQUIREMENT	*****	*****	*****	*****	45 MO AVG	47 DAILY MX	deg F		Continuous	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Paul Freeman / Site Vice President		<i>Paul Freeman</i>	603 773-7496	10/15/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

003-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
FROM	09/01/2010	TO	09/30/2010

BACK-FLUSHING OPERATION
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pnd 10-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*****	*****						
10011 1 0 Effluent Gross flow rate	PERMIT REQUIREMENT	*****	*****	*****	*****	Req. Mon. MO AVG	120 DAILY MX	deg F		When Discharging	CONTIN
10056 1 0 Effluent Gross	SAMPLE MEASUREMENT				*****	*****	*****	*****			
	PERMIT REQUIREMENT	Req. Mon. MO AVG	500000 DAILY MX	gal/d	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE	
Paul Freeman / Site Vice President		<i>David A. Deland</i>	603 773-7496	10/15/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ESTIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form 3320-1
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

022-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 09/01/2010 TO 09/30/2010

SECONDARY PLANT LEAKAGE VAULT1
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

No Discharge

Paul Freeman pmd 10-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	8703	17855	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.3	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. Robinson</i>	TELEPHONE		DATE
			AREA Code	NUMBER	MM/DD/YYYY

603 773-7496 10/15/2010

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS.

NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

023-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD
FROM MM/DD/YYYY TO MM/DD/YYYY
09/01/2010 TO 09/30/2010

SECONDARY PLANT LEAKAGE VAULT2
External Outfall

ATTN: ~~GENE ST. PIERRE~~, VICE PRESIDENT

Paul Freeman pme 10.14.10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	251	578	gal/d	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.9	2.4	mg/L	0	01/07	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/07	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15. MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	10/15/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE PERMITTING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338	024-A
PERMIT NUMBER	DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 09/01/2010	TO 09/30/2010

SECONDARY PLANT LEAKAGE VAULT3:
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pnd 10/14/10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	84	133	gal/d.	*****	*****	*****	*****	0	01/07	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	122400 DAILY MX	gal/d	*****	*****	*****	*****		Monthly	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	1.7	2.7	mg/L	0	03/30	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	03/30	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Weekly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE	
Paul Freeman / Site Vice President		<i>David A. Palmer</i>	603 773-7496	10/15/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY	

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12TH, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

Outfall 024-A had no flow on the fourth week of the month and was therefore only sampled three times.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
09/01/2010	09/30/2010

FROM

TO

STEAM GENERATOR BLOWDOWN
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pml. 10.15.10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	51856	199416	gal/d.	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	425000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO.AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO.AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE	DATE
Paul Freeman / Site Vice President		603 773-7496	10/15/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENTS AND ANY VIOLATION AS NECESSARY. *UCLEAR REGULATORY COMMISSION.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-B
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
09/01/2010	FROM	09/30/2010	TO

STEAM GEN. BLWDN DEMINERALIZE
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pnd 10-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	45074	118579	gal/d	*****	*****	*****	*****	0	99/99	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	210000 DAILY MX	gal/d	*****	*****	*****	*****		Continuous	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Weekly	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	02/90	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	TELEPHONE		DATE
Paul Freeman / Site Vice President		603 773-7496		10/15/2010
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA Code

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PERMIT ISSUED FEBRUARY 12TH FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

025-C
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
FROM 09/01/2010 TO 09/30/2010

WASTE HOLDUP SUMP
External Outfall

No Discharge

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman phd 10-14-10

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	13134	17410	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	60000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	2.0	3.6	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>David A. DeBoni</i>	TELEPHONE	DATE
			603 773-7496	10/15/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
020, 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman paid 10-14-10

NH0020338	025-D
PERMIT NUMBER	DISCHARGE NUMBER

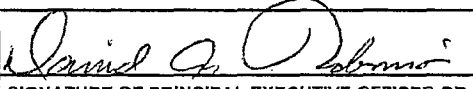
DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 09/01/2010	TO 09/30/2010

WASTE TEST/RECOVERY TEST TANKS
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT	14757	17670	gal/d	*****	*****	*****	*****	0	01/BA	ES
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	100000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****	5.6	13.6	mg/L	0	01/BA	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****	0.0	0.0	mg/L	0	01/BA	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB

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Paul Freeman / Site Vice President			603 773-7498
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER
			MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PERMIT ISSUED FOR FURTHER MONITORING REQUIREMENTS.

NATIONAL POLLUTANT DISCHARGE MINIMATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874

NH0020338
PERMIT NUMBER

026-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD
MM/DD/YYYY TO MM/DD/YYYY
09/01/2010 TO 09/30/2010

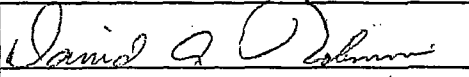
METAL CLEANING WASTES
External Outfall

ATTN: GENE ST. PIERRE, VICE PRESIDENT

Paul Freeman pmd 10-14-10

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	450000 DAILY MX	gal/d	*****	*****	*****	*****		Once Per Batch	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****							
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Once Per Batch	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	30 MO AVG	100 DAILY MX	mg/L		Once Per Batch	GRAB
Oil & grease	SAMPLE MEASUREMENT	*****	*****	*****	*****						
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	15 MO AVG	20 DAILY MX	mg/L		Once Per Batch	GRAB
Copper, total (as Cu)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB
Iron, total (as Fe)	SAMPLE MEASUREMENT	*****	*****	*****	*****						
01045 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	1 MO AVG	1 DAILY MX	mg/L		Once Per Batch	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Paul Freeman / Site Vice President TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
			603 773-7496	10/15/2010
			AREA Code	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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NATIONAL POLLUTANT DISCHARGE MONITORING SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Approved
2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: NextEra Energy Seabrook LLC
ADDRESS: P.O. BOX 300
SEABROOK, NH 03874
FACILITY: NEXTERA ENERGY SEABROOK LLC
LOCATION: SEABROOK STATION
SEABROOK, NH 03874
ATTN: GENE ST. PIERRE, VICE PRESIDENT
Paul Freeman pmd 10-14-10

NH0020338
PERMIT NUMBER

027-A
DISCHARGE NUMBER

DMR Mailing ZIP CODE: 03874
MAJOR

MONITORING PERIOD			
MM/DD/YYYY		MM/DD/YYYY	
09/01/2010	FROM	09/30/2010	TO

COOLING TOWER BLOWDOWN
External Outfall

No Discharge

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow rate	SAMPLE MEASUREMENT				*****	*****	*****	*****			
00056 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	gal/d	*****	*****	*****	*****		Daily	ESTIMA
pH	SAMPLE MEASUREMENT	*****	*****	*****							
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	9 MAXIMUM	SU		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****					
34044 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	5 INST MAX	mg/L		Daily	GRAB
Oxidants, total residual	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	*****	*****			
34044 0 0 See Comments	PERMIT REQUIREMENT	Req. Mon. MO AVG	2.6 DAILY MX	lb/d	*****	*****	*****	*****		Daily	CALCTD

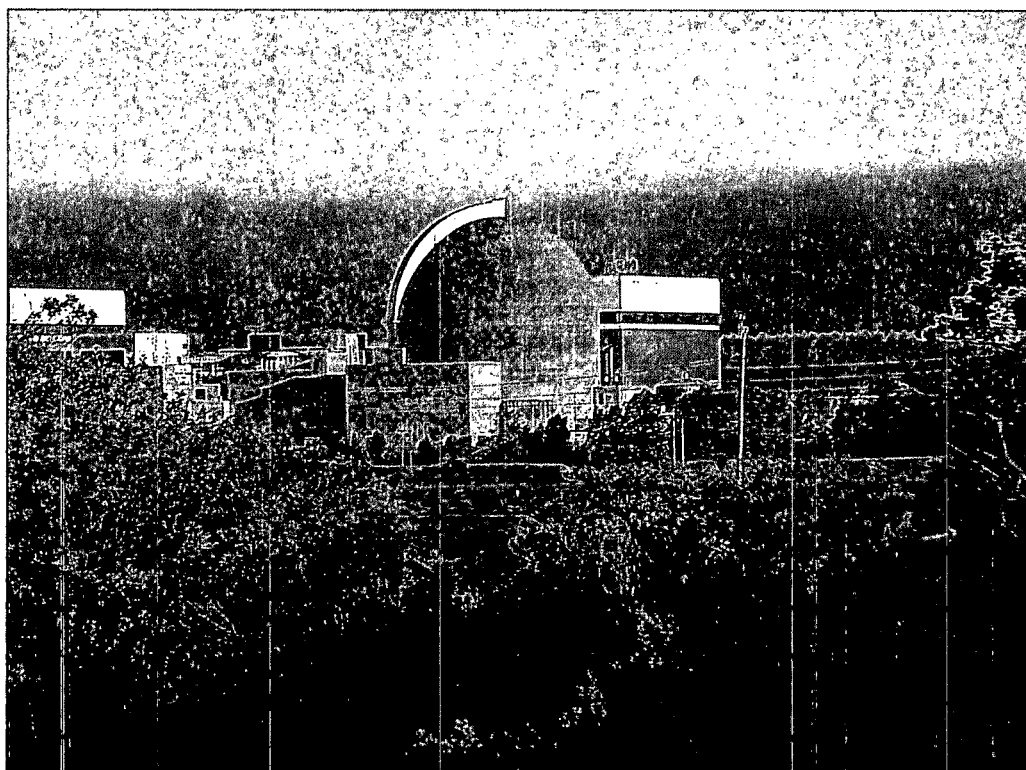
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	<i>David G. Delmon</i>	TELEPHONE	DATE
Paul Freeman / Site Vice President			603 773-7496	10/15/2010
TYPED OR PRINTED			AREA Code	NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED FEBRUARY 12, 2002 FOR FURTHER MONITORING REQUIREMENTS. PLEASE ATTACH ADDITIONAL PAGE FOR COMMENTS AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.



Seabrook Station Program Manual



Environmental Compliance Manual

**SEABROOK STATION
PROGRAM MANUAL**

Environmental Compliance Manual

NAEC
Rev. 41

Manual Owner:
M. O'Keefe

ENVIRONMENTAL COMPLIANCE MANUAL
(NAEC)

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1.0 INTRODUCTION

1.1 Objective

It is the policy of FPLE Seabrook to operate Seabrook Station in an environmentally sensitive manner in accordance with the Seabrook Station Environmental Policy. An important element of this policy is the recognition that strict compliance to regulatory requirements alone is not sufficient corporate citizenship to earn public acceptance. FPLE Seabrook further believes that proactive, responsible environmental management is a vital ingredient in its overall business strategy and one that will support the safe, reliable, and economic generation of electricity.

In partial fulfillment of this policy and the requirements of the Environmental Management System, this manual establishes Seabrook Station's Environmental Compliance Program. The Environmental Compliance Program consists of policies, practices and procedures necessary to achieve and maintain compliance with applicable federal, state and local laws, regulations, permits and licenses, including Appendix B to the Facility Operating License (Environmental Protection Plan - Nonradiological), that are designed to provide for the protection of nonradiological environmental values during the operation of Seabrook Station. As such, the Environmental Compliance Program governs the controls necessary to protect the environment from the impact of nonradiological discharges to the air, land and water. Adherence to the Environmental Compliance Program will ensure that Seabrook Station meets or exceeds federal, state and local environmental requirements.

1.2 Scope

The FPLE Seabrook Environmental Compliance Program defines the requirements, controls, and procedures employed to ensure the protection of the public and the environment. This is accomplished by conducting activities and by monitoring environmental media in accordance with approved programs and procedures developed to comply with applicable regulatory requirements that

- manage hazardous materials and wastes,
- monitor the surrounding environment,
- maintain appropriate records,
- ensure compliance with applicable permits, regulations and commitments,
- perform periodic audits, reviews, inspections, and
- address unusual situations or conditions.

2.0 RESPONSIBILITIES

2.1 General

1. The Environmental Compliance Program is implemented by individuals functioning within defined lines of responsibility, authority and communication. FPLE Seabrook management provides adequate facilities, competent staffing, programs for training and periodic reviews of the effectiveness of the Environmental Compliance Program.
2. Supervisors are responsible, within their departments, for the day-to-day implementation of the Environmental Compliance Program. Supervisors implement policies, and maintain the system of reports and documents implementing their responsibilities.
3. Individuals within the FPLE Seabrook organization and contractor support organization shall follow policies and procedures, and exercise personal knowledge, training and judgment within their defined scope of responsibility in order to
 - a. identify potential problems,
 - b. initiate, recommend, or provide solutions to such problems, and
 - c. verify the implementation of such solutions.

2.2 Site Vice President

Is the senior official responsible for compliance with federal and state environmental laws, rules, and regulations and conformance to the FPLE Seabrook Environmental Policy. Approves the charter and appoints members to the Environmental Review Board.

2.3 Licensing Manager

1. Establishes the policies and objectives of the Environmental Compliance Program.
2. Maintains overall responsibility for the Environmental Compliance Program and is the owner and approver of the Environmental Compliance Manual (NAEC).
3. Performs periodic assessments of each of the elements of the Environmental Compliance Program to ensure conformance with current regulations, permits, licenses and the FPLE Seabrook Environmental Policy.
4. Coordinates interface activities, submits required reports, and acts as official point of contact with state, federal and local agencies imposing non-radiological environmental regulations.
5. Manages and maintains current non-radiological environmental permits and licenses including the application and renewal process.
6. Manages the Long-Term Environmental Monitoring Program.
7. Monitors, screens, tracks, interprets and disseminates emerging federal, state and local environmental regulations.

8. Serves as a member of Environmental Review Board.

2.4 Plant General Manager

1. Assigns appropriate Station personnel to ensure that permit or license requirements are implemented.
2. Maintains technical management, and coordination, of assigned environmental programs.
3. Provides Station membership to the Environmental Review Board.

2.5 Nuclear Oversight Manager

Supports program implementation by conducting nonradiological environmental audits.

2.6 Nuclear Training Manager

Develops courses and provides required training to support the Environmental Compliance Program. Maintains training records.

2.7 Director of Engineering

1. Responsible for the coordination of Environmental Compliance Program implementation activities in design modifications and material reviews.
2. Manages design work and plant configuration modifications in support of the Environmental Compliance Program.
3. Provides for reviews of aspects of the Environmental Compliance Program by Professional Engineers.
4. Provides membership to the Environmental Review Board.

2.8 Chemistry Department Manager

1. Assigns and develops personnel to support implementation of the Environmental Compliance Program.
2. Provides management oversight of the NPDES. Implements the NPDES Monitoring Program including preparing the monthly Discharge Monitoring Report (DMR).
3. Implements the onsite Chlorine Management Program.
4. Responsible for the review and approval of expendable chemical products.

2.9 Spill Event Response Team (SERT)

Responds to spill events, as defined by Station Operating Procedure ON1244.01, Oil/Chemical Spill.

2.10 Shift Manager

Initiates spill response activities and makes all necessary immediate notifications to regulatory agencies after consultation (if necessary) with Licensing personnel.

2.11 Radiation Protection Department Manager

1. Implements the Mixed Waste Management Program and the Hazardous Waste Management Program.
2. Assigns appropriate personnel to perform the daily operation of the Hazardous Waste Facility.

2.12 Operations Department Manager

1. Maintains overall responsibility for the Spill Event Response Team and coordination and informs EOP Coordinator of SERT composition.
2. Assigns appropriate personnel to support the Spill Event Response Team.

3.0 ENVIRONMENTAL REVIEW BOARD

An Environmental Review Board (ERB) shall be established to advise the Site Vice President on the effectiveness of Seabrook Station's environmental programs, processes, procedures and the Environmental Management System and to make recommendations as appropriate. The ERB's charter describing its function, authority, scope of responsibility and composition is provided in Figure 1-3-1.

Figure 1-3-1
Seabrook Station Environmental Review Board Charter
(Sheet 1 of 4)

(Issued by G. F. St. Pierre)

I. FUNCTION

The Environmental Review Board (ERB) advises the Site Vice President on the effectiveness of Seabrook Station's environmental programs, processes, procedures and the Environmental Management System and makes recommendations as appropriate.

II. AUTHORITY

The ERB is appointed by and reports to the Site Vice President.

III. SCOPE

The environmental programs, processes, and procedures that fall under the scope of the ERB's review include those associated with the Environmental Management System as well as normal (permitted) or abnormal discharges to the air, water or land; the Nonradiological Environmental Protection Plan (Appendix B to the Operating License); pollution prevention and waste minimization activities; hazardous waste management; and spill prevention. Radiological waste reduction initiatives and goals and radioactive effluents are within the scope of the Seabrook Station Environmental Management System and therefore are within the scope of this charter.

IV. ERB RESPONSIBILITIES

The ERB functions as an advisory body. Information gathering, study, independent review, visits, and interviews may be conducted by individual members, subcommittees or the full committee. The ERB advises the Site Vice President by providing recommendations when review activities indicate it is appropriate.

The primary purpose of reviews is to ensure that the environmental programs at Seabrook Station, and the resources applied to it, are adequate to meet the goals and objectives of the Environmental Management System and the environmental initiatives of the Seabrook Station Strategic Business Plan. The ERB reviews are expected to detect adverse trends, performance or conditions that may not be apparent by day-to-day observation and to make recommendations for improvement as appropriate. It is also expected that the ERB members use their expertise to evaluate environmental goals.

The ERB performs the Management Review function of the Environmental Management System. The ERB responsibilities associated with this function include the following:

1. The Environmental Review Board (ERB) reviews the Environmental Management System performance routinely at their regular meetings.

Figure 1-3-1
Seabrook Station Environmental Review Board Charter
(Sheet 2 of 4)

2. The Environmental Review Board conducts the EMS Management Review annually to consider the previous year's activities and planned activities for the upcoming year. The Site Vice President, or his designated alternate, shall be in attendance for the annual review.
3. The Management Representative reports to the ERB on the performance of the EMS. The following topics should be considered for discussion in the management review:
 - a. Changing conditions - How conditions (regulation, legislation, processes, technology, and business) have changed through the review period.
 - b. Environmental aspects - New or obsolete environmental aspects as well as elevated or downgraded significant environmental aspects that may have been identified through the review period.
 - c. Environmental objectives, targets, and management programs - The status and progress of management programs for achieving environmental objectives and targets as well as the need for new objectives, targets and management programs to meet changing conditions.
 - d. Environmental performance and compliance - Data and trends pertaining to environmental performance with regard to significant environmental aspects, and to compliance with environmental laws, regulations and other requirements.
 - e. EMS audits - Results of internal and external EMS audits.
 - f. Corrective actions - All open and closed significance level A and B environmental condition reports generated during the review period.
 - g. Views of interested parties - Views expressed by interested parties regarding the EMS. Interested parties include employees, regulators and external stakeholders.
4. The Environmental Review Board assesses the continuing suitability and effectiveness of the EMS, based on the information presented and discussed during the management review, and makes recommendations for improvements as appropriate. This assessment includes an evaluation of the FPL Energy Seabrook Environmental Policy for adequacy and relevance.
5. Results and conclusions of the management review are documented in the ERB meeting minutes.
6. The meeting minutes are archived in accordance with Station document control procedures.

Figure 1-3-1
Seabrook Station Environmental Review Board Charter
(Sheet 3 of 4)

V. REPORTING

The ERB reports its significant observations, conclusions, and recommendations to the Site Vice President, the Station Director, the Licensing Manager and other managers, as appropriate, by way of meeting minutes.

VI. COMPOSITION

As a minimum, the ERB shall have representation in its membership from the following organizations:

- Station Staff
- Licensing
- Engineering
- FP&L Engineering or Juno Environmental Services

Members may be appointed from external organizations to provide special expertise as needed. The membership, including the Chairperson and Vice Chairperson, are appointed in writing by the Site Vice President. FPL members are expected to attend all meetings or to appoint a meeting designee if attendance is not possible. A quorum shall consist of the Chairman or Vice Chairman and a representative from two of the above groups or one group and an external member.

VII. MEMBER DUTIES

Chairperson: The Chairperson or, in his or her absence, the Vice Chairperson presides at all regular and special meetings.

Members: ERB members are expected to identify environmental improvement initiatives, environmental noncompliance issues, or issues that may pose a significant environmental risk to the attention of the ERB in a timely manner. These items are normally provided to the Chairperson in sufficient time to be included on the meeting agenda or may be raised as new business at the meeting.

VIII. QUALIFICATIONS

The ERB is composed of senior personnel that collectively have the experience necessary to conduct the reviews within the scope of this charter.

IX. MEETINGS

The ERB meets as needed but at least twice per year. Special meetings may be convened by the chairperson or, in his or her absence, the vice chairperson.

Figure 1-3-1
Seabrook Station Environmental Review Board Charter
(Sheet 4 of 4)

X. MEETING MINUTES

The chairperson or, in his or her absence, the vice chairperson, prepares and distributes meeting minutes to the Site Vice President, members, and others, as appropriate, within approximately 30 days of each ERB meeting.

The meeting minutes will consist of the date and location of the meeting, a listing of attendees, open ERB action items, copies of or references to significant material reviewed, summaries of significant findings and conclusions, changes to previous minutes, and recommendations made to the Site Vice President.

Meeting minutes are approved by the ERB at the next regularly scheduled meeting.

4.0 SEABROOK STATION ECOLOGICAL ADVISORY COMMITTEE (SEAC)

4.1 Seabrook Station Ecological Advisory Committee

SEAC is an acronym used to describe an independent group of individuals with expertise in marine biology and/or related areas who perform environmental reviews for FPL Energy Seabrook. The SEAC was established to provide independent reviews of the environmental monitoring program. Contracts have been established with a group of individuals who possess expertise in marine biology and/or related areas. The SEAC acronym has been maintained to ensure continuity of communications. The SEAC is typically utilized to review Seabrook Station's Annual Environmental Studies Reports that are prepared by the environmental monitoring contractor (currently Normandeau Associates). The SEAC will typically meet with the environmental monitoring contractor and Licensing personnel to discuss comments on the reports and to provide recommendations to FPLE Seabrook on the Seabrook Station Environmental Studies Program. Comments on the reports are addressed and the appropriate actions are taken regarding report revisions. Any recommendations provided by the SEAC are entered into the Corrective Action Program. The SEAC interface with Seabrook Station is coordinated by Licensing personnel as required.

The following individuals are currently under contract to perform the above described environmental reviews.

- Dr. John Tietjen
Professor of Biology at the City University of New York
- Dr. Hunt Howell
Associate Professor of Zoology
University of New Hampshire
- Dr. Bernie McAlice
Associate Professor Oceanography
University of Maine
- Dr. Saul Saila
Professor of Oceanography
University of Rhode Island
- Dr. Robert Wilce
Professor Emeritus
University of Massachusetts

5.0 SUMMARY OF CHANGES

Rev. 39:

Throughout Chapter, changed Regulatory Compliance Supervisor and Regulatory Programs Manager to Licensing Manager and Regulatory Compliance to Licensing.

Rev. 38:

Updated Environmental Review Board Charter to reflect current organization and practice.

Provided clarification to the description of the Ecological Advisory Committee.

Rev. 34 through 37:

This chapter was unaffected by these revisions to the manual.

Rev. 33:

Added updated Environmental Review Board Charter issued by Mark Warner on January 5, 2005.

Rev. 32:

Deleted position title: Director of Support Services.

Revised ERB Charter per M. Warner Memo FPL-E #04-0003.

Elimination of Technical Advisory Committee consistent with NPDES Permit.

Rev. 30 and 31:

This chapter was unaffected by these revisions to the manual.

Rev. 29:

Added §2.12 and 2.13.

In Figure 1-3-1 clarified outside membership.

Rev. 28:

Updated §2.0, Responsibilities, to reflect current position titles and responsibilities.

Updated §3.0, Environmental Review Board, to reflect revised charter.

Rev. 24 through 27:

This chapter was unaffected by these revisions to the manual.

Rev. 23:

In §1.1 changed "Northeast Utilities Nuclear Group" to "Seabrook Station." Deleted reference to Figure 1-1-1. In second paragraph added "and the requirements of the Environmental Management System."

Deleted Figure 1-1-1, Nuclear Group Environmental Policy.

Rev. 22:

This chapter was unaffected by this revision to the manual.

Rev. 21:

Throughout the chapter updated position title.

Rev. 20:

Revised Figure 1-1-1, Nuclear Group Environmental Policy, to reflect B. D. Kenyon revision dated 11/30/99.

In §2.0, revised responsibilities.

In §3.0, revised Environmental Review Board Charter to reflect June 1, 1999 ERB Charter issued by T. C. Feigenbaum.

1.0 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND INDUSTRIAL WASTEWATER DISCHARGE PERMITS

1.1 Purpose

This section outlines the requirements for compliance with the NPDES Permit and the Town of Seabrook Class 1 Industrial Wastewater Discharge Permit.

1.2 General Information

The National Pollutant Discharge Elimination System is the portion of the Clean Water Act (CWA) which eliminates pollution being discharged to the waters of the United States by requiring that all point source dischargers obtain and comply with a permit issued by the Environmental Protection Agency (EPA). The Class 1 Industrial Wastewater Discharge Permit regulates discharges from the station sanitary drain collection system to the Town of Seabrook's sanitary sewer system. These permits specify the types and quantities of pollutants which can be released by each discharger. Pollutants can be chemical, thermal, or even biological in nature.

1.3 Applicability

These environmental requirements apply to all employees of FPLE Seabrook.

1.4 References

1. Seabrook Station NPDES Permit NH0020338 (Reference Appendix A of this manual)
2. 40 CFR 122, National Pollutant Discharge Elimination System
3. Operating Experience Manual (SSOE)
4. Town of Seabrook Class 1 Industrial Wastewater Discharge Permit No. SEA1003 (Reference Appendix F of this Manual)

1.5 Responsibilities

1.5.1 Chemistry Department Manager

1. Ensures that effluent sampling and analyses are completed in accordance with the requirements of the NPDES and Industrial Wastewater Discharge permits.
2. Coordinates plant programs to ensure compliance with NPDES and Industrial Wastewater Discharge effluent limits.
3. Coordinates the use of off-site laboratories for requisite analyses not performed by site personnel.

1.5.2 Licensing Manager

1. Ensures that biological monitoring surveillances are completed in accordance with the requirements of the NPDES permit.

2. Ensures that the Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasure Plan (SPCC) are reviewed and updated as required under the NPDES Permit.
3. Provides oversight and management of contractor monitoring activities.
4. Submits NPDES and Industrial Wastewater Discharge permit-related reports.
5. Obtains EPA NPDES and Industrial Wastewater Discharge permit modifications and renewals.

1.6 Instructions

1.6.1 Monitoring

Monitoring parameters and frequencies of the various discharge pathways are specified in the permits. The permits should be referred to for specifics. Sampling, analysis and quality assurance shall comply with EPA recommended procedures.

1.6.2 Discharge Monitoring Reports

On a monthly basis, a NPDES Discharge Monitoring Report (DMR) must be submitted to the EPA. This report includes NPDES permit exceedances, and a summary of monitoring results from the previous month.

Discharge monitoring reports for the Industrial Wastewater Discharge Permit must be submitted to the Town of Seabrook Water and Sewer Department every six months, in January and July. This report includes permit exceedances, and a summary of monitoring results from the previous six month period.

1.6.3 Permit Exceedances and Noncompliance

All NPDES permit exceedances and noncompliances are required to be reported to the EPA in accordance with the NPDES Permit. All Industrial Wastewater Discharge Permit exceedances and noncompliances are required to be reported to the Town of Seabrook Water and Sewer Department. Reports shall include what was exceeded and the cause of the exceedance or noncompliance. Additionally, permit exceedances and noncompliances shall be documented and processed under the Seabrook Station corrective action program. (Reference the Operating Experience Manual [SSOE].)

All discharges from the site are regulated. Any unauthorized use of a floor drain, storm drain, sink or sump could potentially cause a permit exceedance, and is therefore forbidden.

There are many non-radiological materials used at Seabrook Station that, if discharged to the environment in an uncontrolled manner, could result in a violation of various regulatory requirements. These materials include chemicals, oil products and groundwater from dewatering activities.

The Chemistry Manual (SSCP), procedure CP 9.3, "Non-Radiological Effluent Releases," provides instructions to control the discharge or release of non-radiological materials not specifically covered in the NPDES permit. The procedure provides a means to review releases and provide documentation for compliance purposes. The procedure applies to, but is not limited to:

- Non-routine discharges of liquids to storm drains and floor drains which supply the storm drain system.
- Dewatering of excavations to storm drains.
- Washing of equipment near storm drains.

CP 9.3 does not apply to rainwater and sanitary waste discharges or Fire Protection System flushing surveillances which are addressed by other Station procedures.

If there is any doubt as to the applicability of procedure CP 9.3, consult Chemistry Department supervisory personnel.

It should be noted that discharges to all Protected Area storm drains, as well as storm drains near the Protected area, are routed to the Circulating Water System which discharges into the Atlantic Ocean. Some site storm drains and surface runoff are routed to the salt marsh. Therefore, any releases to a storm drain will be discharged to either the Atlantic Ocean or the salt marsh.

Anyone requesting approval to release an effluent to the environment shall complete Section I of the Non-Radiological Release Permit, Form CP 9.3A, and should submit the form to the Chemistry Department at least 24 hours prior to the proposed release.

1.6.4 Permit Modification or Renewal

The NPDES permit is renewed every five years. Permit modifications can be requested in the interim. In addition, requests for changes to the NPDES permit shall be submitted to the Nuclear Regulatory Commission. If the facility is to be modified in such a way that it affects the NPDES permit, the EPA must provide prior approval of the necessary permit changes. Compliance with the NPDES permit is not only a requirement of the EPA, but is also a requirement of Appendix B (Environmental Protection Plan) to the NRC Operating License.

The Industrial Wastewater Discharge Permit is renewed every three years. Permit modifications may be made under specific terms and conditions identified in the permit. Compliance with this permit is required under the Seabrook Sewer Use Ordinance.

1.6.5 Environmental Monitoring Program

The Environmental Monitoring Program is implemented both off site and on site to meet the sampling requirements of the National Pollutant Discharge Elimination System (NPDES) Permit. Representatives from the Environmental Protection Agency, N.H. Department of Environmental Services, N.H. Fish and Game Department and the U.S. National Marine Fisheries Service, review the Environmental Monitoring Program results and make recommendations on proposed program changes.

Appendix B of the Seabrook Station Operating License, the Environmental Protection Plan, Nonradiological, states in part 2.0 that "Aquatic matters are addressed by the effluent limitations and monitoring requirements contained in NPDES Permit No. NH0020338 issued by the U.S. Environmental Protection Agency (Region I) on July 26, 1985. The NRC will rely on the U.S.E.P.A. and the NPDES Permit for regulation of matters involving water quality and aquatic biota."

The offsite Environmental Monitoring Program is implemented by FPLE's Environmental Studies Contractor. Environmental studies for Seabrook Station began in 1969 and focused on station design and siting matters. Once these matters were addressed, a monitoring program was implemented during the preoperational period (1976 to 1990).

The Environmental Monitoring Program is designed to determine whether Seabrook Station has affected the balanced indigenous population of fish, shellfish and wildlife in the coastal waters near Seabrook Station. The preoperational monitoring program established a baseline against which potential environmental impacts during the operational period (1990 to present) can be evaluated. Potential sources of station impact include entrainment/impingement in cooling water systems, exposure to the thermal plume and exposure to increased particulate material (dead organisms) settling from discharge, i.e., detrital rain. Major elements of the program include water quality, phytoplankton, zooplankton fish, macrobenthos, surface fouling panels, epibenthic crustacea, and soft-shell clam.

Environmental samples are collected throughout the year by FPLE's Environmental Monitoring Contractor. These samples are analyzed and the data derived from these analyses is evaluated to determine any environmental impact associated with Seabrook Station. Annual Environmental Monitoring Reports are developed which include the results of the previous year's monitoring program.

The onsite Environmental Monitoring Program is coordinated by the Licensing Department personnel. These programs are designed to assess potential station impacts associated with the impingement of fish and lobsters and the entrainment of ichthyoplankton (fish eggs and larvae) and bivalve larvae. The data collected under these programs is evaluated to determine if there is any indication of an environmental impact associated with station operation. The results of these studies are incorporated into the annual Environmental Monitoring Reports. The implementing station instructions are as follows:

1. ZN1120.01 - Ichthyoplankton Entrainment Sampling
 - Ichthyoplankton entrainment sampling is performed weekly (48 times per year). This program evaluates the number of ichthyoplankton entrained by the station's Circulating Water System (CWS). Entrainment sampling can be performed only when at least one CW pump is operating, when sufficient flow is available to supply ocean water to entrainment sampling equipment.
2. ZN1120.02 - Bivalve Larvae Entrainment Sampling
 - Bivalve larvae sampling is performed weekly from April to October. This program evaluates the number of bivalve larvae entrained by the station's Circulating Water System (CWS).
 - Entrainment sampling can be performed only when at least one CW pump is operating, when sufficient flow is available to supply ocean water to entrainment sampling equipment
3. ZN1120.03 - Impingement Assessment Procedure
 - Impingement assessments are performed at least twice per week to determine the number, type and size of fish and lobsters impinged by the station. Fish and lobsters are removed from screen wash debris and counted, identified and measured. Results of the impingement assessment are incorporated into the annual Environmental Monitoring Reports.

2.0 SOURCES OF AIR EMISSIONS

2.1 Purpose

This section identifies sources of air emissions located within the facility which are required to be in compliance with the facility Title V Permit and certain regulations under the New Hampshire Department of Environmental Services (NHDES) Air Resources Division, and outlines the provisions which must be followed to maintain compliance. The Title V Permit is included in Appendix D.

2.2 General Information

1. The Federal government, beginning with the original Federal Clean Air Act (CAA) of 1955 as amended through 1990, has regulated air pollutants to minimize the impact from these emissions on human health and the environment. In general, Federal regulations delegate the responsibility to State and local governments for the prevention and control of air pollution at the source.
2. The NHDES Air Resources Division has enacted air pollution regulations governing new and existing stationary sources of air pollution and the modification of existing sources such that the New Hampshire ambient air quality standard can be achieved and maintained.

2.3 Regulations

1. Federal Statutes
Clean Air Act and Amendments
2. Applicable Federal Regulations
 - a. 40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
 - b. 40 CFR 60 Appendix A - Test Methods
 - c. 40 CFR 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)
 - d. 40 CFR 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories
 - e. 40 CFR 70 - State Operating Permit Programs
 - f. 40 CFR 80 - Regulation of Fuels and Fuel Additives
 - g. 40 CFR 85 - Control of Air Pollution from Mobile Sources
 - h. 40 CFR 86 - Control of Emissions from New and In-Use Highway Vehicles and Engines
 - i. 40 CFR 88 - Clean Fuel Vehicles

- j. 40 CFR 89 - Control of Emissions from New and In-Use Non-road Compression-Ignition Engines
3. State of New Hampshire Revised Statutes Annotated (RSAs)
 - RSA Chapter 125-C, Air Pollution Control
 - RSA Chapter 125-D, Acid Rain Control Act
 - RSA Chapter 125-I, Air Toxics Control Act
 4. The New Hampshire Code of Administrative Rules, Department of Environmental Services, Chapter Env-A
 - a. Env-A 1600, Fuel Specifications
 - b. Env-A 600, Statewide Permit System
 - c. Env-A 705, Emission-Based Fees
 - d. Env-A 800, Testing and Monitoring Procedures.
 - e. Env-A 900, Owner or Operator Recordkeeping and Reporting Obligations
 - f. Env-A 1211, Nitrogen Oxides (NOx)
 - g. Env-A 1400, Regulated Toxic Air Pollutants
 - h. Env-A 1800, Asbestos
 - i. Env-A 2000, Fuel Burning Devices
 - j. Env-A 3200, NOx Trading

2.4 Applicability

1. The following significant stationary sources are addressed under Seabrook Station's Title V Permit:

- a. External Combustion Devices

The following devices are listed under the Title V Permit pursuant to Env-A 608 since each device has a design rating greater than or equal to 10 million Btus per hour of gross heat input and uses #2 fuel oil:

1. Auxiliary Boiler #1
2. Auxiliary Boiler #2

- b. Internal Combustion Devices

The following devices are listed under the facility Title V Permit as emergency generators:

1. Diesel Generator (#68-999) - GOB
 2. Diesel Generator (#68-121) - OSB
 3. Sullair Air Compressor
 4. Diesel Generator 1-A
 5. Diesel Generator 1-B
 6. Supplemental Emergency Power System (SEPS) Generator 2A
 7. Supplemental Emergency Power System (SEPS) Generator 2B
2. Other sources of air emissions are considered exempt or insignificant. Insignificant emission sources are subject to emission recordkeeping and reporting for the purpose of quantifying emission-based fees. Insignificant emission sources on site include the following:
- Fire Pumphouse Boiler (1-ASH-E-218)
 - Waste Oil Burning Space Heaters
 - Propane Space Heaters
 - Non-exempt Stationary Internal Combustion Engines
 - Chemical or expendable product use in non-exempt applications that result in the emission of regulated NH Air Toxics

2.5 References

Seabrook Station Title V Operating Permit TV-OP-017.

2.6 Definitions

2.6.1 Nitrogen Oxides (NO_x)

A gaseous mixture of nitrogen oxides, the most significant components of which are nitrous oxide, having the molecular formula NO and nitrogen dioxide, having a molecular formula NO₂.

2.6.2 Ozone

A compound having the molecular formula O₃. It is the most prevalent of those compounds called photochemical oxidants that result from a complex series of atmospheric reactions initiated by sunlight. When reactive organic substances and nitrogen oxides accumulate in the atmosphere and are exposed to the ultraviolet component of sunlight, the formation of ozone and other photochemical oxidants takes place.

2.6.3 Theoretical Potential Emissions

The theoretical emissions of NO_x that would occur prior to using any air pollution control equipment, and based on

1. 8760 hours per year of continuous operation under maximum design conditions, or
2. hours of operation and/or design and/or process conditions, including operating rates, that are limited by permit conditions.

2.6.4 High Ozone Season

The period from June 1 through August 31 of any given calendar year.

2.6.5 Typical Ozone Season Day

A calendar day for which operating and process rate conditions are typical of the high ozone season. The calculation of emission estimates for a typical ozone season day shall be based on the mean of the parameters relating to operating and process rate conditions during the high ozone season.

2.6.6 Stationary Internal Combustion Engine

Any internal combustion engine that is regulated by a Federal new source performance standard promulgated under Section 111 of the Clean Air Act, or any internal combustion engine that is none of the following:

1. A non-road engine,
2. An engine used to propel a motor vehicle or a vehicle used solely for competition, or
3. An engine subject to standards promulgated under section 202 of the Clean Air Act governing motor vehicle emissions.

2.6.7 Non-Road Engine

1. Any internal combustion engine
 - a. In or on a piece of equipment that is self-propelled or that serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers),
 - b. In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers), or
 - c. That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer or platform.

2. An internal combustion engine is not a non-road engine if
 - a. The engine is used to propel a motor vehicle used solely for competition, or is subject to standards promulgated under Section 202 of the Clean Air Act,
 - b. The engine is regulated by a Federal new source performance standard promulgated under Section 111 of the Clean Air Act, or
 - c. The engine, otherwise included in 2.6.7.1.c above, remains or will remain at a location for more than 12 consecutive months, or a shorter period of time for an engine located at a seasonal source. For example, portable equipment, such as small generators or compressors would normally be considered non-road engines, but because they are maintained on-site for more than 12 consecutive months, they must be treated as stationary internal combustion engines subject to new source review. Note that temporary removal of the equipment in order to circumvent the exclusion based on residence time is a prohibited act.

2.6.8 Modification

Any physical change in, or change in the method of operation of, a stationary source that increases the amount of any air pollutant emitted by such source or that results in the emission of any air pollutant not previously emitted.

2.7 **Responsibilities**

2.7.1 Licensing Manager

Responsible for notification and reporting as identified below and in the Title V Permit.

2.7.2 Operations Department Manager and Maintenance Manager

1. Maintain operating schedule and fuel usage records.
2. Maintain inventory, procurement and replacement records for equipment utilizing stationary internal combustion engines in order to maintain the combined maximum heat input rate of such engines below the regulatory threshold of 4.5 MMBtu/hr, in accordance with the Title V Permit.
3. Responsible for maintenance of equipment utilizing stationary internal combustion engines, non-road engines, and motor vehicle engines in accordance with manufacturers' instructions in order to maintain conformance with emission control requirements.

2.8 **Operating Permit Restrictions**

The operation of each auxiliary boiler and each emergency diesel generator is specified in the Title V Permit and in §2.11. The permit is provided in Appendix D.

2.9 Recordkeeping Requirements

2.9.1 Retention of Records

Seabrook Station shall retain records of all required monitoring data, recordkeeping and reporting requirements, and support information for a period of at least five years from the date of origination.

2.9.2 Env-A 1400, Regulated Toxic Air Pollutants, Records

Env-A 1400 specifies chemicals and substances designated as regulated toxic air pollutants. If a new product or an existing product in a greater quantity designated as a toxic air pollutant is introduced, a record of method of demonstrating compliance in accordance with Env-A 1405 shall be maintained.

2.9.3 Monitoring Data

Records of monitoring requirements as specified in the Title V Permit shall be maintained on a continuous basis. These records include:

- a) Summary of maintenance and repair records associated with emission units;
- b) Summary of inspection, maintenance and test results for each device; and
- c) Summary of testing and/or delivery ticket certifications for sulfur content and specification used oil contaminants limitation provisions.

2.9.4 Records of Fuel Utilization

For each fuel burning device, records of monthly fuel usage shall be maintained to include consumption, fuel type, sulfur content as percent sulfur by weight of fuel, and the concentration of the contaminants in specification used oil.

2.9.5 NOx Recordkeeping Requirements

For fuel burning devices, including boilers, and internal combustion engines, the following information shall be recorded and maintained:

- a) Identification of each fuel burning device;
- b) Operating schedule during the high ozone season for each combustion device identified, including:
 - 1) Hours of operation per calendar month;
 - 2) Days of operation per calendar month;
 - 3) Number of weeks of operation;
 - 4) Type of fuel burned, for each fuel burning device;
 - 5) Heat input rate in million BTUs per hour or, in tons per hour; and

- 6) The following NOx emission data,
 - (a) Actual NOx emissions for each fuel-burning device for
 - i Each calendar year, in tons; and
 - ii A high ozone season day during that calendar year, in pounds per day; and
 - (b) The emission factors and the origin of the emission factors used to calculate the NOx emissions.

2.10 Reporting Requirements

Title V Permit reporting requirements are contained in the Regulatory Compliance Manual (NARC), Figure 3-1-18.

2.11 NOx RACT

Env-A 1211, Nitrogen Oxides (NOx), provides the NHDES requirements for control of the emission of NOx and requires a source (i.e., Seabrook Station) to apply reasonably achievable control technology (RACT) to achieve compliance with the rule. The NOx RACT requirements of Env-A 1211 are specified in the Title V permit. The Title V permit specifies NOx RACT requirements for the following devices.

2.11.1 Auxiliary Boilers

The auxiliary boilers are limited to a NOx emission rate of .20 lb. NOx/million Btu which must be verified by an EPA certified compliance test at 90% load and witnessed by the NHDES.

2.11.2 Emergency Generators

The following devices were classified as emergency generators and, as such, are limited to less than 500 hours of operation during any consecutive 12 month period:

1. Emergency Diesel Generator "A" (1-DG-SKD-7A)
2. Emergency Diesel Generator "B" (1-DG-SKD-7B)
3. Sullair Air Compressor
4. OSB Diesel Generator (68-121)
5. GOB Diesel Generator (68-999)

The Supplemental Emergency Power System (SEPS) engines 2A and 2B were classified as emergency generators and are limited to less than 300 hours of operation during any consecutive 12 month period.

2.11.3 Stationary Internal Combustion Engines

There are presently no stationary internal combustion engines used at Seabrook Station that are subject to the requirements of Env-A 1211. Fuel burning devices categorized as emergency generators in §2.10.2 are subject to reclassification as stationary internal combustion engines in the event that operating times exceed 500 hours (300 hours for SEPS) in any 12-month consecutive interval. These internal combustion engines are not subject to RACT as long as the combined maximum heat input rate of the engines is less than 4,500,000 Btu per hour. This total must be maintained below 4,500,000 Btu per hour or all stationary internal combustion engines will be subject to hourly average NOx RACT emission limits.

2.12 **Motor Vehicle and Non-Road Engines**

Departments are responsible for ensuring that all motor vehicles and non-road engine driven equipment owned or operated by FPLE Seabrook is maintained in accordance with the manufacturers recommended maintenance scope and schedule in order to maintain applicable emission control warranties.

3.0 MANAGEMENT OF OZONE-DEPLETING SUBSTANCES

3.1 Purpose

The purpose of this section is to ensure compliance with Title VI of the Clean Air Act Amendments of 1990 (CAAA), governing ozone-depleting substances (ODSs). ODSs injure public health and the environment by destroying ozone in the upper atmosphere. Additionally, ODSs are greenhouse gases; i.e., they promote global warming.

3.2 Applicability

This section applies to the following:

1. any appliance using and containing an ozone-depleting refrigerant,
2. purchase of any ODS for a nonessential use, as described below, and
3. to other related issues (e.g., certification of persons handling refrigerant; labeling of ODSs; identification of nonozone-depleting substitute products).

3.3 References

1. Title VI of the CAAA
2. 40 CFR Part 82

3.4 Definitions

3.4.1 Appliances

Any device which contains more than five pounds of a Class I or Class II substance for use as a refrigerant and which is used for household or commercial purposes, including refrigerators, chillers, freezers, water coolers, and vending machines (reference 40 CFR 82.152[a]).

3.4.2 Class I or Class II Ozone-Depleting Substance

See list in Figure 2-3-1, List of Regulated ODSs.

3.4.3 Small Appliances

Appliances that are fully manufactured, charged and hermetically sealed in a factory and contain five pounds or less of refrigerant, including, but not limited to refrigerators and freezers designed for home use or for medical or industrial research, room air conditioners (including window air conditioners and packaged terminal air heat pumps), dehumidifiers, under-the-counter ice makers, vending machines, and drinking water coolers (reference 40 CFR 82.152[v]).

3.4.4 Commercial Refrigeration

Commercial refrigeration means appliances utilized in the retail food and cold storage warehouse sectors. Retail food includes the refrigeration equipment found in supermarkets, convenience stores, restaurants, and other food service establishments. Cold storage includes the equipment used to store meat, produce, dairy products and other perishable goods. All of the equipment contains large refrigerant charges, typically over 75 pounds.

Refrigerated food storage equipment used in the Administration Building and General Office Building cafeterias are in this classification of equipment.

3.4.5 Industrial Process Refrigeration

Industrial process refrigeration means complex customized appliances used in the chemical, pharmaceutical, petrochemical and manufacturing industries. These appliances are directly linked to the industrial process. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration. Appliances used for regulating temperatures in control panel buildings and cooling equipment to cool computers are not industrial process refrigeration.

No appliances currently in use at Seabrook Station are in this equipment classification.

3.4.6 Full Charge

The amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one of the following four methods or a combination of the following four methods:

1. The equipment manufacturer's determination of the correct full charge of the equipment;
2. Determining the full charge by appropriate calculations based on component sizes, density of refrigerant, volume of piping, and all other relevant considerations;
3. The use of actual measurements of the amount of refrigerant added or evaluated from the appliance; and/or
4. The use of an established range based on the best available data, regarding the normal operating characteristics and conditions for the appliance, where the mid-point of the range will serve as the full charge, and where records are maintained in accordance with 40 CFR 82.166(q).

3.4.7 Initial Verification Test

Those leak tests that are conducted as soon as practicable after the repair is completed. An initial verification test, with regard to the leak repairs that require the evacuation of the appliance or portion of the appliance, means a test conducted prior to the replacement of the full refrigerant charge and before the appliance or portion of the appliance has reached operation at normal operating characteristics and conditions of temperature and pressure. An initial verification test with regard to repairs conducted without the evacuation of the refrigerant charge means a test conducted as soon as practicable after the conclusion of the repair work.

3.4.8 Follow-up Verification Test

Those tests that involve checking the repairs within 30 days of the appliance's returning to normal operating characteristics and conditions. Follow-up verification tests for appliances from which the refrigerant charge has been evacuated means a test conducted after the appliance or portion of the appliance has resumed operation at normal operating characteristics and conditions of temperature and pressure, except in cases where sound professional judgment dictates that these tests will be more meaningful if performed prior to the return to normal operating characteristics and conditions. A follow-up verification test with respect to repairs conducted without evacuation of the refrigerant charge means a reverification test conducted after the initial verification test and usually within 30 days of normal operating conditions. Where an appliance is not evacuated, it is only necessary to conclude any required changes in pressure, temperature or other conditions to return the appliance to normal operating characteristics and conditions.

3.4.9 Reclamation

To reclaim refrigerant means to reprocess refrigerant to at least the purity specified in Appendix A to 40 CFR 82, subpart F (based on ARI Standard 700-1993, Specifications for Fluorocarbon and Other Refrigerants) and to verify this purity using the analytical methodology prescribed in Appendix A. In general, reclamation involves the use of processes or procedures available only at a reprocessing or manufacturing facility.

3.4.10 Recovery

To recover refrigerant means to remove refrigerant in any condition from an appliance and to store it in an external container without necessarily testing or processing it in any way.

3.4.11 Recycle

To recycle refrigerant means to extract refrigerant from an appliance and clean refrigerant for reuse without meeting all of the requirements for reclamation. In general, recycled refrigerant is refrigerant that is cleaned using oil separation and single or multiple passes through devices, such as replaceable core filter-driers, which reduce moisture, acidity, and particulate matter. These procedures are usually implemented at the field job site.

3.5 Responsibilities

3.5.1 Maintenance Manager

Ensures that work done on process equipment containing ozone depleting substances is performed by trained personnel and in accordance with approved procedures.

3.5.2 Nuclear Training Manager

Responsible for training and certification programs.

3.5.3 Licensing Manager

1. Responsible for the coordination of reviews of substitute products for Class I and Class II ozone depleting substances utilizing Engineering input as required.
2. Responsible for documentation and record retention of substitute product reviews.

3.6 Requirements

3.6.1 Ban on Emissions of Ozone-Depleting Refrigerants

1. Emissions Ban

40 CFR 82.154(a) prohibits, in the course of maintaining, servicing, repairing or disposing of an appliance, commercial refrigeration, or industrial process refrigeration equipment, knowingly venting or otherwise knowingly releasing or disposing of any Class I or Class II substance (see Figure 2-3-1) used as a refrigerant in such appliance or industrial process refrigeration.

2. Exempt Emissions

40 CFR 82 exempts emissions occurring when following EPA's required practices (see below). Further, the rule exempts small releases resulting from purging, connecting and disconnecting hoses to charge or service an appliance.

40 CFR 82 also does not apply to mixtures of nitrogen and R-22 that are used as holding charges or as leak test gases, i.e., not as refrigerant.

Finally, refrigerant emissions in the course of normal operation of equipment are not prohibited. However, 40 CFR 82 requires repair of substantial leaks (see below.)

3.6.2 Required Practices

40 CFR 82 requires the following, which are discussed below:

- Use of certified recovery and recycling equipment
- Evacuation to prescribed levels
- Alternate practices where evacuation is not performed

- Repair of certain leaking equipment
 - Recordkeeping
 - Reporting
 - Labeling
 - Purity check in limited cases
1. Use of Certified Equipment

All persons opening appliances for maintenance, service or repair must evacuate the refrigerant in either the entire unit or the part to be serviced (if the latter can be isolated) to a system receiver or a recovery or recycling machine certified under 40 CFR 82.158(a).

NOTE

Recovery partially into chilled cylinders and partially into certified equipment does not satisfy the rule. See §3.6.3 below.

All persons disposing of appliances, except for small appliances containing less than 5 lbs. of refrigerant, must evacuate the refrigerant in the entire unit to a certified recovery or recycling machine. System dependent equipment cannot be used with appliances normally containing more than 15 pounds of refrigerant unless the equipment is permanently attached to the appliance as a pump-out unit (reference 40 CFR 82.156[c]).

2. Evacuation Levels

Persons repairing, servicing, or disposing of appliances, except for small appliances, must evacuate to the levels in Figure 2-3-2, Evacuation Levels (reference 40 CFR 82.156[a][1] & [3]). However, evacuation need not comply with this table if

- a. evacuation to the atmosphere is not to be performed after the completion of the work, and the work is not major. (Major work involves removing the compressor, condenser, evaporator, or auxiliary heat exchanger coil.) In this case, evaporation/pressurization (to 0 psig) to the atmosphere is permitted prior to the work. (See 58 FR 28676.)
- b. due to leaks in the appliance, evacuation to the levels in Figure 2-3-2 is not attainable, or would substantially contaminate the refrigerant being recovered (reference 40 CFR 82.156[a][1]).
- c. the work involves only oil changes. Appliances may be evacuated to a pressure not to exceed 5 psig to perform oil changes. Alternatively, the oil can be recovered to a system receiver where the receiver will be evacuated to atmospheric pressure.

3. Alternate Practices

- a. If evacuation to the atmosphere is not to be performed after completion of the work, and if the work is not major, the appliance must be
- (1) evacuated to a pressure no higher than 0 psig before it is opened if it is a high or very high pressure appliance, or
 - (2) pressurized to 0 psig before it is opened if it is a low pressure appliance, without using methods, e.g., nitrogen, that require subsequent purging (reference 40 CFR 82.156[a][i]).

NOTE

High pressure means the appliance use a refrigerant with a boiling point between -50 and 10 degrees Centigrade. Low pressure means the boiling point is above 10 degrees Centigrade. Very high pressure means the boiling point is below -50 degrees Centigrade.

- b. If, due to leaks in the appliance, evacuation to the level described in Figure 2-3-2 is not attainable, or would substantially contaminate the refrigerant being recovered, the technician must
- (1) isolate leaking from nonleaking components wherever possible,
 - (2) evacuate nonleaking components to be opened to the levels specified in Figure 2-3-2, and
 - (3) evacuate leaking components to be opened to the lowest level that can be attained without substantially contaminating the refrigerant. This cannot exceed 0 psig (reference 40 CFR 82.156[a][2][ii]).

4. Leaking Equipment

Substantial leaks of equipment containing a charge of 50 pounds or more must be repaired (reference 40 CFR 82.156[i]). Substantial means a 35% annual leak rate for industrial process and commercial refrigeration; 15% for all other covered equipment.

NOTE

Air conditioning equipment and systems used for area and space cooling are considered comfort cooling appliances and are subject to the 15% annual leak rate limit. This includes control building A/C units and other air conditioning equipment used for cooling control boards and electrical panels.

For leakage in industrial process and commercial refrigeration systems:

- (a) Within 30 days of discovering the leak, the owner must repair the leak or develop a one-year retrofit or retirement plan for the leaking equipment.

- (b) The plan (or a legible copy) must be kept at the site of the equipment and work to retrofit or retire must be completed within one year.
- (c) The owner may obtain a reasonable extension beyond 30 days when delayed by the requirements of other applicable laws/regulations, or the unavailability of a suitable replacement refrigerant with a lower ozone depletion potential.
- (d) If within these circumstances, the owner must notify EPA within 6 months after the 30 day period following discovery of the leak.
- (e) Records necessary to allow EPA to determine that these provisions apply and the length of time necessary to complete the work must be submitted to EPA and maintained on site. Further, EPA must approve the extension (40 CFR 82.156(a)(7)(i)).
- (f) The owner generally has one year to complete a retrofit of industrial process equipment. However, an additional one year period is available (40 CFR 82.156(a)(7)(ii) where:
 - (1) The equipment is custom built.
 - (2) Delivery will take over 30 weeks.
 - (3) The owner notifies EPA (no permission is required).
 - (4) The owner maintains records of these circumstances.

No EPA permission is required when these criteria are met.

NOTE

Once a leak has been repaired, if a new leak occurs, the annual leak rate is recalculated from 0. That is, previous leaks (if properly repaired) are not counted in computing new leaks.

For appliances not classified as industrial process or commercial refrigeration, EPA notification is not required, but the one-year retrofit or retirement plan must be made available on request.

5. Recordkeeping

Vendors servicing appliances normally containing over 50 pounds of refrigerant must provide FPLE Seabrook with documentation indicating the amount of refrigerant added to the appliance (reference 40 CFR 82.166[j]). Standard vendor receipts satisfy these requirements. This documentation is not required for appliances containing less than 50 pounds of refrigerant.

For industrial process and commercial refrigeration equipment applications under a retrofit plan:

Where the owner takes more than one year to complete a retrofit of industrial process equipment, it must maintain records documenting the circumstances set forth in 40 CFR 82.156(a)(7)(ii).

The owner must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added (reference 40 CFR 82.166[k]). Additionally records should include the following:

- a. Identification of the facility.
- b. The leak rate.
- c. The method used to determine the leak rate and full charge.
- d. The date a leak rate of greater than the allowable annual leak rate was discovered.
- e. The location of the leak(s) to the extent determined to date.
- f. Any repair work that has been completed and the date that work was completed.
- g. Basis for repairs exceeding the allowed 30-day period.
- h. Repair plans and schedules for repairs beyond the allowed 30-day interval.
- i. Dates and types of all initial and follow-up verification tests and the test results.

6. Reporting

Information listed in 5a through 5i above must be reported to the EPA within 30 days of discovery of leakage in excess of allowable limits.

7. Labeling

See §3.6.8.

8. Purity

Recycled Class I or Class II refrigerant which is to be conveyed to another entity must be cleaned to the ARI 700 purity standard and chemically analyzed to verify that it meets this standard. Only certified reclaimers are authorized to process used refrigerant. Only certified laboratories are authorized to perform the required analysis of reclaimed refrigerant. However, intra-company transfer of refrigerant is not subject to this requirement when both entities are wholly owner subsidiaries of the parent company.

3.6.3 Guidance on Work Practices

1. Management of Refrigerant

Cylinders should be kept in a clear, dry area, below 125°F. Cylinders 30-50 pounds may be kept in a tool crib where there is mechanical ventilation or the air volume exceeds 5000 cubic feet. Cylinders 125-150 pounds may be kept in a warehouse or mechanical room having normal ventilation for standard manufacturing.

Empty cylinders should be refilled with the same type of refrigerant they contained formerly (i.e., the same cylinder should not be filled with R-12; emptied; then refilled with R-13).

2. Evacuation of Refrigerant into Chilled Cylinders

Some facilities have evacuated refrigerant from large (e.g., 800 pound) air conditioning systems through a thermal process, taking refrigerant into a large cylinder surrounded by nitrogen coils, that condensed it. The last amount of refrigerant was evacuated into a piece of certified machinery, resulting in a total evacuation satisfying the 95% evacuation level. Although 40 CFR 82 does not address this situation, EPA has stated that this practice does not conform to the rule because it is a pressurized system, not a push-pull. Therefore, this practice will no longer be permitted.

3.6.4 Preparing Equipment for Disposal

1. Sticker on All Covered Equipment While In Service

To ensure that refrigeration equipment or air conditioners are not disposed of with their refrigerant intact, appliances shall have a sticker or tag affixed which states, "Do not discard in trash unless refrigerant has been evacuated. Contact _____ to arrange for evacuation." The sticker or tag shall have another blank to be signed by the person evacuating the appliance. (See Figure 2-3-3, Illustration of Appliance Sticker Warning.)

2. Documentation of Evacuation

After evacuating any appliance bearing the sticker described above, complete the blank indicating evacuation. Additionally, NAEC FORM 2-3A, Documentation of Removal of Refrigerant and Refrigerant Contaminated Oil, shall be completed. The original of this document shall be conveyed with the appliance to the scrapper/recycler. A copy shall be kept in the file of the party performing evacuation.

3. Ensuring Appliance Capacitor Is PCB Free

If an appliance capacitor does not contain PCBs, it should be labeled "PCB free." If the capacitor lacks this label, the capacitor shall be removed from the appliance and disposed of as PCB waste.

3.6.5 Certification Requirements for Persons Working with or Buying Refrigerant

1. Federal Requirement: HVAC Servicing

Persons who maintain, service, repair or dispose of appliances that could reasonably be expected to release a Class I or II substance into the atmosphere must have EPA technician certification. However, no certification is required for persons disposing of small appliances. Refer to 40 CFR 82.161(a).

2. State Requirement: HVAC Servicing

There is no state law or regulation in New Hampshire requiring licensing of persons working with ozone-depleting refrigerant.

3. Federal Requirement: Purchase of Refrigerant

Generally, Class I or Class II substances may be sold only to certified technicians or manufacturers. However, when the substance will be charged into equipment by a certified technician, the buyer need not be certified (reference 40 CFR 82.154[n][1]-[6]). FPLE Seabrook should provide sellers with at least one copy of a technician's certification from a certified employee.

NOTE

Apprentices may not purchase regulated refrigerant.

Sale of R-12 in containers smaller than 20 pounds, for use in motor vehicles, is restricted to technicians certified under EPA's motor vehicle air conditioning regulations.

4. State Requirement: Purchase of Refrigerant

There is no state law in New Hampshire restricting who may purchase ODSs.

3.6.6 Preference for Nonozone-Depleting Refrigerants

The purchase of nonozone-depleting refrigerant systems is performed if the cost of purchase and maintenance (including refrigerant) is less than/equal to the cost of alternative systems. FPLE Seabrook does not advocate discarding functioning systems that use ozone-depleting refrigerants.

3.6.7 Management of Appliance Oil

1. Disposal of Oil

HVAC oil is typically handled as a hazardous waste. Contact the Hazardous Waste Coordinator to determine the proper method of disposal.

2. Evaporation of CFCs from Oil

Generators need not remove CFCs from CFC contaminated oil (reference 58 FR 28677). Accordingly, evaporation of CFCs from this oil and delivery of this oil to metal scrappers do not violate the ban on emissions of ODSs.

3. Removal/Nonremoval of Oil

Unless a particular vendor instructs otherwise, motors, compressors containing small amounts of oil may be included in scrap metal sent to vendors. Oil should be removed from appliances where it is readily feasible to do so (e.g., there is a valve or opening to remove the oil). When oil has been removed, contact the Hazardous Waste Coordinator to determine the proper handling of it. NAEC FORM 2-3A, Documentation of Removal of Refrigerant and Refrigerant Contaminated Oil, should be completed to indicate that the oil has not become contaminated with halogens except through contact with refrigerants.

3.6.8 Labeling

Containers containing a Class I or Class II substance must bear a warning statement printed in a legible, clear and conspicuous fashion. The warning must state the following:

“WARNING: Contains [insert name of substance], a substance which harms public health and environment by destroying ozone in the upper atmosphere.”

See Figure 2-3-4, Warning Label for Containers Containing ODSs, for a sample.

This requirement applies to all such containers, including containers which do not leave the facility.

Containers should also bear the OSHA Right to Know label (reference the Hazard Communications Reference [SHCR]).

3.6.9 Ozone-Depleting Solvents

1. Nonessential Uses

40 CFR 82 prohibits the sale or distribution in interstate commerce of ODSs for certain “nonessential” uses. Covered ODSs are those listed in Class I (group I or group III) or Class II (see Figure 2-3-1.) (Reference 40 CFR 82.60[a].) Nonessential products include “any aerosol product or other pressurized dispenser... including industrial uses” containing one of these ODSs (reference 40 CFR 82.66[d]).

2. Essential Uses

40 CFR 82 allows sale and distribution of cleaning fluid for electronic and photographic equipment when sold to a commercial purchaser (reference 40 CFR 82.66[b][2]). Buyers need to present documentation of commercial status by presenting a local business license number, federal employer identification number, or state sales tax exemption number (reference 40 CFR 82.62[b]).

3. Lubricants and Cleaning Fluids

The ban does not apply to lubricants, coatings, or cleaning fluids for electrical or electronic equipment which contain CFC-11, CFC-12, or CFC-113 for solvent purposes but which contain no other CFCs.

4. 1,1,1-trichloroethane

By Executive Order, new production of 1,1,1-trichloroethane was banned after January 1, 1996. For a discussion of substitute products for parts cleaning, see §3.6.11 below.

3.6.10 Use of Ozone-Depleting Products for Specific Utility Functions

1. Linemen's Gloves

Use of CFC-113 (or other covered ODSs) for machinery that tests the protective sleeves of linemen's gloves is a nonessential use. Remaining stocks may be used indefinitely. Alternative substances include C6-F14.

2. Carbon Filter Banks

Under 40 CFR 82 regulations, use of CFC-11 in testing carbon filter banks at nuclear plants is implicitly deemed nonessential. However, the EPA has issued an exemption for purchase for this purpose.

3. Transformers

Use of CFC-12 (or other covered ODSs) to test for leaks in large transformers is nonessential. Remaining stocks may be used indefinitely. As an alternative, EEI and GE recommend (in order of descending preference) use of soap bubbles, sulfur hexafluoride, or helium.

4. Condensers

Use of CFC-12 (or other covered ODSs) to locate leaks in condensers is nonessential. Remaining stocks may be used indefinitely.

5. Cleaning Out HVAC Systems

Use of ODSs (especially R-11) to flush out HVAC systems whose compressors have overheated complies with CAAA regulations, assuming the flushout is done following the required practices described above (§3.6.2). If flushout is performed, hard piping or hose clamps should be used to prevent evaporation. Ideally, facilities should use an alternative practice described below: cleaning the unit with acid core filter dryer, changing the oil, then testing the new oil for the presence of acid. Rather than using R-11 to flush out systems, the following method is recommended.

- a. Remove a sample of oil from the compressor and test for acid using a sporian acid test kit. Protective equipment is recommended.
- b. Reclaim the system refrigerant into certified equipment, either on site or at a reclamation facility.
- c. Install a new compressor.
- d. Replace the liquid line moisture drier with an acid core filter. If it is a severe burnout, indicated by carbon or soot exiting the compressor housing into the discharge line, install a suction line acid core filter.
- e. Charge the system with clean refrigerant and run the compressor in normal system operation.

- f. Sealed hermetic compressor

Run the system for 8 hours. Remove the suction line acid core filter and replace the liquid line acid core filter with a moisture drier. This completes the process.

- g. Semihermetic compressor

Run the system for 4 hours, shut it down, and take an oil sample. Replace all acid core filters and compressor oil. If the oil sample shows no acid, run the system for 8 more hours. Take another oil sample test. If no acid is indicated, then remove the acid core filters and install only a liquid line moisture drier to complete the process.

If after the 4-hour initial run, the oil sample indicates acid, repeat the initial 4-hour step until the oil sample test indicates no acid. At this point, run the system for 8 more hours. Take another oil sample test. If no acid is indicated, then remove the acid core filters and install only a liquid moisture drier to complete the process.

6. Portable fire extinguishers that contain Class II ozone depleting substances (HCFCs) and are used in commercial, industrial or non-residential applications are exempt from the current ban on use of these substances.

7. EPA has finalized rulemaking that removes the exemption from laboratory applications of CFCs in analytical methods for oil and grease and total hydrocarbons. Based on the rulemaking, no further purchases of CFC-113 will be allowed for use in EPA Methods 413.1, 413.2, 418.1 and 9070; however, existing stocks may continue to be used. The only other lab application of CFC-113 is particulate testing of fuel oil in accordance with procedure CS0924.06 and ASTM standard D-2276, 1973. This procedure may continue to be used until January 1, 2006, under the current extension of the laboratory applications exemption. The Chemistry Department is currently evaluating new testing procedures under ASTM D-6217 as a possible replacement for this procedure.

NOTE

Consult the equipment manufacturer when in doubt or to ensure compliance with manufacturer's warranties.

3.6.11 Substitute Products

1. EPA Policy

Under EPA's Significant New Alternatives Policy (SNAP) it is unlawful to replace any Class I or Class II substance with a substitute that may present adverse health or environmental effects. (A product not being employed as a substitute for a CFC or HCFC can still be used.) However, a label of "unacceptable" or no label for a product that is a substitute means that the substitute cannot be lawfully used.

EPA review and approval of substitutes is required before they can be used in applications currently served by Class I or Class II substances. EPA classifies substitutes or alternative technology as follows:

- Acceptable
- Acceptable subject to use conditions
- Acceptable subject to narrow use limits
- Unacceptable
- Pending

Substitution requests will be addressed through the chemical review process specified in Procedure EP 2.1. Substitute products will be evaluated for acceptability by Licensing with Engineering support as requested to determine if the proposed substitute product is acceptable for use on the affected equipment. No substitute products will be used without a formal review by Licensing.

If a substitute product has been designated by EPA as "acceptable subject to use conditions," end users must make reasonable efforts to determine that other alternatives are not feasible due to safety, performance or technical reasons and must document this assessment. The documentation must include

- descriptions of substitutes examined and rejected,
- descriptions of processes or products in which the substitute is needed, and
- a statement of the reason for rejection of other alternatives.

This documentation must be kept on file in order to demonstrate compliance with EPA requirements (Ref. 40 CFR 82.180(b)(2)).

If a substitute product is designated by EPA as “acceptable subject to narrowed use limits,” end users are expected to contact vendors of alternatives to explore with experts whether or not other acceptable substitutes are technically feasible for the process, product or system in question. End users must document these efforts, including:

- descriptions of substitutes examined and rejected,
- descriptions of processes or products in which the substitute is needed,
- a statement of the reason for rejection of other alternatives,
- the anticipated date other substitutes will be available, and
- the projected time for switching to other available substitutes.

This documentation must be kept on file in order to demonstrate compliance with EPA requirements (Ref. 40 CFR 82.180(b)(3)).

Refer any substitution requests to Engineering for performance and documentation of the required reviews. Engineering will also evaluate the use of the substitute products for acceptability with the manufacturers of the affected equipment. No substitute products shall be used without a formal review by Engineering.

Contact the Licensing Department for current information on substitute products reviewed by EPA.

2. Substitute Refrigerants

Under the SNAP, most HCFCs are acceptable transitional refrigerants. However, HCFC 141b is an unacceptable substitute for CFC-11 in new centrifugal chillers. Further, HCFC 22/HFC 142b/CFC-12 (blend) is an unacceptable substitute for CFC-12 in commercial comfort air conditioning systems. EPA has also approved use of HFC, but warns it contributes to global warming. HCFCs (but not HFCs) are subject to the refrigerant recovery practices described in §3.5.2 and these practices are recommended for HFCs. EPA recommends that users of substitute refrigerants comply with ASHRAE Standard 15 (Mechanical Refrigeration) and ASHRAE Standard 34 (Refrigerants). For guidance on selecting a substitute, contact Engineering.

3. Substitute Parts Cleaning

Under the SNAP, most HCFCs are unacceptable substitutes for CFC-113 and MCF in metals, electronics and precision cleaning. This ban is in effect for use in new equipment; use in existing equipment was discontinued on January 1, 1996. See 59 FR 13094. Acceptable substitutes for parts cleaning include hydrocarbons, perfluorocarbons (PFCs), absorption, and new technologies, such as chlorine compression.

3.6.12 Halon

Halon should be stored in DOT/OSHA approved cylinders at temperatures between 50 and 90°F. Cylinders should be protected from mechanical damage.

3.6.13 Reporting of Refrigerant Releases

CERCLA requires reporting releases of 5000 pounds or more of R-11 or R-12. (See 40 CFR 302.4.) The CAAA have no additional reporting requirements for release of CFCs. However, substantial leaks from equipment containing a charge of 50 pounds or more must be repaired.

Figure 2-3-1
List of Regulated ODSs
(Sheet 1 of 2)

List of Class 1 Substances

Group I:

chlorofluorocarbon-11 (CFC-11)
chlorofluorocarbon-12 (CFC-12)
chlorofluorocarbon-113 (CFC-113)
chlorofluorocarbon-114 (CFC-114)
chlorofluorocarbon-115 (CFC-115)

Group II:

halon-1211
halon-1301
halon-2402

Group III:

chlorofluorocarbon-13 (CFC-13)
chlorofluorocarbon-111 (CFC-111)
chlorofluorocarbon-112 (CFC-112)
chlorofluorocarbon-211 (CFC-211)
chlorofluorocarbon-212 (CFC-212)
chlorofluorocarbon-213 (CFC-213)
chlorofluorocarbon-214 (CFC-214)
chlorofluorocarbon-215 (CFC-215)
chlorofluorocarbon-216 (CFC-216)
chlorofluorocarbon-217 (CFC-217)

Group IV: carbon tetrachloride

Group V: methyl chloroform

Figure 2-3-1
List of Regulated ODSs
(Sheet 2 of 2)

List of Class II Substances:

hydrochlorofluorocarbon-21 (HCFC-21)
hydrochlorofluorocarbon-22 (HCFC-22)
hydrochlorofluorocarbon-31 (HCFC-31)
hydrochlorofluorocarbon-121 (HCFC-121)
hydrochlorofluorocarbon-122 (HCFC-122)
hydrochlorofluorocarbon-123 (HCFC-123)
hydrochlorofluorocarbon-124 (HCFC-124)
hydrochlorofluorocarbon-131 (HCFC-131)
hydrochlorofluorocarbon-132 (HCFC-132)
hydrochlorofluorocarbon-133 (HCFC-133)
hydrochlorofluorocarbon-141 (HCFC-141)
hydrochlorofluorocarbon-142 (HCFC-142)
hydrochlorofluorocarbon-221 (HCFC-221)
hydrochlorofluorocarbon-222 (HCFC-222)
hydrochlorofluorocarbon-223 (HCFC-223)
hydrochlorofluorocarbon-224 (HCFC-224)
hydrochlorofluorocarbon-225 (HCFC-225)
hydrochlorofluorocarbon-226 (HCFC-226)
hydrochlorofluorocarbon-231 (HCFC-231)
hydrochlorofluorocarbon-232 (HCFC-232)
hydrochlorofluorocarbon-233 (HCFC-233)
hydrochlorofluorocarbon-234 (HCFC-234)
hydrochlorofluorocarbon-235 (HCFC-235)
hydrochlorofluorocarbon-241 (HCFC-241)
hydrochlorofluorocarbon-242 (HCFC-242)
hydrochlorofluorocarbon-243 (HCFC-243)
hydrochlorofluorocarbon-244 (HCFC-244)
hydrochlorofluorocarbon-251 (HCFC-251)
hydrochlorofluorocarbon-252 (HCFC-252)
hydrochlorofluorocarbon-253 (HCFC-253)
hydrochlorofluorocarbon-261 (HCFC-261)
hydrochlorofluorocarbon-262 (HCFC-262)
hydrochlorofluorocarbon-271 (HCFC-271)

**Figure 2-3-2
Evacuation Levels**

TABLE 1
REQUIRED LEVELS OF EVACUATION FOR APPLIANCES
EXCEPT FOR SMALL APPLIANCES, MVACS,
AND MVAC-LIKE APPLIANCES

Type of Appliance	Inches of Mercury Vacuum* Using Equipment Manufactured:	
	Before Nov. 15, 1993	On or after Nov. 15, 1993
HCFC-22 appliance** normally containing less than 200 pounds of refrigerant	0	0
HCFC-22 appliance** normally containing 200 pounds or more of refrigerant	4	10
Other high-pressure appliance** normally containing less than 200 pounds of refrigerant (CFC-12, -500, -502, -114)	4	10
Other high-pressure appliance** normally containing 200 pounds or more of refrigerant (CFC-12, -500, -502, -114)	4	15
Very high-pressure appliance (CFC-13, -503)	0	0
Low-pressure appliance (CFC-11, HCFC-123)	25	25 mm Hg absolute

*Relative to standard atmospheric pressure of 29.0" Hg.

**Or isolated component of such an appliance.

Figure 2-3-3
Illustration of Appliance Sticker Warning

DO NOT DISCARD IN TRASH UNLESS
REFRIGERANT HAS BEEN EVACUATED

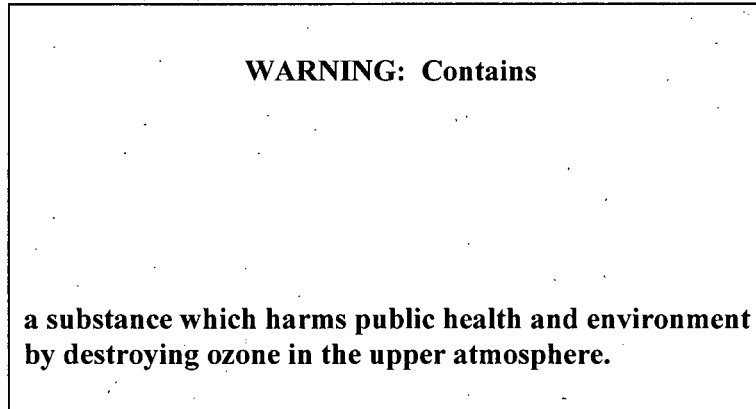
CONTACT _____ TEL. _____

TO ARRANGE FOR EVACUATION

Refrigerant has been removed

Signed Date

Figure 2-3-4
Warning Label for Containers Containing ODSs



4.0 MANAGEMENT OF ASBESTOS-CONTAINING MATERIALS

4.1 Purpose

This section outlines the requirements for handling, removing, and disturbing asbestos-containing material. This section identifies the FPLE Seabrook responsibilities and program elements to control asbestos fiber emissions as well as actions required to meet State and Federal environmental regulations.

4.2 Overview

1. Asbestos is a naturally occurring noncombustible chemical resistant fibrous silicate mineral with many useful properties; it is used as acoustical plaster, pipe insulation, building panels, floor covering, and fire proofing.
2. The inhalation of asbestos fibers can produce asbestosis (lung disease) and lung cancer. As a result, this material is regulated to minimize health risks associated with exposure. However, asbestos-containing materials in a solid state, good repair, not subject to handling, and not likely to emit airborne fibers are not generally considered hazardous.
3. The Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) have issued regulations to reduce human exposure to asbestos. The EPA has issued the National Emissions Standards Hazardous Air Pollutants (NESHAPS), which includes regulations to prevent visible emissions of asbestos particles into the air. OSHA regulations apply to all workplace activities involving asbestos fibers. The OSHA standard specifies acceptable levels of airborne exposures for workers, engineering and administrative controls, work practices, and medical surveillance.

4.3 Applicability

1. To the greatest extent possible, Seabrook Station was built to be free of products that contain asbestos. However, some asbestos-containing materials may be installed at Seabrook Station or in storage. Refer to the Safety and Health Manual (NASH) for details.
2. These requirements conform with all applicable environmental federal and state regulations and shall be adhered to by all affected company employees.
3. Applicable federal and state regulations must be followed even where specific functional procedures do not exist.
4. The Safety and Health Manual (NASH) focuses on the health and safety issues dealing with minimizing worker exposure to asbestos fibers.

4.4 References

Several federal and state environmental regulatory agencies control various aspects of asbestos. A summary of each agency, its respective responsibility, and specific references listed below is found in Figure 2-4-1.

1. OSHA 29 CFR 1910.1001 and 1926.58
2. EPA 40 CFR 61 Subpart M
3. DOT 49 CFR Part 171
4. DOT 49 CFR Parts 106, 107
5. NH RSA 141E
6. SS91612, "Asbestos Screening"
7. Env-Wm 2600 Part 2601 Management of Waste Asbestos
8. Env-A 1800 Asbestos Management and Control
9. He-P 5000 Asbestos Management Rules

4.5 Definitions

4.5.1 Active Waste Disposal Site

Any disposal site other than an inactive site.

4.5.2 Asbestos

Any type of friable material that is more than one percent asbestos, i.e., material that hand pressure can break, crumble, pulverize or reduce to powder when dry. This includes those materials which, because of forces acting on them during renovation or demolition, could create asbestos fiber emissions. The definition also includes any container or bags that previously contained such materials. The definition includes but is not limited to amosite, chrysotile, crocidolite, anthophyllite, tremolite, and actinolite.

4.5.3 Asbestos Abatement

The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials.

4.5.4 Asbestos-Containing Material (ACM)

See asbestos. Any material containing asbestos greater than 1%, based on analysis using Polarized Light Microscopy; includes filters from control devices, friable asbestos material and packaging.

4.5.5 Asbestos Disposal Facility

A disposal facility licensed by the New Hampshire D.E.S. or Federal E.P.A. to receive asbestos waste.

4.5.6 Asbestos Waste Disposal Bags

A 6-mill bag, specially labeled, which is used for containing asbestos waste.

4.5.7 Asbestos Work

Work performed where employee exposure exceeds or has the potential to exceed an airborne concentration of 0.1 fibers/cc air (8 hr. time-weighted average [T.W.A.]).

4.5.8 Competent Person

An employee capable of identifying existing asbestos hazards in the work place and who has the authority to take prompt corrective measures to eliminate them.

4.5.9 Controls to Limit Asbestos Fiber Release

Controls such as encapsulation, wetting with water, use of wetting agents, HEPA filtration, or enclosures, etc.

4.5.10 Demolition

The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations. The EPA also interprets demolition to include dismantlement or removal of facilities.

4.5.11 Emergency Asbestos Abatement Project

A renovation operation that was not planned but results from a sudden, unexpected event. This term includes operations necessitated by nonroutine failures of equipment.

4.5.12 Facility

Any institutional, commercial, or industrial structure, installation, or building.

4.5.13 Facility Component

Any pipe, duct, boiler, tank reactor, turbine, or furnace at or in a facility; or any structural member of a facility.

4.5.14 Friable Asbestos Material

Any material containing more than 1 percent asbestos, based on analysis using Polarized Light Microscopy, that hand pressure can crumble, pulverize or reduce to powder when dry.

4.5.15 Enclosure

An air-tight, impermeable permanent barrier around asbestos-containing material to control the release of asbestos into the air.

4.5.16 Glovebag

A manufactured plastic bag type enclosure with built-in gloves which is placed with an air-tight seal around asbestos-containing material and which permits the asbestos-containing material to be removed without releasing asbestos fibers to the atmosphere.

4.5.17 Leak-Tight

A condition whereby solids or liquids cannot escape or spill out. It also means dust-tight.

4.5.18 NESHAP

National Emission Standard for Hazardous Air Pollution.

4.5.19 Planned Renovation Operations

A renovation operation, or a number of such operations, in which the amount of friable asbestos material that will be removed or stripped within a given period of time can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operation experience.

4.5.20 Renovation

Altering in any way one or more facility components. Facility components include pipes, ducts, boilers, tanks, reactors, turbines, or furnaces at or in facilities.

4.5.21 Site/Departmental Responsible Individual(s)

That superintendent, manager, supervisor, or designee at a given plant or work center or within a given department who is responsible for work involving the handling, disturbing, or removing of asbestos.

4.5.22 Visible Emissions

Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

4.6 Responsibilities

4.6.1 Licensing Manager

Responsible for the technical adequacy of this section. Coordinates EPA/State/Local notification for facility renovation, modification, or demolition.

4.6.2 Nuclear Training Manager

Responsible for training and certification programs.

4.6.3 Plant General Manager

Ensures that work on asbestos-containing products within the protected area is conducted in accordance with approved procedures and by trained personnel.

4.6.4 Safety Staff

Responsible for monitoring work on asbestos-containing products to ensure appropriate precautions are in effect to minimize health risk.

4.6.5 Hazardous Waste Coordinator

Responsible for proper disposal of asbestos-containing material.

4.6.6 Radiation Protection Department Manager

Provides direction for the disposal of radiologically contaminated asbestos materials.

4.6.7 Maintenance Manager

1. Ensures that potential ACM is identified prior to disturbing, removing, or handling the material.
2. Ensures that each ACM removal or abatement task is supervised by an individual trained as an ACM competent person.
3. Notifies Licensing prior to any planned removal or abatement of ACM.
4. Ensures that asbestos abatement projects are carried out in compliance with applicable procedures.
5. Maintains records on asbestos abatement projects under his/her responsibility.
6. Ensures newly installed nonasbestos insulation is labeled in accordance with the station labeling program, procedure SM 7.2.
7. Ensures that work on asbestos-containing products outside the protected area, and off site, within FPLE Seabrook's jurisdiction, is conducted in accordance with approved procedures and by trained personnel.

4.7 Precautions

1. Material within a plant or facility that may contain asbestos shall be handled as asbestos until test results are known.
2. Contact the safety staff prior to handling any material that may contain asbestos.

4.8 Requirements

4.8.1 Labeling

1. Asbestos-containing transit/hardboard and specific asbestos-containing wiring, where possible, shall be labeled as follows:

**CAUTION
ASBESTOS HAZARD
DO NOT DISTURB WITHOUT
PROPER TRAINING AND EQUIPMENT**

2. Seabrook Station policy prohibits the use of asbestos containing material for pipe and equipment thermal insulation. All additions or modifications to site systems and equipment insulation must conform with this requirement or be labeled accordingly.

4.8.2 Notification Requirements

1. Planned demolitions, renovations and removal/abatement of ACM require 10-day advance notification to federal, state and local agencies. The EPA notification form is shown in Figure 2-4-4. State and local notification can be made by submitting a copy of the notification form to NHDES Air Resources Division and the Town of Seabrook Building and Health Department. When multiple demolition or renovation projects are planned for a calendar year, the advance notification may be made to EPA and NHDES 10-days before the start of the calendar year. This notification must include the planned work scope. Follow-up notifications must be made prior to the start of each demolition or renovation activity in the scope of work. Demolition and renovation activities not identified within this work scope remain subject to the 10-day advanced notification requirement.
2. EPA requires advance notification of renovation when the cumulative amount of ACM to be removed is equal to or greater than 260 linear feet, or 160 square feet or 35 cubic feet. EPA also requires advance notification whenever a building or structure will be demolished, even if there is no ACM present. Contact the Safety Staff prior to any demolition, dismantlement or renovation activities so that a site inspection for the presence of asbestos can be made.
3. The NHDES - Air Resources Division must be notified prior to asbestos abatement work when the amount of ACM is greater than 10 linear feet for piping or 25 square feet or 3 cubic feet for other components.

4. A site safety and contingency plan (including the elements listed below) is required to be submitted to the NHDES at least 30 days prior to initiation of work which has the potential to cause fugitive emissions at an asbestos waste site as defined by Env-Wm 102.17.
 - a. Identification by type, condition, and quantity of the asbestos
 - b. A physical description of the work area
 - c. A zone delineation and site security plan
 - d. An air monitoring plan in accordance with 29 CFR 1926.58 and 40 CFR 61 Subpart M
 - e. A description of the local exhaust ventilation systems to be used
 - f. A description of the methods to be used to remove the asbestos waste
 - g. The wetting agent to be used
 - h. Labeling procedures in accordance with 40 CFR 61 Subpart M
 - i. A transportation plan
 - j. A disposal plan
 - k. A description of the encapsulant or sealant to be used at the end of the removal work
 - l. A personnel protection plan in conformance with the requirements set forth in 29 CFR 1910.120 and 29 CFR 1926.58
 - m. A description of work site practices within zones identified in step 4c of this section
 - n. A plan for specialized personnel training in accordance with 29 CFR 1926.58 and 29 CFR 1910.120
 - o. Verification of completion of EPA personnel protection and safety course 165.2 as set forth in 29 CFR 1910.120(e)(2) or its equivalent by the lead person performing site characterization work
 - p. Location drawings of all known asbestos which will not be disturbed during the proposed work
 - q. As-built drawings certified by a qualified professional engineer indicating the location of all remaining asbestos material which meet the requirements of Env-Wm 300

5. Planned Removal or Demolition - Internal Notification

Notify Licensing as soon as any planned removal or demolition is identified.

6. Planned Removal or Demolition - External Notification

- a. Licensing will make external notification to the appropriate agencies.
- b. For projects performed by outside contractors, the requirements to notify federal and/or state agencies should be incorporated into the contractor's scope of work, with the additional requirement to submit a copy of such documents to the responsible site person. The responsible site person must verify contractor notification in a timely manner and forward a copy of the correspondence to Licensing for additional distribution and retention.
- c. Notification agencies include the following:

U.S. EPA Region 1
Demo/Reno Clerk (APC-2311)
JFK Federal Building
Boston, MA 02203

NH Department of Environmental Services
Air Resources Division
64 North Main St.
Concord, NH 03302-2033
Attn: Mr. Steve Cullinane

Town of Seabrook
Department of Buildings and Health
P. O. Box 456
99 Lafayette Road
Seabrook, NH 03874

7. Unplanned Removals or Demolition - Emergency Notification

- a. Emergency removals of ACM are defined as those removals necessary as the result of a sudden unexpected event (see §4.5, definition of "emergency asbestos abatement project"). Notify Licensing immediately upon determination of an emergency removal of ACM. Licensing will notify appropriate federal/state/local agencies.
- b. New Hampshire regulations require that the written notification be postmarked within 48 hours after the start of the removal work.
- c. The EPA must be notified by telephone immediately of an emergency building demolition or renovation. Written notification must be postmarked or delivered no later than the following work day.

8. Rescheduled Removal or Demolition - Renotification

When dates of removal or demolition need to be rescheduled, renotification of appropriate federal/state/local agencies is necessary. Licensing will notify appropriate federal/state/local agencies.

4.8.3 Recordkeeping Requirements

1. New Hampshire regulations require that specific records concerning ACM removal be kept.
2. The records shall be kept on site and be retained for 30 years.
3. When the removal work is performed by an outside contractor, it is the contractor's responsibility to complete the records and provide the site responsible person with a copy of the information. The company's site responsible person shall ensure that all pertinent contractor records are obtained and kept on site.
4. When the removal work is performed by in-house personnel, the site responsible person must record this information.
5. DES regulations require that the following information be retained at a central location:
 - a. A list of all certified/trained employees including dates of employment.
 - b. Copies of all correspondence with regulatory agencies.
 - c. Verification of ACM disposal including amounts and locations.
 - d. Copies of results of personnel and workplace exposure monitoring.
6. DES requires the retention of any records required by OSHA, specifically in accordance with 29 CFR 1926.58. The information required by OSHA is similar to the DES requirements. The exception is that OSHA requires that a record be kept for each employee subject to the medical surveillance requirements of OSHA. For confidentiality reasons, these records are maintained by the Medical Staff. Any questions on this subject should be directed to the Medical Staff. Employee training records must be kept for 1 year after the employee has left the company.
7. The following must be readily available on site during the project:
 - a. A current copy of DES regulations covering work practice requirements.
 - b. A list of employees working on the removal (the list must include social security number and DES certification number).
 - c. Project air monitoring results.
 - d. A sign-in/sign-out log of work area.

- e. Copies of the procedures for the use of the decontamination enclosure system (ENV-A1805.05) or any other procedures which have been established to prevent contamination of areas outside the work area.
 - f. Emergency action plan.
8. In addition to these required records the following, if available, should be retained:
- a. Material Safety Data Sheet (MSDS) for asbestos
 - b. Bulk sample results
 - c. Before and after project photographs

4.8.4 Safety and Health Controls

Safety and health controls shall be implemented in accordance with the Safety and Health Manual (NASH).

4.8.5 Employee Training and Certification

- 1. Employees required to work with asbestos or who may be exposed above the action level must receive asbestos training in accordance with NESHAP, OSHA and state standards (see the Safety and Health Manual).
- 2. The Maintenance Manager shall ensure that all asbestos workers receive the required training and ensure that training records are maintained locally.
- 3. Every renovation project must have at least one onsite management level person who has received training on the NESHAP provisions and methods for complying with them.
- 4. The Maintenance Manager is responsible for ensuring New Hampshire DES asbestos worker certificates are obtained.

4.8.6 Emission Controls

- 1. NESHAP requires that as much asbestos-containing material as possible be removed before doing any work on facility components that would serve to break up, disturb or preclude access to material for subsequent removal of asbestos-containing materials. Regulated asbestos-containing materials need not be removed if the following conditions are met:
 - a. It is Category I nonfriable asbestos (packings, gaskets, resilient floor covering, and asphalt roofing containing more than 1% asbestos) material that is not in poor condition and is not friable.
 - b. It is on a facility component that is encased in concrete or other similar hard material and is adequately wet whenever exposed during demolition.

- c. It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed asbestos must be treated as asbestos-containing waste material and adequately wet at all times until disposed.
 - d. They are Category II nonfriable asbestos-containing material (materials exclusive of Category I asbestos containing more than 1% asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure) and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.
2. The "competent" job supervisor shall ensure that the appropriate asbestos tent containment and engineering controls including HEPA ventilation and wet methods are implemented to ensure "no visible asbestos emissions to the environment" during the asbestos work as required by the NESHAP regulations. In addition, a competent person must be present during demolition of any building structure to ensure compliance with EPA Standards.
 3. Waste water generated during asbestos abatement shall be HEPA filtered prior to discharge. The filters shall then be disposed of as asbestos waste.
 4. Friable asbestos waste must be transported to the ground via dust-tight chutes or containers if they have been removed or stripped more than 50 feet above ground level.
 5. Where damage to pipe covering and boiler jackets is limited, the easiest abatement method is repair.
 6. Plastering these openings with nonasbestos materials can be done to restore open joints, damaged areas, or areas around valves and flanges.
 7. Duct tape should not be used as a long-term solution since it becomes brittle after exposure to high temperatures.
 8. Where large portions of the material must be removed, containment barriers or glovebags should be used.

4.8.7 Abatement and Removal Options

Abatement and removal options are defined in the NASH or are provided by the Safety Staff for each activity.

4.8.8 Asbestos Disposal

Asbestos must be disposed of at state or federal authorized facilities. The contracted abatement services or the Hazardous Waste Coordinator arranges for appropriate transportation and disposal.

- Radioactively Contaminated Asbestos

Notify the Radwaste Department Supervisor as soon as possible (30 days if possible) prior to the removal process to determine and schedule the appropriate shipping containers necessary to support the work. The Radwaste Department Supervisor will be responsible for coordinating the packaging and shipping the radioactively contaminated asbestos off site for processing or for onsite storage.

- Nonradioactive Asbestos

The instructions for the disposal of nonradioactive asbestos are contained in the NASH or are provided by the Safety Staff.

4.8.9 Transportation of Asbestos

See Chapter 3 for information on transporting DOT hazardous materials.

4.8.10 Contractors

1. All asbestos abatement contractors must be licensed/certified according to applicable state DES regulations.
2. Asbestos abatement contractors are responsible for complying with all state and federal regulations concerning asbestos abatement, transportation, and disposal.
3. The department responsible for administering the asbestos abatement contract shall monitor contractor compliance.

4.8.11 Spills/Releases to the Environment

1. Under the authority of CERCLA, EPA lists asbestos as a "Hazardous Substance." CERCLA provisions do not apply unless asbestos is released into the ambient air or environment (air, water, land) outside a building. As a Clean Water Act pollutant, asbestos is also subject to reporting when one pound of asbestos is released into waterways.
2. FPLE Seabrook must report to EPA's CERCLA National Response Center whenever one pound of friable asbestos is released to the environment. A spill of one pound or more of asbestos shall be immediately reported to the following agencies:

NOTE

The reporting requirement is based on the amount of asbestos, not weight of the asbestos-containing material, released.

- a. New Hampshire Department of Safety Hazardous Material Team
- b. National Response Center
- c. Air Resources Division

4.8.12 Applicability of RCRA Disposal Requirements to Asbestos Wastes

NHDES regulates asbestos waste as a solid (non-hazardous) waste. Should asbestos become mixed with or contaminated by a hazardous waste or exposed to hazardous material (i.e., lead), RCRA hazardous waste disposal requirements are applicable. Consult the Hazardous Waste Coordinator for appropriate disposal.

Figure 2-4-1
Summary of Agencies That Regulate Asbestos

Agency - Regulation

Responsibility

Federal

Occupational Safety and Health
Administration (OSHA)

29 CFR 1910.1001

Standards to protect employees from asbestos exposure in the workplace.

29 CFR 1926.58

Standards applying to construction and demolition work.

29 CFR 1910.134

Standards for the use and maintenance of respirators.

Environmental Protection
Agency (EPA)

Prevent asbestos emissions to the environment.

40 CFR Part 61 Subpart M
40 CFR Part 761 Subpart E, Appendix C
40 CFR Part 761 Subpart F, Appendix A

Control the disposal of asbestos waste.
Asbestos model accreditation plan.
Sample analysis methodology for determining asbestos content.

Department of Transportation
(DOT)

Regulate the transportation of asbestos waste.

49 CFR Part 171-177

State

RSA 141-E
New Hampshire Department of Environmental
Services (DES)
Env-A 1800
Env-Wm 2601

Asbestos management and control.
Handling transportation and disposal of asbestos waste.

New Hampshire Department of Health and Human
Services

Standards for both "certified" and non-certified work, certified work is abatement/demolition of asbestos containing material greater than 3 linear feet or 3 square feet.

He-P 5000

Figure 2-4-2
Summary of Notification Requirements
(Sheet 1 of 2)

New Hampshire

<u>Agency</u>	<u>Activity</u>	<u>ACM Limits</u>	<u>Time Requirements</u>	<u>Form Used</u>
DES	Planned Major Asbestos Abatement – Class S or Class N Renovation	Greater than 10 linear ft. or 25 square ft. or 3 cubic ft.	10 working days before removal starts.	EPA Form
	Planned Major Asbestos Abatement - Demolition	No minimum threshold applies. Notification required even when no ACM is present.	10 working days before removal starts.	EPA Form
	Planned Major Asbestos Abatement - Renovations or Demolitions for a calendar year	The same threshold values for renovations and demolitions noted above apply.	Notification 10 working days prior to the start of the calendar year with quarterly updates.	EPA Form
	Emergency Asbestos Abatement - Renovation or Demolition	For renovations, minimum threshold greater than 10 linear ft. or 25 square ft. or 3 cubic ft. For demolitions, no minimum threshold applies. Notification required even when no ACM is present.	Verbal immediately, (within 24 hours of the start of the activity) Written no later than 48 hours after the start of the activity.	EPA Form
EPA	Planned Renovation (which includes removal)	greater than 260 linear ft.,* or 160 square ft., or 35 cubic ft.	At least 10 working days before removal begins.	EPA Form

Figure 2-4-2
Summary of Notification Requirements
(Sheet 2 of 2)

<u>Agency</u>	<u>Activity</u>	<u>ACM Limits</u>	<u>Time Requirements</u>	<u>Form Used</u>
	Emergency Bldg. Demolition	No minimum ACM quantity exists.	Verbal immediately, Written no later than the next working day.	EPA Form
	Planned Building Demolition	No minimum ACM quantity exists.	10 working days before demolition begins.	EPA Form
	Planned Renovations or Demolitions for a calendar year	For renovations, the minimum threshold applies to the net amount of ACM associated with the planned activities. For demolitions, no minimum ACM quantity exists.	Notification 10 working days prior to the start of the calendar year with follow-up written notifications prior to the start of each planned activity.	EPA Form

*For figuring the amount of asbestos, it is necessary to estimate the entire amount of asbestos to be removed during the renovation project within the year.

Figure 2-4-3
Federal EPA Notification Form
(Sheet 1 of 2)

NOTIFICATION OF DEMOLITION AND RENOVATION

OPERATOR PROJECT #	POSTMARK	DATE RECEIVED	NOTIFICATION #	
I. TYPE OF NOTIFICATION (O=ORIGINAL R=REVISED C=CANCELLED):			WPR NOTICE?	
II. FACILITY INFORMATION (IDENTIFY OWNER, REMOVAL CONTRACTOR, AND OTHER OPERATOR)				
OWNER NAME:				
ADDRESS:				
CITY:	STATE:	ZIP:		
CONTACT:	TEL:			
REMOVAL CONTRACTOR:				
ADDRESS:				
CITY:	STATE:	ZIP:		
CONTACT:	TEL:			
OTHER OPERATOR:				
ADDRESS:				
CITY:	STATE:	ZIP:		
CONTACT:	TEL:			
III. TYPE OF OPERATION (D=DEMO C=ORDERED DEMO R=RENOVATION E=EMER. RENOVATION):				
IV. IS ASBESTOS PRESENT? (YES/NO)				
V. FACILITY DESCRIPTION (INCLUDE BUILDING NAME, NUMBER AND FLOOR OR ROOM NUMBER)				
BLDG. NAME:				
ADDRESS:				
CITY:	STATE:	COUNTY:		
SITE LOCATION:				
BUILDING SIZE:	NUM. OF FLOORS:	AGE IN YEARS:		
PRESENT USE:	PRIOR USE:			
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:				
VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING:		NONFRIABLE ASBESTOS MATERIAL NOT TO BE REMOVED		INDICATE UNIT OF MEASUREMENT BELOW
1. REGULATED ACM TO BE REMOVED	RACM TO BE REMOVED	CAT I	CAT II	UNIT
2. CATEGORY I ACM NOT REMOVED				
3. CATEGORY II ACM NOT REMOVED				
PIPES				Ln Ft: Ln m:
SURFACE AREA				Sq Ft: Sq m:
VOL RACM OFF FACILITY COMPONENT				Cu Ft: Cu m:
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) START:			COMPLETE:	
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) START:			COMPLETE:	

Continued on page 2

Figure 2-4-3
Federal EPA Notification Form
(Sheet 2 of 2)

NOTIFICATION OF DEMOLITION AND RENOVATION (continued)

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED		
XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:		
XII. WASTE TRANSPORTER #1		
NAME:		
ADDRESS:		
CITY:	STATE:	ZIP:
CONTACT PERSON:		TELEPHONE:
WASTE TRANSPORTER #2		
NAME:		
ADDRESS:		
CITY:	STATE:	ZIP:
CONTACT PERSON:		TELEPHONE:
XIII. WASTE DISPOSAL SITE		
NAME:		
LOCATION:		
CITY:	STATE:	ZIP:
TELEPHONE:		
XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:		
NAME:		TITLE:
AUTHORITY:		
DATE OF ORDER (MM/DD/YY):		DATE ORDERED TO BEGIN (MM/DD/YY):
XV. FOR EMERGENCY RENOVATIONS		
DATE AND HOUR OF EMERGENCY (MM/DD/YY):		
DESCRIPTION OF THE SUDDEN, UNEXPECTED EVENT:		
EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS OR WOULD CAUSE EQUIPMENT DAMAGE OR AN UNREASONABLE FINANCIAL BURDEN:		
XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER.		
XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS. (Required 1 year after promulgation)		
_____ (Signature of Owner/Operator)		_____ (Date)
XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.		
_____ (Signature of Owner/Operator)		_____ (Date)

5.0 MANAGEMENT OF VOLATILE ORGANIC COMPOUNDS

5.1 Purpose

This section specifies requirements to control the release of volatile organic compounds (VOCs). Requirements are provided for parts cleaning, painting operations and gasoline dispensing.

5.2 References

1. NHDES Code of Administrative Rules, Chapter Env-A 1204-1205
2. NHDES Gasoline Vapor Recovery Testing Procedures and Inspection Manual

5.3 Definitions

5.3.1 Freeboard Height

The distance from the liquid solvent in the degreaser tank to the lip of the tank.

5.3.2 Freeboard Ratio

The freeboard height divided by the smaller interior dimension (length, width or diameter) of the degreaser.

5.3.3 VOCs

Any chemical compound or mixture of chemical compounds containing the element carbon, but not containing carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, carbides or ammonium carbonate. VOCs include, but are not limited to, petroleum crudes, petroleum fractions, petrochemicals, solvents, diluents, thinners, degreasing agents, and propellants. See Env-A 101.170.

The following organic compounds are not included in the definition of VOCs because they have a negligible photochemical reactivity:

- Methane
- Ethane
- Methylene Chloride (dichloromethane)
- 1,1,1-trichloroethane (methyl chloroform)
- 1,1,1-trichloro-2,2,2-trifluoroethane (CFC-113)
- trichlorofluoromethane (CFC-11)
- dichlorodifluoromethane (CFC-12)
- chlorodifluoromethane (CFC-22)
- trifluoromethane (FC-23)
- 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114)
- chloropentafluoroethane (CFC-115)
- 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123)
- 1,1,1,2-tetrafluoroethane (HFC-134a)
- 1,1-dichloro 1-fluoroethane (HCFC-141b)

- 1-chloro 1,1-difluoroethane (HCFC-142b)
- 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124)
- pentafluoroethane (HFC-125)
- 1,1,2,2-tetrafluoroethane (HFC-134)
- 1,1,1-trifluoroethane (HFC-143a)
- 1,1-difluoroethane (HFC-152a)
- 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)
- 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)
- 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee)
- perchlorethylene, also known as tetrachloroethylene difluormethane (HFC-32)
- ethylfluoride (HFC-161)
- 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)
- 1,1,2,2,3-pentafluoropropane (HFC-245ca)
- 1,1,2,3,3-pentafluoropropane (HFC-245ea)
- 1,1,1,2,3-pentafluoropropane (HFC-245eb)
- 1,1,1,3,3-pentafluoropropane (HFC-245fa)
- 1,1,1,2,3,3-hexafluoropropane (HFC-236ea)
- 1,1,1,3,3-pentafluorobutane (HFC-365mfc)
- chlorofluoromethane (HCFC-31)
- 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)
- 1-chloro-1-fluoroethane (HCFC-151a)
- 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane (C4F9OCH3)
- 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane (CF3)2CFCF2OCH3
- 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C4F9OC2H5)
- 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane (CF3)2CFCF2OC2H5

Perfluorocarbon compounds which fall into these classes:

- (i) Cyclic, branched, or linear, completely fluorinated alkanes.
- (ii) Cyclic, branched or linear, completely fluorinated ethers with no unsaturations.
- (iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations.
- (iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

5.3.4 Theoretical Potential to Emit

The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is federally enforceable, i.e., a specified permit condition.

5.3.5 Stage I

Gasoline vapor recovery during transfer of gasoline into stationary tanks at gasoline dispensing facilities.

5.3.6 Stage II

Gasoline vapor recovery during motor vehicle refueling operations from stationary tanks at gasoline dispensing facilities.

5.3.7 CARB Certified Vapor Recovery System

A vapor recovery system that has been certified by the California State Air Resources Board (CARB) pursuant to Section 41954 of the California Health and Safety Code.

5.4 **Responsibilities**

5.4.1 Maintenance Manager

1. Responsible for maintenance and inspection of Stage I/II vapor recovery system.
2. Responsible for recordkeeping association with the gasoline dispensing station.

5.5 **Requirements**

5.5.1 Parts Cleaning

Parts cleaning/degreasing units currently in use at Seabrook Station do not use VOC-based solvents. Any introduction of alternative cleaning solutions shall be identified to Regulatory Compliance through the Expendable Products review program.

5.5.2 Paint Shops

Painting operations at Seabrook Station are performed for the purpose of equipment or architectural maintenance and have aggregate emissions of less than 5 tons per year. These activities are considered to be non-core activities, as defined in NHAR Env-A 1204.03(ba) and are not subject to reasonably available control technology (RACT) requirements for stationary sources of VOCs. They are considered to be exempt activities under the provisions of Env-A 609.03(c)(5) and Env-A 609.03(c)(9); therefore, they are not included in the Title V Operating Permit and are not subject to emission-based fees.

5.5.3 Gasoline Dispensing

Volatile Organic Compounds (VOCs) present in gasoline vapors are subject to emission control requirements specified in NHAR Env-A 1205. At Seabrook Station, gasoline storage and dispensing facilities are located on the north side of the Equipment Maintenance Shop. The tank and dispensing station are equipped with Stage I and Stage II vapor recovery systems designed to prevent gasoline vapor emissions during tank filling and gasoline dispensing activities. The following requirements/controls apply:

1. No person shall transfer or allow the transfer of gasoline into stationary tanks at a gasoline dispensing facility unless a CARB certified Stage I vapor recovery system is used. All Stage I vapor recovery systems shall be equipped with a submerged fill pipe.
2. All Stage I/II vapor recovery systems at gasoline dispensing facilities installed on or after November 15, 1992 shall be CARB certified equipment. All systems shall recover at least 95% of gasoline vapors or the manufacturer's design efficiency, whichever is higher. This standard shall apply to each stationary tank during each bulk gasoline delivery.
3. Each vent on above-ground gasoline storage tanks shall be equipped with a UL approved pressure relief valve. Pressure relief shall be set to either a pressure within 10% of the maximum allowable working pressure of the tank, or at least 25.8 mm Hg (0.5 psig).
4. All Stage I/II vapor recovery equipment shall be maintained, at all times, to be properly operating, as specified by the manufacturer, as of the date of installation.
5. All Stage I/II vapor recovery equipment, except UL approved pressure relief valves, shall be maintained to be leak free and vapor tight. As part of the maintenance requirements, the owner or operator of the gasoline dispensing facility shall conduct a daily inspection of the facility, which shall include a visual inspection of all vapor recovery components. Any equipment having a defect, as defined by the CARB inspection criteria, shall be tagged "Out of Order." No person shall use or permit the use of such marked system or component until it has been repaired, replaced, or adjusted, as necessary. The owner or operator shall give notice to the division within 8 hours of such repair, replacement or adjustment of tagged defective systems or components, stating the anticipated date of the resumption of operations.
6. All Stage I/II vapor recovery systems shall have devices which prevent the flow of product until vapor recovery equipment is in place and operational. Seabrook Station utilizes a Stage I coaxial system equipped with an interlock protection mechanism for the storage tank, and a Healy Stage II vapor recovery system for the gasoline dispenser.
7. Gasoline at dispensing facilities shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation into the atmosphere.
8. No person shall transfer or allow the transfer of gasoline from stationary tanks into gasoline tank trucks unless a vapor recovery system that collects 95% of gasoline vapors is used and is operating properly.
9. All gasoline dispensing facilities shall notify the NHDES Air Resources Division, in writing, at least 60 days prior to construction, installation of, or major modification to Stage I or Stage II controls. Notification will be made on a NHDES-approved form and include the required notification fee.

10. Vapor recovery systems shall be maintained, inspected and tested in accordance with the manufacturer's CARB certification. Stage II vapor recovery systems shall be retested at three-year intervals, within 90 days prior to the expiration date of the certification of compliance issued by NHDES.
11. The following records shall be maintained on the premises:
 - a. Record of installation.
 - b. All information pertinent to the proper installation, operation and use of gasoline vapor recovery equipment and NHDES procedures.
 - c. The quantity of all gasoline delivered to the site, for the most recent 3 years.
 - d. All information pertinent to equipment failures, repairs and maintenance, for the most recent 3 years.
 - e. Notification of compliance including the most recent results of the dynamic pressure test, and leak test, and liquid blockage test.
 - f. All NHDES correspondence including evidence of payment of notification, enforcement and renewal fees.
12. Access to records shall be furnished to NHDES or the EPA upon request.

6.0 SF₆ EMISSION REDUCTION PROGRAM

6.1 Purpose

As part of its corporate commitment to pollution prevention and environmental stewardship, FPLE Seabrook has entered into the SF₆ Emissions Reduction Partnership for Electric Power Systems. This is a voluntary and cooperative agreement between FPLE Seabrook, the EPA and other utility and non-utility organizations to take proactive steps toward reducing emissions of sulfur hexafluoride gas to the atmosphere. Sulfur hexafluoride (SF₆) emissions are recognized as a contributing cause of global warming. This section outlines SF₆ management, recordkeeping and reporting requirements under this program.

6.2 Overview

1. Sulfur hexafluoride (SF₆) is recognized as a "greenhouse gas" which, along with other gases such as carbon dioxide, methane, and nitrous oxide, contributes to global warming. SF₆ is the least prevalent of the greenhouse gases in the atmosphere; however, it is very effective in reflecting infrared radiation back to earth and heating the surface.
2. SF₆ is used for electrical insulation and for arc quenching and current interruption in equipment used in the transmission and distribution of electricity. At Seabrook, this gas is contained in the 345-kV switchyard breakers and bus ducts. The total system SF₆ inventory is 42,351 lbs.
3. SF₆ emissions from electric power systems are the result of unavoidable releases from properly functioning equipment (due to static and dynamic operation) and from leakage (e.g., due to old and/or deteriorated gaskets or seals). Additionally, emissions may occur when gas is either transferred into equipment or extracted from it for disposal, recycling, or storage.
4. Emissions of SF₆ are not currently subject to federal regulations. Emissions are regulated under NH Air Toxic rules and are subject to emission inventory reporting requirements under the facility Title-V Permit.

6.3 Applicability

In accordance with the FPLE Seabrook Policy Statement, programs will be implemented to accomplish the following objectives to the degree technically and economically feasible:

- To recycle (recover and reuse) SF₆.
- To establish a maintenance program for equipment with a goal of reducing emissions.
- To implement a strategy for replacement of SF₆ equipment that leaks to such an extent that leakage cannot be controlled through normal maintenance procedures.
- To purchase and use equipment that eliminates or reduces the possibility of SF₆ leaks.
- To promote the development of innovative technologies and information exchange within utility and non-utility sectors to further reduce SF₆ emissions.

6.4 References

1. January, 2003, Reduction of the Emission of Sulfur Hexafluoride (SF₆) Gas, Memorandum of Understanding Between the United States Environmental Protection Agency and FPL Energy Seabrook, LLC.
2. FPLE Seabrook Environmental Policy Statement (Figure 2-6-1)
3. NH Env-A 1400 Regulated Toxic Air Pollutants

6.5 Responsibilities

6.5.1 Licensing Manager

Responsible for emission inventory record-keeping and reporting.

6.5.2 Maintenance Manager

Ensures annual emission reduction goals are reached through planned maintenance activities and system surveillance activities.

6.5.3 Director of Engineering

Ensures design modifications are developed for emission reductions, to the extent technically and economically feasible.

6.6 Requirements

6.6.1 Recordkeeping

1. Records of all maintenance activities and design modifications associated with the 345-kV electrical distribution system insulating gas pressure boundary shall be maintained.
2. Surveillance records for the 345-kV distribution system involving SF₆ pressure monitoring, leak detection and makeup shall be maintained.
3. Inventory records for purchase and issue of SF₆ gas shall be maintained.
4. Records of any returns, transfers or disposal of SF₆ gas to off-site facilities for recycling, re-use or disposal shall be maintained.

6.6.2 Reporting

1. Annual reports documenting the changes in SF₆ inventory, emissions and management practices shall be reported annually to the EPA by March 30.
2. Emission reduction goals for each year shall be established and reported to EPA by March 30. Any subsequent changes to these goals shall be reported as needed.

6.6.3 Training

Only trained and knowledgeable personnel are authorized to handle SF₆ gas and related equipment. Any work performed by outside contractors shall be in accordance with FPLE Seabrook approved procedures.

Figure 2-6-1
FPLE Seabrook
Environmental Policy Statement
SF₆ Management

Overview

In support of FPLE Seabrook's commitment to pollution prevention and protecting the environment, Seabrook Station adopts the following policy to address the issue of global warming. FPLE Seabrook has entered a voluntary partnership with the Environmental Protection Agency, along with many other members of the utility and industrial community, in an effort to reduce emissions of sulfur hexafluoride, which contribute to this condition. In keeping with the corporate objectives outlined under this policy, FPLE Seabrook will implement appropriate actions to reduce emissions contributing to global warming.

Policy Statement

FPLE Seabrook will develop, adopt and implement appropriate programs and standards to minimize any contribution to the effects of global warming. Sulfur hexafluoride gas is used extensively in Seabrook Station's electrical distribution equipment, and due to its high global warming potential (GWP) of 22,000 times that of carbon dioxide, it is prudent that emissions be kept as low as reasonably achievable. Programs will be implemented to accomplish the following objectives to the degree technically and economically feasible:

- To recycle (recover and reuse) SF₆.
- To establish a maintenance program for equipment with a goal of reducing emissions.
- To implement a strategy for replacement of SF₆ equipment that leaks to such an extent that leakage cannot be controlled through normal maintenance procedures.
- To purchase and use equipment that eliminates or reduces the possibility of SF₆ leaks.
- To promote the development of innovative technologies and information exchange within utility and non-utility sectors to further reduce SF₆ emissions.

This policy supports the corporate objective of minimizing pollution and is implemented in voluntary cooperation with federal and state regulatory agencies.

(signature on file)

Mark E. Warner
Site Vice President

7.0 SUMMARY OF CHANGES

Rev. 39:

Throughout chapter, changed Regulatory Compliance Supervisor and Regulatory Programs Manager to Licensing Manager and Regulatory Compliance to Licensing.

Rev. 38:

Throughout §2.0, updated references to reflect current regulations.

In §2.4, added SEPS engines and deleted fire pumphouse diesels and the vehicle maintenance shop storage tanks in accordance with current permit.

In §2.5, deleted outdated references.

In §2.8, added reference to §2.11.

Changed §2.9 to reflect record keeping requirements of current permit.

Added new §2.10, Reporting Requirements, and stated that reporting requirements are located in the NARC.

Revised §2.11 to reflect the devices listed in the current permit.

Rev. 33 through Rev. 37:

This section was unaffected by these revisions to the manual.

Rev. 32:

Deleted Director of Support Services.

Elimination of NU references.

Identified replacement of Atlas Copco Air Compressor with Sullair Air Compressor.

Rev. 30 and 31:

This chapter was unaffected by these revisions to the manual.

Rev. 29:

Updated position titles.

Rev. 28:

In §6.0 updated position title, company name and references to reflect transfer of plant ownership.

Rev. 24 through 27:

This chapter was unaffected by these revisions to the manual.

Rev. 23:

In §2.1 added reference to Appendix D.

In §2.3 added references to federal and state statutes.

In §2.4 added step 2 on insignificant emission sources that are subject to state recordkeeping and reporting requirements.

In §2.5 deleted old reference 1, renumbered and added new reference 3.

Added §2.6.8, Modification, as a definition.

In §2.10.2 added GOB Diesel Generator (68-999).

In §3.6.10 added step 7 on use of CFCs in laboratory applications (CR 02-01981).

In §4.4 added references 8 and 9 on state regulations.

In §5.5.3, Gasoline Dispensing, changed the requirements for stage 2 vapor recovery systems.

Rev. 22:

This chapter was unaffected by this revision to the manual.

Rev. 21:

Throughout the chapter updated position title.

Added new §6.0, SF₆ Emission Reduction Program, and renumbered subsequent sections.

8.0 CHAPTER 2 NAEC FORMS

Reproducible copies of the following NAEC FORMs for Chapter 2 are included in this section:

		<u>REV.</u>
NAEC FORM 2-3A	DOCUMENTATION OF REMOVAL OF REFRIGERANT AND REFRIGERANT CONTAMINATED OIL	32
NAEC FORM 2-4A	ASBESTOS CHAIN OF CUSTODY RECORD	17

1.0 MANAGING SOLID, HAZARDOUS, AND MIXED WASTE

1.1 Purpose

This section provides NextEra Energy Seabrook's policies and responsibilities for the management of solid, hazardous, and mixed waste in accordance with Federal, State, and local environmental regulations. Additionally, this section identifies those programs, practices, and procedures necessary to reduce waste and reuse or recycle products in order to minimize solid and hazardous waste and comply with Seabrook Station's Environmental Policy.

1.2 Applicability

This procedure applies to those at Seabrook Station who may generate or manage hazardous waste.

1.3 References

1. New Hampshire Hazardous Waste Rules Env-Wm
2. EPA 40 CFR 260 - 272
3. EPA Waste Minimization Policy Guidance
4. Licensing Department Instructions
5. Hazardous Waste Instructions
6. Expendable Products Control Manual (NAEP)
7. Seabrook Station Environmental Policy
8. EPA Policy Statements on Extension of the Enforcement of RCRA Section 3004(j), Storage Prohibition at Facilities Generating Hazardous Waste, dated April 26 1996 and April 9, 1998
9. JD0999.914, Handling of Used Chemicals in the RCA

1.4 Definitions

1.4.1 Asbestos Waste

Solid waste that contains more than one percent asbestos by weight. This waste may be considered friable asbestos which is any material that contains more than one percent asbestos by weight and can be or has a high probability of being crumbled, pulverized or reduced to powder by hand pressure in accordance with 40 CFR 61.

1.4.2 Ash

Ash residue from the combustion of solid waste, fossil fuel, or sludge in an incinerator that is either entrained in the gas stream of the incinerator and removed by the air pollution control equipment (fly ash) or that is discharged through and from the grates, combustor, or stoker (bottom ash).

1.4.3 Bulky Waste

Large items that cannot be handled by normal solid waste processing, collection, or disposal methods, such as appliances, furniture, large auto parts, tires, and tree stumps when they are not buried on site in accordance with state law.

1.4.4 Construction and Demolition Debris

Non-putrescible waste building materials and rubble which is solid waste resulting from the construction, remodeling, repair, or demolition of structures or roads. Such waste includes, but is not limited to: bricks, concrete and other masonry materials, wood, wall coverings, plaster, drywall, plumbing, fixtures, non-asbestos insulation or roofing shingles, asphalt pavement, glass, plastics that are not sealed in a manner that conceals other wastes, electrical wiring, and components containing no hazardous liquid and metals that are incidental to any of the above. Solid waste that is not construction and demolition debris, even if resulting from construction, remodeling, repair, and demolition of structures, roads, and land clearing, includes, but is not limited to: asbestos waste, garbage, corrugated container board, electrical fixtures containing hazardous liquids such as fluorescent light ballasts or transformers, carpeting, furniture, appliances, tires, drums, containers, and fuel tanks.

1.4.5 Hazardous Waste

A solid waste which because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes contain those materials identified in subpart D of 40 CFR 161 or exhibit any of the characteristics (ignitability, corrosivity, reactivity, and toxicity) defined in subpart C of 40 CFR 261.

1.4.6 Infectious Waste

Any waste which because of its infectious nature may pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

1.4.7 Mixed Waste

The Resource Conservation and Recovery Act (RCRA) defines mixed waste as waste that contains both a hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954. For purposes of this section, mixed waste shall mean waste that contains low-level radioactive waste and hazardous waste.

1.4.8 Motor Oil

Motor, engine, and gear oils and transmission and brake fluids.

1.4.9 Motor Vehicle Waste

Used motor oil, motor vehicle batteries, and tires from motorized vehicles.

1.4.10 Putrescible Material

Any organic material which can decompose and give rise to foul smells and noxious by-products.

1.4.11 Radioactive Material

By-product, source, or special nuclear material that is received, possessed, used, or transferred pursuant to a Nuclear Regulatory Commission or Agreement State license. It does not include naturally occurring radionuclides.

1.4.12 Recyclable Materials

Materials including separated clear and colored glass, aluminum, ferrous and nonferrous metals, plastics, corrugated cardboard, motor vehicle batteries, tires from motor vehicles, and all paper.

1.4.13 Recycling

Recycling as defined by RSA 149-M: 1, XVII, namely the collection, storage, processing, and redistribution of separated solid waste so as to return material to the marketplace.

1.4.14 Reuse

The act of placing waste into service again, subsequent to its generation, either as a material used in place of virgin material, for an alternate purpose, or for use in kind.

1.4.15 Solid Waste

Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining and agricultural activities and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point source discharges subject to permits under Section 40-2 or the Federal Water Pollution Control Act, as amended, or source, special nuclear or by-product materials as defined by the Atomic Energy Act of 1954, as amended.

1.4.16 Universal Wastes

Wastes which meet the definition of hazardous waste in the NH Hazardous Waste Rules, but which during accumulation and transport pose a relatively low risk compared to other hazardous wastes. Wastes which the NH Department of Environmental Services has determined meet universal waste criteria include antifreeze, mercury-containing lamps and devices, certain types of batteries, and recalled or suspended hazardous waste pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act.

1.5 Responsibilities

1.5.1 Licensing Manager

1. Responsible for identifying regulatory requirements and the overall compliance with the solid and hazardous regulations.
2. Ensures Seabrook Station programs, policies, and procedures exist where necessary to ensure compliance with regulations. Ensures this information is communicated to the organization.
3. Maintains records of solid and hazardous waste activities as required by the program and regulations.
4. Acts as primary contact person for federal and state regulators. Facilitates any audits and inspections for site solid and hazardous waste programs.

1.5.2 Hazardous Waste Coordinator

1. Implements and administers the Hazardous Waste Management Program.
2. Responsible for overall management of hazardous waste on site.
3. Responsible for the documentation of program deficiencies, trending program and performance indicators.
4. Provides waste documentation and data for reporting and recordkeeping purposes to ensure compliance with the regulations.
5. Acts as primary contact person for contracted hazardous waste vendors.

1.5.3 Facilities and Site Support Manager

1. Responsible for overall management of nonhazardous solid waste on site.
2. Maintains recycling containers and ensures proper accounting and segregation of waste streams.
3. Identifies training needs for Facilities and Site Support personnel.
4. Acts as primary contact for nonhazardous solid waste vendors.
5. Provides routine reports on solid waste activities.

1.5.4 All Employees

Responsible for proper on-site disposal and segregation of different types of solid waste. Comply with hazardous waste regulations in keeping with their job duties. Personnel who generate a waste must be aware of the proper disposal technique for that waste, namely the right place to put it for disposal.

1.6 Overview

The Resource Conservation and Recovery Act (RCRA) is the primary statute governing the regulation of solid and hazardous waste. It completely replaced the Solid Waste Disposal Act of 1965 and supplemented the Resource Recovery Act of 1970; RCRA itself was substantially amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA).

The principal objectives of RCRA are as follows:

- to promote the protection of human health and the environment from potential effects of improper solid and hazardous waste management
- to conserve material and energy resources through waste recycling and recovery
- to reduce or eliminate the generation of hazardous waste as expeditiously as possible

In order to achieve these objectives, RCRA authorizes the Environmental Protection Agency (EPA) to regulate the generation, treatment, storage, transportation, and disposal of hazardous wastes. The EPA has set forth these regulations in 40 CFR Parts 260 through 272. The core of the RCRA regulations establishes the "cradle to grave" hazardous waste regulatory program through the major sets of regulations described below. The EPA has delegated the responsibility of managing the State of New Hampshire hazardous waste program to the New Hampshire Department of Environmental Services Waste Management Division.

NextEra Energy Seabrook is classified as a Large Quantity generator of hazardous waste in the State of New Hampshire as the waste generation rate is greater than 1000 kg of hazardous waste in any given calendar month. NextEra Energy Seabrook is required to meet all training, reporting, recordkeeping, accumulation, storage, and manifesting requirements under the hazardous waste regulations for large quantity generators.

1.7 General Requirements

1.7.1 Waste Minimization

1. Waste Minimization Program

Section 3002 (b) of the Resource Conservation and Recovery Act requires generators of hazardous waste to certify on their hazardous waste manifests that they have a waste minimization program in place. A waste minimization program should establish source reduction or elimination as a priority over the management of wastes after they are generated. This strategy reduces or eliminates the generation of environmentally harmful pollutants, which may be released to the air, land, surface water or ground water. Whenever pollutants cannot be prevented, they should be recycled in an environmentally safe manner. Pollutants that cannot be prevented or recycled should be treated in an environmentally safe manner, with the last resort being disposal or otherwise release to the environment.

The EPA's "Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program," *Federal Register*, March 28, 1993, recommends that a waste minimization program should incorporate the following basic elements:

- a. Top management support
 - b. Characterization of waste generation and waste management costs
 - c. Periodic waste minimization assessments
 - d. Appropriate cost allocation
 - e. Encouragement of technology transfer
 - f. Program implementation and evaluation
2. Top Management Support

Top management support is necessary for the success of an organization's waste minimization effort.

Seabrook Station's Executive Management sets forth the expectations and priorities for the conduct of work at Seabrook Station in the Strategic Business Plans.

3. Characterization

Identification is the first step in properly managing wastes at any facility. The waste must first be classified as a solid waste. It must then be determined if the waste meets the definition of a hazardous waste. An accounting system to track the types and amounts of waste generated is a necessary component in any waste minimization program.

Seabrook Station currently tracks and measures all hazardous and radioactive waste generation. Future enhancements in waste tracking will facilitate meeting this element of the waste minimization program and allow for the tracking of all waste streams.

4. Waste Minimization Assessments

Waste minimization assessments identify the sources of waste and identify alternative management practices. Waste stream measurements and assessments are performed in order to identify and prioritize waste minimization opportunities. Based on hazards, costs, and liabilities, each waste stream is prioritized for review and options for management identified. The assessment includes technical feasibility of alternatives, costs, effectiveness, and regulatory burden.

5. Cost Allocation

Cost allocation is necessary to identify opportunities for waste minimization and cost saving opportunities. The cost of waste generation and management should be directly attributed to the activity responsible for generating the waste.

Future enhancements in waste tracking will facilitate meeting this element of the program.

6. Encouragement of technology transfer

Seeking and exchanging of technical information on waste minimization is encouraged and may be accomplished through benchmarking activities and association with trade or professional organizations.

7. Program implementation and evaluation

Seabrook Station's waste minimization program focuses on source reduction and recycling. Waste streams are reviewed to determine if they can be reduced or eliminated. Waste streams include solid, hazardous, and radioactive waste and discharges to land, air and water.

Seabrook station implements and evaluates the waste minimization program through a variety of programs and employee training.

- a. The Non-Radiological Environmental Impact Review Program requires changes to the plant design and other site-wide activities to be assessed for environmental impacts including the use of chemicals, discharges to water, and discharges to air.
- b. Expendable Products Control Program establishes the controls necessary to protect station systems, structures, and components from damage due to improper application of chemical or expendable products. The program also imposes sufficient controls for personnel protection and waste minimization. The potential for the generation of a hazardous waste is reviewed and alternative products are recommended when appropriate.
- c. The Station Spill Prevention Control and Countermeasure (SPCC) Plan in conjunction with Spill Response Procedure ON1244.01 provides for the prevention and minimization of pollution to the environment.
- d. The Storm Water Pollution Prevention Plan (SWPPP) identifies the potential storm water pollution sources on site and describes best management practices to prevent or minimize the potential for storm water pollution.
- e. Seabrook Station recycles solid waste as described in Environmental Compliance Manual (NAEC), Chapter 3.

- f. General Employee Training for all employees includes waste minimization, chemical use, and expendable product control. In addition, all NextEra Energy Seabrook employees have received Environmental Impact and Awareness Training.
- g. Radiation Worker Training for all employees who access the radiologically controlled area includes requirements and guidance for minimizing radioactive waste.
- h. Performance Indicators are used to track the status of various elements of the waste minimization program.
- i. Periodic assessments of waste minimization are scheduled and performed in accordance with the fleet procedure on self-assessments.

1.7.2 Waste Identification

Identification is the first step in properly managing wastes at this facility. The waste must first be classified as a solid waste. It must then be determined if the waste meets the definition of a hazardous waste. Any personnel who generate a waste must be aware of the proper disposal technique for that waste, namely the right place to put it for disposal. If any doubt exists about the proper identification and disposal methods, contact the Facilities and Site Support Manager for solid waste or the Hazardous Waste Coordinator for hazardous waste.

1.7.3 Waste Stream Measurements and Assessments

Waste stream measurements and assessments can be performed in order to identify and prioritize waste minimization opportunities.

1.7.4 Waste Recycling

When practical and consistent with regulatory requirements and economic factors, wastes shall be recycled.

1.8 **Specific Requirements**

1.8.1 Hazardous Waste

1. Identification and Listing of Regulated Hazardous Wastes (Part 261)

Determining that a solid waste is a RCRA hazardous waste is the first step in ascertaining one's responsibility under RCRA. Hazardous wastes may be listed in the regulations by name, by specific processes, or by their characteristics of ignitability, corrosivity, reactivity, or toxicity. The Hazardous Waste Coordinator is available to provide assistance in determining if any questionable solid waste is a hazardous waste.

2. Standards for Generators of Hazardous Wastes (Part 262)

RCRA places the most accountability and liability for the proper disposition of hazardous waste on the generator. Generator standards ensure proper recordkeeping and reporting, proper treatment and storage, the use of the Uniform Hazardous Waste Manifest System to track shipments of hazardous waste; the use of proper labels and containers; and the delivery of the waste to a permitted treatment, storage, or disposal facility (TSDF). The following instructions are used to ensure proper disposition:

a. Waste Classification and Labeling (Hazardous Waste Department Instruction HW01)

Hazardous waste as well as nonhazardous waste and unidentified waste will be classified and labeled in accordance with Hazardous Waste Department Instruction HW01.

Waste will be classified as hazardous, nonhazardous, or unknown prior to storage or disposal. Once waste is classified, the waste shall be labeled, stored and processed for disposal. Hazardous and unknown wastes shall be shipped off site within a 90 day time limit.

b. Hazardous Waste Storage and Inventory (Hazardous Waste Department Instruction HW02)

Hazardous waste generated on site may be accumulated at designated satellite storage locations that have been preapproved by the site Hazardous Waste Coordinator. Accumulation of hazardous waste at these locations is limited to no more than 55 gallons of hazardous waste or 1 quart of acutely hazardous waste as designated in 40 CFR 261.33(e). This limit applies to the TOTAL of all waste at the satellite location. Generators are NOT allowed to accumulate 55 gallons of each waste. Satellite storage locations must be at or near the point of waste generation and under control of the operator of the process generating the waste. Containers must be maintained in good condition/not leaking, must be compatible with the waste stored, and must be kept closed except when necessary to add or remove waste. Containers at satellite locations must be labeled as "Hazardous Waste," the contents of the container identified, and be dated at the start of waste accumulation.

The Hazardous Waste Coordinator has the responsibility for the designation and monthly inspection of satellite storage locations. Approved onsite satellite locations are identified in the Expendable Products Control Manual, Chapter 5. Emergency response is coordinated through the Control Room and the Emergency Coordinators phone numbers are documented in ON1244.01, Oil/Chemical Spill.

Only containers of capacities less than .46 m³ (119 gal.) that meet DOT requirements for packaging hazardous waste for transport in accordance with 49 CFR 178 will be used for onsite accumulation and storage of hazardous waste. Use of larger capacity containers, or containers not meeting DOT requirements will necessitate implementation of additional air emission controls, inspection and monitoring requirements under 40 CFR 265.1087.

Hazardous wastes are stored for a maximum of 90 days after the start of the waste accumulation date. The 90-day time limit begins when the material is declared a waste by the collector and transferred to the Hazardous Waste Facility.

3. Standards for Packaging of Hazardous Wastes (Part 263)

The transportation of hazardous waste is regulated by the U.S. Department of Transportation (DOT), as well as RCRA. Wastes are processed for off site disposal in accordance with Hazardous Waste Department Instruction HW03. Processing includes locating the proper processing drum, placing the date of entry on the process drum, proper drum labeling, and disposal of the empty waste container.

Hazardous wastes are shipped off site in accordance with Hazardous Waste Department Instruction HW04. Hazardous waste are packaged, labeled, marked, placarded, manifested and contracted carriers documented prior to offsite shipment.

4. Recordkeeping and Reporting Requirements Env-Wm 512

Federal and State Hazardous waste regulations require that large quantity generators of hazardous waste maintain certain records regarding their management of hazardous waste.

These records include the following:

- Manifest Records- Generator's copy of manifest with transporter's signature and confirmation copy of manifest with TSDF's signature
- Records of any test results, waste analyses, or other waste determinations
- Copies of Land Disposal Restriction notifications/certifications
- Exception reports for non-returned manifest confirmation copies
- Personnel training records
- Quarterly Hazardous Waste Activity Reports
- Records of any hazardous waste spills or discharges

Records must be maintained on site for a period of 3 years.

All generators of hazardous waste must notify NHDES Waste Management Division of all hazardous waste activities governed by the regulations. Notification is done by completing the Notification of Hazardous Waste Activity Form, obtained from the division. Subsequent notification must be made using the same form within 30 days of the effective date of any change in the information originally supplied.

When shipping a hazardous waste off site, the generator shall prepare an 8 part prenumbered EPA/DOT uniform hazardous waste manifest, preferably obtained from the destination state. The generator shall retain 1 copy, give 5 to the transporter, and shall forward 1 copy to the destination state and 1 copy to the division within 5 days of shipment. If the destination's states manifest does not have 8 parts, the generator shall ensure that 8 copies are available for distribution.

The following routine reports are required to be submitted to the NHDES - Waste Management:

- Hazardous Waste Quarterly Activity Reports

Additional reports

- Exception reports for the failure to receive a delivery confirmation copy of the waste manifest are required to be submitted to the division within 45 days.
- The generator shall report all manifest discrepancies to NHDES.

5. Management of Specific Hazardous Wastes

Specific recycling activities addressed in the hazardous waste regulations include reuse, fuels blending, used in a manner constituting disposal, reclamation of lead-acid batteries, and used oil burned for energy recovery.

a. Waste Recycling

Management will implement sound recycling of wastes whenever practical, balancing regulatory requirements, economic factors and environmental stewardship.

b. Used Oil Management

Management of site used oil will be in accordance with HW05. Seabrook Station burns specification used oil in oil-fired furnaces to provide heat to certain facilities located on site.

c. Handling and Disposition of Used Batteries

Batteries will be collected and stored at the Hazardous Waste Facility. Prior to collection, the batteries will be visually inspected for holes, cracks, or any signs of leaks. Batteries may be sent for reclamation, recycled, or processed as hazardous waste. Generators who store spent lead-acid batteries destined for reclamation shall store the batteries in a manner designed to ensure that the battery housings do not break or leak acid onto the soil or into any groundwaters or surface waters, but shall not otherwise be subject to the hazardous waste rules. Other types of batteries may be subject to the Universal Hazardous Wastes rules.

1.8.2 Universal Waste

1. Batteries

Universal Waste batteries under the NHDES policy include nickel-cadmium, small sealed lead acid, and hazardous lithium batteries. Lead-acid motor vehicle batteries are not included under this policy. Universal Waste batteries shall be managed in accordance with the Universal Waste Rules ensuring that the waste is appropriately stored, labeled, and shipped.

2. Fluorescent Light Bulbs

Used fluorescent light bulbs are recycled by a certified recycler. When removed from service, used fluorescent light bulbs shall be collected in designated containers for collection and recycling. Broken fluorescent light bulbs shall be disposed of as hazardous waste.

1.8.3 Elementary Neutralization Limited Permits

An Elementary Neutralization Limited Permit is granted to a facility in the State of New Hampshire for a neutralization unit that is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic and discharges into a surface water in accordance with a National Pollutant Discharge Elimination System Permit. This permit is granted per New Hampshire Waste Regulations Env-Wm 353.04.

NextEra Energy Seabrook has applied for and received two separate elementary neutralization permits, one for the treatment and discharge of laboratory wastes that exhibit the corrosivity characteristic and a second for the treatment and discharge of the Steam Generator Blowdown Waste Holdup Sump. Copies of the neutralization permits are included in Appendix F.

Licensing maintains the documentation required for compliance with the permits.

1.8.4 Mixed Waste

Mixed waste is a subset of hazardous waste and must meet the labeling, storage, recordkeeping, and other management requirements set forth by the Environmental Protection Agency (EPA) for hazardous waste and the NRC requirements for the handling of Low Level Radioactive Waste (LLRW).

Mixed waste is identified in accordance with procedure JD0999.914, Handling of Used Chemicals in the RCA. Once identified, the mixed waste is stored in the RCA satellite storage area. The storage area, the storage containers, and the handling of these storage containers shall meet all of the requirements for hazardous waste.

Mixed waste in excess of 55 gallons shall be sent off site within 90 days of when the excess began accumulating. If the radioactive component of mixed waste decays to the point that it meets the free release criteria established by Health Physics procedures, the waste is no longer mixed waste and shall be treated strictly as hazardous waste. It shall then be removed from the mixed waste storage location and shipped to a treatment or disposal facility within 90 days of such determination.

The Hazardous Waste Coordinator reviews mixed waste generation on a case-by-case basis to determine if the Station should apply for a regulatory exemption from the hazardous waste regulations. An exemption would normally be applied for when treatment for mixed waste is not available or when it is economically beneficial to accumulate a larger amount of waste.

1.8.5 Solid Waste

NextEra Energy Seabrook attempts to recycle as much waste as practical. The following waste streams are identified and will be maintained segregated from other wastes for ease of collection, processing, and recycling.

Waste materials shall be placed within the proper designated containers. Waste materials shall not be placed on the ground. Disposal of wastes other than those generated at Seabrook Station is prohibited.

1. Automobile Tires

Waste tires shall be disposed of only in a permitted facility after being treated in a manner that will preclude creeping, such as shredding, filling, splitting or quartering, unless the facility has technology capable of using whole tires in their processing. Waste tires are removed from site by an authorized contract disposal company. Tires are stored on site on a temporary basis only.

2. Scrap Metal (Copper, Iron, Steel, Aluminum)

- a. Scrap shall be collected in a designated container at the Transfer Facility adjacent to the Carpenter Shop. Scrap metal is removed from site by a scrap metal dealer, sorted, and then recycled.
- b. These waste streams shall be kept segregated from other waste streams.

3. Electronic Equipment

Electronic equipment such as computer circuit boards shall be collected in a designated container at the Transfer Facility adjacent to the Carpenter Shop.

4. Construction Debris

Construction debris consisting of sheetrock and other demolition products shall be collected in a designated container at the Transfer Facility adjacent to the Carpenter Shop.

5. Mixed Solid Wastes

Plastics, seat cushions, fire resistant wood, painted or treated wood and fiberglass shall be collected in a designated container at the Transfer Facility adjacent to the Carpenter Shop. Call the Hazardous Waste Coordinator if unsure about a material to be disposed of.

6. Computer and Office Paper

Computer and office paper should be collected in designated containers within all office areas for recycling.

7. Aluminum Cans

Aluminum beverage cans should be collected in designated containers within all office areas for recycling.

8. Asbestos

Asbestos shall be managed in accordance with Chapter 2 of this manual.

9. Infectious Waste

Infectious and suspect waste shall be collected and disposed of in accordance with the Medical Manual (NAMP) and the NASH. Additional instructions shall be obtained from Medical and Safety personnel.

10. Asphalt, Sandblast Grit, and Concrete

This waste is managed by the Facilities and Site Support Department as solid waste which is temporarily stored at this facility and ultimately transferred to an authorized disposal facility.

2.0 TRANSPORTING DEPARTMENT OF TRANSPORTATION (DOT) HAZARDOUS MATERIALS

2.1 Purpose

This section provides regulatory interpretations, and provides detailed requirements to meet Department of Transportation (DOT) requirements for shipping DOT hazardous materials common to FPLE Seabrook.

This section also establishes guidelines and responsibilities for FPLE Seabrook personnel involved in the transportation of nonradioactive hazardous materials on public roadways. This section also addresses the laws governing transportation of hazardous materials and the reporting of accidents involving hazardous materials as stated in Title 49, U.S. Code of Federal Regulations (CFR), Parts 100 through 200.

NOTE

There are distinct differences between hazardous materials and hazardous waste. If a material is waste, contact the Hazardous Waste Coordinator as there are specific state and federal rules and regulations (Title 40, Code of Federal Regulations, Part 260 [40 CFR 260]) which pertain to hazardous waste. Some hazardous materials may become hazardous wastes. All hazardous wastes are hazardous materials.

Many materials commonly shipped may not appear to be hazardous, but are classified as hazardous materials by the DOT. For example, certain paints are flammable and are classified as hazardous materials by the DOT

A DOT hazardous material meets two criteria

1. it poses an unreasonable risk when transported in commerce, and
2. the DOT has designated it a hazardous material.

DOT hazardous materials are listed alphabetically, by proper shipping name in DOT regulation 49 CFR 172.101.

2.2 Applicability

These environmental requirements apply to the transportation of all materials classified as hazardous materials by the DOT on public roadways.

Federal DOT hazardous materials regulations apply to all intrastate and interstate transportation in commerce. Transporting hazardous materials on Seabrook Station property does not require shipping papers.

Regulations and specific requirements for container types, markings of container types, markings of containers, and placard markings for vehicles are included in 49 CFR 100-200.

2.3 References

1. Title 49, Code of Federal Regulations, Parts 100-199, 397
2. Title 40, Code of Federal Regulations, Part 260
3. ON1244.01, Oil/Chemical Spill
4. GN1332.02, Hazardous Material Transportation Security Plan (Safeguards)
5. Regulatory Compliance Manual (NARC)

2.4 Responsibilities

2.4.1 Licensing Manager

Provides guidance as needed to comply with 49 CFR parts 100 - 199, Federal Motor Carrier Safety Requirements and changes to the regulations. Submits written reports regarding hazardous material incidents to the DOT on Form F5800.1 per 49 CFR 171.15 and 171.16.

2.4.2 Nuclear Training Manager

Provides training pertaining to hazardous material transportation. Maintains a list of personnel who have general hazardous material training and function-specific training.

2.4.3 Maintenance Services Department Supervisor

Responsible for function application. Coordinates with Training on an annual schedule of hazardous materials training courses.

2.4.4 Department Managers and Supervisors

Ensure compliance with this section by individuals under their direction and ensure that they are trained.

2.4.5 Hazardous Material Employees

See Figure 3-2-2, Hazardous Material Employee Responsibilities.

2.4.6 Hazardous Materials Technical Review Committee

Responsible for the implementation and maintenance of the Hazardous Materials Training Program, including review of job functions, regulatory requirement applicability, technical review and certification of hazardous materials training and testing provided by vendors.

2.4.7 Security Manager

Responsible for implementing, revising and updating the Hazardous Material Transportation Security Plan and Risk Assessment as required by 49 CFR 172.800.

2.5 Definitions

2.5.1 Bulk Package

A package other than a ship or barge, including a transport vehicle or freight container with

1. a maximum capacity greater than 119 gallons (450 L) for a liquid,
2. a maximum net mass greater than 882 pounds (400 kg) and maximum capacity greater than 450 L (119 gallons) for a solid, or
3. a water capacity greater than 1,000 pounds (454 kg) for a gas.

2.5.2 Cargo Tank

A bulk package that

1. is a tank intended primarily for carriage of liquids or gases appurtenances, reinforcements, fittings, and closures,
2. is permanently attached to or forms a part of a motor vehicle but which, by its size, construction, or attachment to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle, and
3. is not a cylinder, portable tank, tank car, or multi-unit car tank.

2.5.3 Carrier

The person engaged in the transportation of property or passengers via land, water, or civil aircraft.

NOTE

In many cases, FPLE Seabrook employees are both the shipper and carrier. In these instances, both shipper and carrier requirements must be followed.

2.5.4 Commerce

Trade, traffic, commerce, or transportation within the jurisdiction of the United States. This applies between a place in a State and any place outside of a State, or which affects trade, traffic, commerce, or transportation (including loading, unloading and storage incidental to transport) by any mode.

2.5.5 Hazard Class

The category of hazard assigned to hazardous materials under the definitions as listed in Figure 3-2-1, Definitions of Hazard Classes.

2.5.6. Hazard Division

A subdivision of Hazard Class.

2.5.7 Hazardous Materials

Any substance determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce (e.g., flammables, corrosives, explosives, poisons, compressed gases, oxidizers) as listed in 49 CFR table 172.101.

2.5.8 Hazardous Material Employee

A person who in the course of employment directly affects hazardous materials transportation safety. This term includes an individual who loads, unloads, or handles hazardous materials; tests, reconditions, repairs, modifies, marks, or otherwise represents containers as qualified for use; prepares hazardous materials for transportation; is responsible for safety of transporting hazardous materials; or operates a vehicle used to transport hazardous materials. (See Figure 3-2-2, Hazardous Material Employee Responsibilities.)

2.5.9 Hazardous Substance

Any substance, virgin or waste, which poses a threat to human health or the environment by virtue of its chemical, physical, or toxicological characteristics. This includes CERCLA (Superfund) hazardous substances (as listed in 49 CFR 172.101, Appendix A) and Marine Pollutants (as listed in 49 CFR 172.101, Appendix B).

2.5.10 Hazardous Waste

A solid waste which because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes contain those materials identified in subpart D of 40 CFR 161 or exhibit any of the characteristics (ignitability, corrosivity, reactivity, and toxicity) defined in subpart C of 40 CFR 261.

2.5.11 Limited Quantity

Applicable to specific materials, means the maximum amount of a hazardous material for which there is a specific labeling or package exception.

2.5.12 Marine Pollutant

A mixture or solution containing certain quantities of one or more materials listed in Appendix B of 49 CFR 172.101. These materials (such as pesticides and herbicides) are known to kill or retard marine life and to accumulate in the food chain, causing potential danger to humans, as well as birds and other wildlife.

2.5.13 Nonbulk Package

A package which has

1. a maximum capacity less than 119 gallons (450 L) for a liquid,
2. a maximum net mass of less than 882 pounds (400 kg) and a maximum capacity less than 119 gallons (450 L) for solids, or
3. a water capacity of less than 1,000 pounds (454 kg) for a gas.

2.5.14 Portable Tank

A bulk package (except a cylinder with capacity less than 1,000 pounds) designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle or ship and equipped with skids, mounts, or accessories to facilitate handling of the tank by mechanical means. It does **not** include a cargo tank, tank car, multi-unit tank car, tank or trailer carrying 3AX, 3AAX, or 3T cylinders.

2.5.15 Reportable Quantity

The quantity of a hazardous substance released to the environment requiring notification of appropriate regulatory agencies. This quantity must be released within a 24-hour period for the release to be reportable.

2.5.16 Shipper

The person who prepares (i.e., packages, classifies, marks/labels, placards, prepares shipping papers) or offers a hazardous material for transportation via rail, highway, water, or air.

2.6 **Hazardous Material Transportation Security**

A Hazardous Material Transportation Security Plan and Risk Assessment have been developed in compliance with 49 CFR 172.800. (Ref. GN1332.02, Safeguards.) Additional Security Measures (ASMs) are required to be implemented prior to shipment of Radioactive Materials Quantities of Concern (RAMQC) or prior to shipment of high risk nonradioactive hazardous material. Such shipments are rarely performed at Seabrook Station. The thresholds for such shipments are delineated in GN1332.02 and the referenced Nuclear Regulatory Commission Orders. The thresholds are also specified in the Seabrook Station procedures for shipment of radioactive and nonradioactive hazardous materials. **Shipments of RAMQC or high risk nonradioactive hazardous materials are prohibited until such time that all ASMs have been implemented and requisite notifications performed as specified in GN1332.02.**

2.7 **Hazardous Materials Certificate of Registration**

A copy of the FPLE Seabrook Energy Certificate of Registration is kept on file by Licensing and Records Management at Seabrook Station.

2.8 Requirements

The following outlines the process requirements which must be completed to ensure compliance in completing hazardous material shipping papers. These requirements are generally sufficient to determine DOT requirements to prepare the necessary documentation for day-to-day operations.

2.8.1 Hazardous Materials Transportation Requirements

1. General

Before any hazardous materials may be transported in commerce on public roads, the following steps must be taken by the person transporting or preparing the shipment to ensure compliance with the law:

- a. Determine if the material is a hazardous material. A DOT hazardous material is capable of posing an unreasonable risk to health, safety, or property.

To determine if the material is a DOT hazardous material, review the product's Material Safety Data Sheet (MSDS), if available, review the DOT definitions for hazardous materials (see Figure 3-2-1) and read the product label (words such as flammable, corrosive, or poison indicate that the material may be DOT regulated).

If employees have reason to suspect that the material may be a DOT hazardous material and they require additional shipping information, they should contact the Hazardous Waste Coordinator or Licensing for assistance.

- b. If the material is a DOT hazardous material, determine the proper DOT shipping description.
- c. Prepare shipping papers.
- d. Select/use appropriate container marking and label(s).
- e. Select the appropriate package.
- f. Determine if vehicle placards are required. If so, affix placards to the appropriate sized (GVWR) vehicle for the load. Contact the Transportation Department if additional information is required.

2. Employee Training

The DOT requires employees who handle, load, store, and transport DOT hazardous materials to be trained. Recurrent training must be implemented at least every 36 months.

DOT General Awareness Training is required for all hazardous material employees. DOT Safety Training is required for all hazardous material employees who handle hazardous materials.

Vehicle operators must receive DOT hazardous material training before they operate a vehicle transporting DOT hazardous materials. The regulations also require that new hazardous material employees complete training within 90 days of employment. Employees who change job functions must be trained in the new job functions within 90 days after the change.

Specific hazardous materials training requirements for site personnel are included in the Hazardous Materials Training Program Description.

2.8.2 Proper Shipping Name Selections

1. Basic Description

The basic description of hazardous materials on shipping papers must include the following:

- a. Proper DOT shipping name
- b. Hazard class or division
- c. Identification number (UN or NA number)
- d. Packaging group

2. Proper DOT shipping name

Refer to the 49 CFR 172.101 Hazardous Materials Table to determine the proper DOT Shipping Name using the following directions:

- a. Look up the technical name of the material. The technical name is the "common name of the material" (e.g., Gasoline);
- b. Determine the chemical family of the material (e.g., Alcohols, not otherwise specified [N.O.S]);
- c. Determine whether the end use of the material is listed (e.g., compounds, cleaning liquid);
- d. Look up the hazard class of the material (e.g., corrosive liquids, N.O.S.);
- e. Determine whether the material is a CERCLA (Superfund) hazardous substance (e.g., asbestos or PCBs). Refer to 49 CFR 172.101, Appendix A.
- f. Determine whether the material is a Marine Pollutant. Refer to 49 CFR 172.101, Appendix B.

NOTE

Do **not** use the DOT Emergency Response Guidebook (ERG) to determine the DOT description for hazardous materials. The names provided in the ERG are **not** proper DOT shipping names.

3. Description to Include Weight

The total number of compressed gas cylinders or the total weight or volume for each hazardous material must be included on the shipping paper.

4. Description to Include UN/NA Identification Numbers

The UN/NA number is the third component of the proper shipping description. The identification number is four-digit number which can be used by emergency response people to identify the material rather than using an often complex proper shipping name.

5. Description to Include Packing Group

The Packing Group is the fourth component of the proper shipping description. The packing group is an indication of the degree of danger presented by the hazardous material. The three packing groups are as follows:

- Packing Group I (PG I) materials have **great danger**
- Packing Group II (PG II) materials have **moderate danger**
- Packing Group III (PG III) materials have **minor danger**

Packing group designations are required for Class 3 (Flammable Liquids); Class 4 (Flammable Solids); Class 5 (Organic Peroxide); Class 6 (Poisonous/Infectious); and Class 9 (Miscellaneous).

Packing group designations do not exist for Class 2 (Flammable and Nonflammable Gases), Class 7 (Radioactive), ORM-D or combustible materials.

When the DOT provides more than one packing group for a material, the packing group for a specific material will be determined by physical characteristics of the material (e.g., flash point, boiling point, vapor pressure).

6. Consumer Commodity (ORM-D)

Any DOT hazardous material which presents a limited hazard during transport due to its form, quantity, or package may be reclassified as a Consumer Commodity (ORM-D). Typical materials within FPLE Seabrook which can be shipped as ORM-Ds include most aerosol products such as paint, cleaners, power cartridge devices, and small containers of flammable liquids.

The following materials may **not** be transported as Consumer Commodities (ORM-D):

- a. Flammable compressed gases such as butane, propane, and MAP gas cannot be shipped as ORM-D regardless of the container size. This applies when a flammable compressed gas is the primary product (not a propellant for a powder, paste, gel, or liquid). Materials common to FPLE Seabrook include soldering or brazing torches. When transported on public roads (while in commerce), these flammable gas cylinders must meet all DOT requirements including use of a DOT-approved container, DOT container marking/labeling, DOT shipping paper, and, as necessary, placarding of the vehicle (Fed. Reg. 10/28/91, Vol. 56, #208).
- b. Industrial/commercial hazardous materials which are **not** packaged in a form intended for home use may **not** be classified as an ORM-D. This includes materials intended for use only by a professional (e.g., weed killer sold only to professional crop dusters), containers of materials used to manufacture other materials, materials used in an industrial process, and chemicals used for scientific/ chemical laboratory purposes (i.e., chemicals which are not available at a retail store).

In order to be shipped as an ORM-D, the material must be packaged and distributed in a form suitable for sale at a retail agent/store for personal or household use/care. The DOT has determined what packages can be reclassified as ORM-D materials for all nine DOT hazard classes. See the table below for a list of materials and the amounts not to be exceeded in an individual package if the material is allowed to be transported as ORM-Ds.

When transporting DOT hazardous materials classified as "Consumer Commodities" or "ORM-D," ensure that they are placed in a securely closeable box (e.g., a tool box, ammunition box) or a compartment on the vehicle with a latched door. If the vehicle has compartments accessed from the outside of the vehicle, the ORM-D materials must be enclosed in an inner package or compartment (i.e., a door behind a door). The vehicle may have more than one ORM-D container. The total weight of the ORM-Ds in a single package must not weigh more than 65 lbs. (inclusive of package and contents).

Amounts Not to be Exceeded in Packages to be Classed as Limited Quantity or Consumer Commodities

ORM-D: Other Regulated Material - Consumer Commodity				
Hazard Class	Class/ Division	Packing Group	Limited Quantity	Consumer Commodities
Flammable Liquids	Class 3	PG I	16 ounces (0.5 L)	Same
		PG II	0.3 gallons (1.0 L)	Same
		PG III	1 gallon (5.0 L)	Same
Flammable Solids	Division 4.1	PG II	2.2 lbs. (1.0 kg)	Same
		PG III	11 lbs. (5.0 kg)	Same
Corrosive Materials	Class 8	PG II	0.3 gallons (1.0 L), liquids 2.2 lbs. (1.0 kg), solids	Same
		PG III	1 gallon (4.0 L), liquids 11 lbs. (5.0 kg), solids	Same
Poisonous Materials	Division 6.1	PG III	1 gallon (4.0 L), liquids 11 pounds (5.0 kg), solids	8 oz. (250 ml.) 8.8 oz. (250 g)
Oxidizers	Division 5.1	PG II	0.3 gallons (1.0 L), liquids	Same
		PG III	1 gallon (4.0 L), liquids	Same
Organic Peroxides	Division 5.2	PG I	1.0 oz. (30 ml), liquids	Same
		PG II		Same
		PG III		Same
Miscellaneous	Class 9	--	1 gallon (4.0 L), liquids	Same
			11 lbs. (5.0 kg), solids	Same
Flammable Gas	Class 2.1	--	Cannot be a Limited Quantity	Cannot be an ORM-D
Nonflammable Compressed Gases	Class 2.2	--	4 fluid oz. (7.22 cubic inch)	Same
Aerosols charged with nonpoisonous solutions	--	--	27.7 fluid oz. (50 cubic inch)	Same

7. Limited Quantity

The DOT regulations have provisions allowing the transport of those materials which cannot be classified as an ORM-D (as discussed above) without meeting all the DOT requirements. This exception is called the "Limited Quantity." Each hazard class has specific "Limited Quantity" requirements which are listed above (see §2.8.2.6, Consumer Commodity).

Shipping a material as a Limited Quantity allows one to use a non-DOT approved container. However, the package must be marked with the DOT shipping name (UN/NA numbers are not required). Additionally, no DOT labels nor DOT placards are to be used. A DOT shipping paper must be used and must include the letters "LTD QTY" after the proper DOT shipping name.

For example: a one-quart metal container of xylene which is distributed as an industrial cleaner (for industrial use only) can be shipped as a Limited Quantity. The container used does not need to meet the DOT package requirements other than it must be a good package. To properly ship this material, one would need to mark the container with the proper DOT shipping name (no UN/NA number required). A shipping paper would need to be used. An example of the shipping paper description is:

"Xylenes, LTD QTY, 3, UN1307, PG II"

NOTE

Certain materials such as nitric acid, propanol, and methanol cannot be shipped as "Limited Quantities" or "Consumer Commodities."

2.8.3 Shipping Papers

NOTE

Hazardous material shipments are prohibited in the company express mail system.

1. FPLE Seabrook Shipments

When DOT hazardous materials are transported on a company vehicle, they must be readily identified on a shipping paper. If the material is a hazardous waste, a waste manifest (which is a type of shipping paper) must be used. It is the responsibility of the vehicle operator to ensure that proper shipping papers are used while transporting DOT hazardous materials. Once the materials have been removed from the vehicle, the shipping paper must be modified (e.g., rewritten, line crossed out) to reflect the materials on the vehicle. Once the shipment is completed, the shipping paper can be discarded.

The FPLE Seabrook Hazardous Materials Shipping Paper (NAEC FORM 3-2A) lists the common materials found at FPLE Seabrook. It has been designed to provide the user with details for meeting most DOT requirements including the marking and labeling of packages, and placarding of vehicles. This shipping paper is for use on FPLE Seabrook vehicles only.

Items not already listed on the shipping paper must be entered on the shipping paper by the shipper. Abbreviations are prohibited except for package type, quantity, or volume. For information concerning materials not listed on the form, see 49 CFR Table 172.101.

The Hazardous Material Shipping paper does not include a certification statement as this is not required when the materials are transported on a FPLE Seabrook vehicle.

2. Vendor or Contracted Carrier Shipping Papers

If the hazardous material is to be shipped by a contracted carrier or non-FPLE Seabrook vehicle, the hazardous materials employee who prepared the shipment (marking/labeling/packaging/completing shipping papers) must use/sign the certifying statement as stated below:

“This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.”

The Straight Bill of Lading form includes this statement. The Hazardous Materials Shipping Paper (NAEC FORM 3-2A) does not include the statement and may not be used by a contracted carrier or non-FPLE Seabrook vehicle.

3. Special Carriers - DOT Hazardous Material and the United States Mail or Parcel Services. The U.S. Postal Service, United Parcel Service or Federal Express should be contacted for specific requirements for shipping hazardous material.

4. Required Shipping Paper Information

When filling out shipping papers, the shipper shall include the following information:

- a. The proper DOT Shipping Name as it appears in 49 CFR 172.101, Hazardous Materials Table.
- b. The Hazard Class number.
- c. The Identification Number assigned to the material.
- d. The Packing Group assigned to the material. Packing Group designations do not exist for Class 2 (Flammable/ Nonflammable Gases), Class 7 (Radioactive), ORM-D, or combustible materials.

- e. The total quantity by weight or volume or the number of compressed gas cylinders. Abbreviations such as "lbs." for pounds and "gal." for gallon are allowed.

5. Additional Entries on Shipping Papers

a. Limited Quantity

If a hazardous material is shipped as a limited quantity, the words "Limited Quantity" or the abbreviations "LTD QTY" must be on the shipping paper following the basic descriptions.

b. Dangerous When Wet Materials

The words "Dangerous When Wet" shall be entered on the shipping paper as part of the proper DOT Shipping Name when a material is classified as "Dangerous When Wet."

c. Technical Names for "N.O.S." Descriptions

The technical name of the hazardous material must be entered in parentheses in association with the shipping name when the Proper Shipping Name includes the "N.O.S." (not otherwise specified or listed in the DOT regulations) description. An example would be "Hazardous waste, liquid, N.O.S. (xylene and ethanol mixture)."

d. Hazardous Substances - RQ

Hazardous substances (in excess of the Reportable Quantity) must have as part of the proper shipping name, the letters "RQ" before the proper name. Example: RQ, Environmentally Hazardous Substance, Solid, N.O.S. (Asbestos).

6. Key Points to Remember for Shipping Papers

The shipping paper tells the driver about the hazardous material on his/her vehicle and provides vital information to emergency responders in the event of a DOT incident. The shipping paper must be readily available at all times during the transport of hazardous materials and must be

- a. within reach of the driver while restrained by the seat belt,
- b. readily visible or in a pouch on the door, or
- c. on the driver's seat, and
- d. easily identifiable when carried with other papers by tabbing them or keeping on top of other paperwork.

7. Hazardous Material Emergency Response Information

The Seabrook Station Control Room serves as the 24-hour contact point to handle emergency responses. NAEC FORM 3-2B, Hazardous Material Emergency Response Information (49 CFR 171.15, 171.16), shall be completed for each hazardous material shipment or a Straight Bill of Lading form via a common carrier and any shipments made using a special carrier (UPS, FEDEX, etc.). The completed form must be delivered or faxed to the Control Room Shift Manager prior to the shipment's leaving Seabrook Station property.

8. Record Retention

Hazardous Material Shipping Papers shall be retained for a minimum of 375 days.

2.8.4 DOT Labels

Hazardous material shipments are identified by standard (preprinted 4" x 4") warning labels placed on containers. DOT labels provide quick and easy identification of hazards present. DOT hazardous materials are generally received from manufacturers or distributors with DOT labels affixed. Hazardous material employees are responsible for ensuring DOT labels are affixed to packages prior to shipping and/or before transportation on FPLE Seabrook vehicles. Refer to DOT regulations 49 CFR 172 to 180 for further information on DOT labels.

NOTE

DOT labels cannot be "hand-made." DOT labels must meet specific color and durability criteria.

As a result of recent changes in the regulations, the DOT labels have changed. DOT labels must now display the hazard class or division number within the lower point of the label.

1. Selecting Labels

Labeling instructions for commonly shipped hazardous materials are detailed on the FPLE Seabrook Hazardous Materials Shipping Paper (NAEC FORM 3-2A). Labels are obtained by contacting hazardous materials employees at Warehouse 2 receiving area.

2. Label Placement

- a. Labels must be affixed to the exterior of a package. If an exterior package is used to contain an inner package of hazardous materials, the exterior package must be labeled.
- b. A tag holding the DOT label may be used if a package is so small that a label will not fit on it or the package is of an irregular surface such that the label will not stick.

- c. Labels must be near the marking (see §2.8.5 for DOT marking).
- d. Labels must represent the hazard in the package. If the material in a package has more than one hazard classification, the package must be labeled for each hazard.
- e. When two or more materials of different classes are in the same package, multiple labels may be required and are placed next to each other.
- f. Labels are not required on Limited Quantity or ORM-D Packages. (See §2.8.5 for ORM-D mark except Class 6 [Poisons].)

3. Subsidiary Hazard Labels

Certain DOT hazardous materials have more than one hazard class. For these materials, the package shall be labeled with primary and subsidiary hazard labels. The hazard class/division number must be displayed in the lower point of the primary hazard label and must not be displayed on the subsidiary label. The shipping profiles will specify which labels to use for common FPLE Seabrook materials. Ensure that the specific labels are used as directed in the profile sheet.

NOTE

Labels shall not be altered in any manner. Do not cross out or otherwise eradicate the hazard class on a DOT label.

4. Empty Containers and Labels

A package which has been “emptied” but not purged of the hazardous material is still regulated by the DOT, e.g., a safety can which previously held gasoline and now contains gasoline vapors. This container is still DOT regulated and must remain labeled as if it were full.

The same markings and labels are used on a container with residual hazardous materials as the full container. However, the DOT shipping paper should include the following additional description: “Residue: Last Contained...” in association with the basic DOT description.

For example, FPLE Seabrook may receive returnable DOT-approved “Totes” containing materials such as Hydrazine or Sodium Hypochlorite. When these containers are shipped back to the vendor, the shipping paper should contain the above description.

5. Authorized Label Modifications

For a package containing Oxygen, the word “Oxygen” may be used on the Oxidizer label in place of the word “Oxidizer,” and the class number “2” (nonflammable gas) may be used in place of the class number of “5.1” (Oxidizer).

NOTE

Labels shall not be physically altered in any manner. Do not cross out or otherwise eradicate the hazard class or print on a DOT label.

6. Exceptions from Labeling (see 49 CFR 172.400a)

DOT hazard labels are not required on the following:

- a. A cylinder containing a Division 2.1 (flammable gas) or Division 2.2 (nonflammable gas) that is
 - (1) not poisonous,
 - (2) carried by a private motor carrier (such as FPLE Seabrook) or contract motor carrier,
 - (3) not overpacked, and
 - (4) durably to legibly marked with compressed gas association labels.
- b. A compressed gas cylinder permanently mounted in or on a transport vehicle.
- c. A portable tank which is already properly placarded.
- d. A package (less than 119 gallon capacity) containing a combustible liquid.
- e. A package containing a material classified as ORM-D (however, it must have the ORM-D marking).
- f. Certain packages containing "limited quantities" and "small quantities."

NOTE

Packing labels may be obtained at Warehouse 2.

2.8.5 DOT Markings

The shipper is responsible for marking each package containing DOT hazardous materials. All containers must be marked with the proper DOT shipping name and identification number. There are slightly different requirements for marking bulk packages (greater than 119 gallons capacity) and nonbulk packages (less than 119 gallon capacity).

1. Selection of Marking

Marking instructions for commonly transported hazardous materials are detailed on the FPLE Seabrook shipping paper.

2. Placement of Marking

Marking

- a. must include proper DOT name and ID number.
- b. must be durable, legible, and written in English.
- c. may be printed on the package or affixed by tag.
- d. must be in contrasting colors, unobscured, away from other markings (e.g., trade name).
- e. must be near the DOT label(s).

3. Marking Nonbulk Packages

Nonbulk packages have a capacity of less than 119 gallons. The proper shipping name and identification number must be displayed on nonbulk packages.

4. N.O.S.

Packages containing materials which use the generic "N.O.S." description must be marked with the technical name in conjunction with the generic N.O.S. name. For example: "Hazardous waste, Liquid, N.O.S. (xylene and ethanol mixture) NA 3082."

5. "RQ"

If the material is a CERCLA hazardous substance and the package contains the reportable quantity, the letters "RQ" must be marked on the package in conjunction with the proper shipping name. For example: "RQ, Environmentally Hazardous Substance, solid, N.O.S. (Aldicarb), UN 3077."

6. Marking Package Containing Liquids

Inner containers of liquids which are packaged in an outer package must be packed with the closures facing up. The DOT "This End Up" marking must be placed on the package with the arrow pointing upward.

7. Packages Containing Poisons

Poison liquids and gases which are identified as poisonous by inhalation must be marked with the words "Poisonous By Inhalation" and "Hazard Zone (A or B)" in association with the required DOT label.

8. ORM-D - Consumer Commodity

Packages containing a Consumer Commodity must be marked with the "ORM-D" mark. No other label or identification number is required on the package. No shipping paper is required to transport ORM-D materials (see §2.8.2.6 for additional details).

9. Limited Quantity

Shipping a material as a Limited Quantity allows one to use a non-DOT-approved container. However, the package must be marked with the DOT shipping name (UN/NA numbers are not required) (see §2.8.2.7 for additional details).

10. Name and Address on Package

The name and address of the person or party to whom something is delivered must be on a DOT hazardous material package when it is shipped or transferred from one carrier (common, contract, or private) to the next, transferred from one vehicle to another as part of a full load, or shipped in a portable tank.

11. Marking Bulk Packages

NOTE

As a general rule of thumb, placards must be visible on all four sides of a bulk packaging and at least three inches away from any other markings.

a. Tanks Between 119 Gallons and 1000-Gallons Capacity

The proper DOT shipping name and identification number must be placed on bulk packages greater than 119 gallons and less than 1000 gallons, such as portable tanks. These markings must be displayed on the two opposing sides of the tank sides. Identification numbers shall not be displayed on radioactive, explosives, dangerous, or subsidiary hazard placards.

b. Tanks with Capacity Greater than 1000 Gallons

Portable containers with a rated capacity greater than 1000 gallons must have the identification number and shipping names placed on each side and each end of the container.

c. Cargo Tanks

Only identification numbers are required on a cargo tank and must be displayed. If a placard is required, the identification number may be displayed across the center of the placard or on a separate specification orange panel placed next to the placard.

d. Empty Bulk Packages

Each bulk package must remain marked and/or placarded when it is emptied unless it has been sufficiently cleaned/purged of residue/vapors to remove any potential hazard or been refilled with a compatible material requiring different markings or no markings. Do not use the "Residue Placard" on bulk packages other than rail cars.

e. Empty Railroad Tank Cars

If a railroad tank car has been emptied and has not been cleaned/purged, it must display the correct "Residue Placard."

2.8.6 Containers and Packages

Major changes in packaging standards were instituted in HM-181. Packaging hazardous materials properly is important to ensure safety during transportation and handling. It is the shipper's responsibility to determine that the material is packaged properly. Drivers and receivers should also check packages in order to prevent spills, leaks, or injury.

A hazardous material is assigned to one of three package groups based on its particular safety hazards. PG I, PG II, and PG III indicate that the degree of danger represented by the material is either major (PG I), moderate (PG II), or minor (PG III). Follow the package group as discussed in each material profile sheet. For example, when transporting flammable paints in the original manufacturer's package, one must determine which package group must be listed on the shipping paper. The package group is based on the material's specific physical properties (e.g., for flammables, this includes the flash point and boiling point of the material). Package groups play a major role in determining the package that is used to transport the material. For this reason, it is best to use the original manufacturer's container when possible, rather than repackage a material.

Always use a "good package" when transporting hazardous materials. When selecting a proper DOT package, ensure that the package is clean, closed securely, and compatible with the materials to be shipped. It is best to use the manufacturer's container, rather than repackage a material.

All packages containing DOT Hazardous Materials must be designed, constructed, and contents limited, so that under normal transport conditions

- there will be no significant release to the environment,
- the effectiveness of the package will not be substantially reduced, and
- there will be no mixture of gases, vapors in the package which could spontaneously release heat or pressure, or by explosion reduce the effectiveness of the package.

All packages must be strong and tight.

Previously, the DOT specified what containers could be used to transport hazardous materials. These specifications dealt with the construction of the container (e.g., types of materials, number of welds, nails, type of wood, etc.). The new packaging requirements are "performance-based" criteria. A package now must be capable of meeting criteria such as the drop test, leakproof test, stacking, hydrostatic pressure, and vibration test. This change facilitates international commerce and promotes technological advances in packages. The performance-based criteria are now in place. However, manufacturers have until October 1, 1994, to continue manufacturing containers under the old provisions. By October 1, 1996, former DOT specification packages may no longer be used. The new performance-based containers must be used.

A summary of UN standard performance-based packaging identification codes is listed below.

SUMMARY OF UN STANDARD PACKAGING IDENTIFICATION CODES	
Code	Type of Packaging
1A1	Nonremovable head steel drum
1A2	Removable head steel drum
1B1	Nonremovable head aluminum drum
1B2	Removable head aluminum drum
1N1	Nonremovable head metal drum
1N2	Removable head metal drum
1G	Fiber drum
1H1	Nonremovable head plastic drum
1H2	Removable head plastic drum
3H1	Nonremovable head jerrican
3H2	Removable head jerrican
4C1	Ordinary box (natural wood)
4D	Plywood box
4G	Fiberboard box
5H3	Water-resistant woven plastic bag
5H4	Plastic film bag
5L3	Water-resistant textile bag
5M1	Multiwell paper bag
5M2	Multiwell water-resistant paper bag
T	Tanks imported
X	For packaging meeting Packing Group I, II, and III test
Y	For packaging meeting Packing Group II and III test
Z	For packaging meeting only Packing Group III test

1. Package Identification Codes

Each material must be packaged according to its packing group as detailed in 49 CFR 172.101 and Part 173. Packages designed to transport hazardous materials must be marked by the container manufacturer to show compliance with DOT package regulations. New performance-oriented package markings appear on the package as follows:

U 4G H 4/s/89

N USA/+AB0001/APSS

The UN means the package is manufactured and tested according to international standards. The top line indicates the type of container, construction materials, packing group, maximum gross, solids, or inner package, and the year it was manufactured. The bottom line indicates the country, authorizing mark, DOT-authorized lab tested, and the testing house registration and number.

2. Reuse and Reconditioning of Drums

HM-181 placed specific restrictions on the reuse of metal and plastic drums. Reuse is based on minimum thickness requirements intended to ensure the container will withstand handling and transport.

a. Metal and Plastic Drums

Drums which are reused must conform to the following criteria:

- (1) Each must be inspected and may not be reused unless free of incompatible residue, rupture, or other damage which reduces its structural integrity.
- (2) If drums show evidence of reduction in structural integrity, it must be reconditioned before reuse.
- (3) If intended to contain liquids, the package must be subject to a leakproofness test, using air at an internal pressure (gauged) of at least 7.0 psi.
- (4) Any package which is leakproof tested or reconditioned must be marked with the letter "R" and the name and address of the package reconditioner.
- (5) Metal and plastic drums used as single packaging or the outer package of composite packaging are authorized for reuse only when they are marked (in millimeters) with the thickness of the packaging material and conform to specific criteria (see 49 CFR 173.28).
- (6) Packaging made of paper, plastic film, or textile are not authorized for reuse (does not include fiberboard).

b. Exceptions for Reuse of Drums - Reuse of STCs or NRCs

- (1) The shipper may determine if a container is a Single Trip Container (STC) and Nonreusable Container (NRC) by looking at the DOT specification markings for the letters "STC" or "NRC." On drums this is usually found on the bottom head of the drum, or on the rim in some cases (e.g., DOT 17E STC).
- (2) Containers marked as STC or NRC may
 - (a) be reused for materials which are not regulated by the DOT as long as they are in good condition, or
 - (b) be reused if they have been tested and certified for reuse by a DOT-registered drum conditioner.
- (3) A package may be reused without being subject to the preceding under the following conditions:
 - (a) Transportation is by highway only.
 - (b) A package is not offered for transportation less than 24 hours after it is finally closed for transport and each package is inspected for leakage and is found to be free from leaks immediately prior to transport.
 - (c) Each package is loaded by the shipper and unloaded by the person or party to whom it is delivered.
 - (d) The package may be reused only once.

3. Salvage and Overpack Drums

The requirements for use of salvage drums and overpack are as follows:

- a. Must be a metal or plastic removable head drum.
- b. Must be marked and labeled as prescribed for the respective materials (see 49 CFR 173.3).
- c. Capacity cannot exceed 450 liters (119 gallons).
- d. When necessary, sufficient cushioning, and packing material shall be provided to prevent excessive movement of damaged inner packages and to capture any leaking liquid.
- e. Must be marked "Salvage Drum."
- f. Must be a drum manufactured to meet Packing Group III and be marked by the manufacturer as meeting Packing Group III for a liquid with specific gravity of 1.2 and with a hydrostatic test of 35 Kpa.

4. Lab Packs

A lab pack may be used under the following conditions:

- a. The material(s) to be packed are from the following hazard classes and divisions:
 - 3 Flammable/Combustible Liquids
 - 4.1 Flammable Solids
 - 4.2 Spontaneously Combustible Material
 - 4.3 Dangerous When Wet
 - 5.1 Oxidizer
 - 6.1 Poisonous Materials
 - 8 Corrosive Materials
 - 9 Miscellaneous Hazardous Materials
- b. Outer packaging must be UN 1A2 or 1B2 metal drums, a UN 1D plywood drum, a 1G fiber drum or a 1H2 plastic drum.
- c. Each outer packaging must contain only one hazard class.
- d. Inner packages containing liquids must have sufficient chemically compatible absorbent material.
- e. Gross weight must not exceed 205 kg (425 lbs.).

5. Empty Packages

The DOT defines an empty container as one which has had the hazard removed from the package (i.e., purged of the hazard). Since FPLE Seabrook staff rarely purge containers, it is important to realize that containers which are emptied by normal means (e.g., pouring or pumping) may contain residual amounts of DOT hazardous materials. For example, a gasoline can which has no liquid but contains gasoline vapors is still hazardous. As such, it is regulated by the DOT as if it were full of gasoline thus requiring the use of DOT markings, labels, shipping papers, and perhaps placards while being transported. The same markings and labels are used on a container of residual materials as the full container.

Additional information is required on the shipping paper for bulk packages (greater than 119 gals. capacity) with residues of DOT hazardous materials. The following additional description should be included with the proper DOT name:

“Residue: Last Contained...” in association with the basic DOT shipping name of the hazardous material last contained in the package.

6. ORM-D

When transporting Consumer Commodities or "ORM-D," ensure that they are placed in a securely closeable outer package (e.g., strong tool box, ammunition box) or a compartment within a compartment where there is a door behind a door.

Vehicles may have more than one ORM-D container. The total weight of the ORM package (inclusive of outer package and contents) must not be more than 65 lbs. total weight. ORM-D packages must have the ORM-D marking (see §2.8.2.6 for additional details).

7. Other Container Requirements

Although most hazardous material containers are specified by the DOT, there are obscure materials which have other container regulations which apply as well.

2.8.7 Placards

Placards alert people to the potential hazards in a motor vehicle, rail car, freight container, cargo container, or portable tank. They also provide emergency response personnel with important information should an accident occur. Refer to DOT regulations 49 CFR 172 to 180 for further information on DOT placards.

1. New Placards

The hazard class or division numbers are required on placards. Hazard class numbers must be displayed in the lower corner of the placard corresponding to the primary hazard class or the material. Hazard class numbers are **not** allowed on a placard that corresponds to a subsidiary hazard. No hazard class number is allowed on the "Dangerous" placard.

2. Other Rules

Placards

- a. must be provided by the shipper to the carrier,
- b. must represent the hazard on the vehicle,
- c. must be placed on all 4 sides of the vehicle (front placard may be on the power unit or cargo body, however, the placard must be visible),

NOTE

The adhesive used on most placards is a strong permanent-type adhesive. The vehicle paint may be damaged if placards are attached directly onto painted surfaces. A placard holding frame is available from the Department of Transportation which allows easy removal of placards.

- d. must be placed in the on point configuration (wording must be read from left to right),

- e. must be placed so that they are not obstructed by anything,
- f. must be placed at least 3 inches from other markings,
- g. must be located so that dirt and mud will not splash on, and
- h. must be maintained in readable condition.

3. Placard Determination

Prior to shipment, the shipper must determine whether or not vehicle placards are required. Placarding is required on vehicles depending on the material and quantity of material transported.

Typical placards required for commonly shipped FPLE Seabrook hazardous materials are illustrated on the back of the Hazardous Materials Shipping Paper. Placards are obtained by contacting the hazardous materials employees at Warehouse 2 receiving area.

4. Materials Which Require No Placards

No placards are required for materials classified as follows:

- a. Radioactive White I (Class 7)
- b. Radioactive Yellow II (Class 7)
- c. Infectious Substances (Poison/Division 6.2)
- d. ORM-D
- e. Any material identified as a "Limited Quantity"
- f. Combustible liquid in containers of 119 gallons (450 L) or less, each container
- g. Miscellaneous Hazardous Materials (Class 9) with no other DOT hazard

5. Placards Required

The DOT regulations have two tables for determining whether placards are required.

- a. Table 1 (49 CFR 172.504)

Placards are required for any quantity of Table 1 materials which include the following:

- (1) Explosives in Division 1.1, 1.2, 1.7
- (2) Poison Gases (Division 2.3)
- (3) Dangerous When Wet (Division 4.3)

- (4) Gases which have the Poison Inhalation Hazard (Division 2.3)
- (5) Radioactive III

b. Table 2 (49 CFR 172.504)

Placards are required when the combined total weight of a Table 2 hazard class exceeds 1,000 lbs. (including the weight of the package and its contents). Either a "Dangerous" placard or a placard(s) for the specific hazard must be used. However, the preferred method is to placard for each specific hazard(s) on the vehicle. Multiple placards may be placed on each side of the vehicle as long as the hazard is on the vehicle. Table 2 materials include the following:

- (1) Explosives Division 1.4, 1.5, and 1.6
- (2) Flammable Gases (Division 2.1)
- (3) Nonflammable Gases (Division 2.2)
- (4) Flammable Liquids (Class 3)
- (5) Combustible Liquids in packages with capacity greater than 119 gallons (Class 3)
- (6) Oxidizers (Division 5.1)
- (7) Poisons in Package Group other the PG I Inhalation Hazard (Division 6.1)
- (8) Keep Away From Food - Poisons (Division 6.1 PG III)
- (9) Flammable Solids (Division 4.1)
- (10) Spontaneously Combustible (Division 4.2)
- (11) Organic Peroxides (Division 5.2)
- (12) Corrosive Materials (Class 8)

6. Mixed Loads

When shipping bulk packages (less than 119 gallons capacity) of two or more Table 2 materials, a Dangerous placard may be used in place of the placard required for each hazard class. However, using the Dangerous placard does not represent the hazard as clearly as the specific placards.

When 5,000 lbs. of any hazard class from Table 2 is loaded at any one facility, the placard for that hazard class must be displayed.

7. Placards and Driver Requirements

If a vehicle requires placards, the vehicle operator must have a Commercial Drivers License with a Hazardous Material Endorsement. Note that as discussed earlier there are certain materials which are exempt from placarding. This exemption also excludes the driver from the hazardous material endorsement.

An improperly or insufficiently placarded vehicle may not be moved on public roads except in an emergency. Even if such an emergency exists, one of the following conditions must be in effect before the vehicle is moved:

- a. The vehicle must be escorted by a representative of local or state government (e.g., police).
- b. The U.S. DOT has granted permission to move the vehicle (contact the DOT).
- c. Immediate movement of the vehicle is necessary in order to protect life or property.

Any vehicle transporting DOT hazardous materials which must be placarded must comply with The Federal Motor Carrier Safety Regulations as discussed in 49 CFR 397. These regulations govern vehicle attendance, surveillance, parking, routes, fires, smoking, fueling, tires, and transport of explosives.

2.8.8 Loading Precautions

1. Segregation and Separation of Hazardous Materials

Incompatible materials must be loaded, stored, or transported separately or with some barrier to keep materials separate in case of an accidental release. If a material is not compatible with another material, a reaction will occur when they are combined. A product's MSDS includes information related to reactivity or incompatibility. The DOT has established some general segregation rules that must be followed (49 CFR 177.848). These are minimum requirements. Additional information may be obtained by review of a MSDS. The DOT guidelines are given in Figure 3-2-5. These rules apply to DOT hazardous materials which are

- a. in packages which require DOT labels,
- b. in a compartment within a multicompartmental cargo tank, or
- c. in a portable tank loaded in a vehicle or freight container.

2. Miscellaneous Driving/Loading/Unloading Rules (49 CFR 177.834)

Following are several rules which govern the operation of a motor vehicle carrying hazardous materials including the loading/unloading of hazardous material (see Figure 3-2-7 for a driver's checklist to ensure compliance).

Any tank, barrel, drum, cylinder, or other package not permanently attached to the vehicle must be properly secured when transported aboard a vehicle.

No hazardous materials can be carried in or on pole trailers.

No smoking is permitted by personnel on or about a motor vehicle while loading or unloading Class 1 explosives, Class 5 oxidizing materials, or Class 2/Class 3/Class 4 flammable materials, or an empty cargo tank which has been used to transport flammable liquids or gases.

Hazardous materials must be kept away from potential fire hazards (smoking, lighting matches, any flame, or lighted cigar, pipe, or cigarette). Example: do not start vehicle engine while unloading or loading flammables unless needed to operate an appropriate transfer pump.

Do not use tools that are likely to damage the package or its closures.

Vehicle hand breaks or air parking brake must be engaged when the vehicle is in a parked position.

Wheel chocks must be in place when the vehicle is parked.

No motion can be allowed between containers when a vehicle is under way.

Containers with valves must be loaded so that the likelihood of damage is minimized.

Cargo tanks must be attended by a qualified person at all times during loading and unloading. The individual in attendance must be awake, have unobstructed view of the cargo tank, know what to do in an emergency, and be capable of moving the vehicle.

Ensure bulk packages are properly grounded when adding/removing materials to avoid static electricity buildup.

Make sure all valves have been properly opened or closed. Make sure there are no spills or leaks.

If any item or material being shipped is discovered to be leaking or broken en route, it must be repaired or removed to a safe area before the shipment continues.

All required markings, labels, and placards must be maintained in good condition.

Be familiar with the Segregation Table for Hazardous Materials (see Figure 3-2-5).

2.8.9 Hazardous Material Incidents and Reporting

If a vehicle carrying hazardous materials is involved in an accident, DOT mandates specific procedures to be followed. Figure 9, Hazardous Material Accident Reporting Checklist, summarizes actions to be taken during a hazardous material accident. It may be carried upon vehicles as a reference. Actions include the following:

1. Notify and obtain help from area emergency response personnel (POLICE/FIRE DEPARTMENT/911). The driver may ask a bystander to call local authorities rather than leave the vehicle unattended.
2. As appropriate, call Seabrook Station at (603) 474-9521 and request to be connected to the Control Room.

NOTE

These numbers are monitored 24-hours a day; collect calls will be accepted.

State your name, location, and telephone number. Give a brief description of the emergency including the hazardous materials involved.

3. CALL YOUR SUPERVISOR, if possible.
4. Isolate the immediate accident area as appropriate.

NOTE

Do **not** take any actions which are not safe. Emergency response requires specific training, tools, and equipment. Protect yourself and others.

5. If safe to do so, remove materials from the immediate area as appropriate.
6. If safe to do so, repair or remove containers in the vehicle as appropriate.
7. Place specific warning devices at the accident site.
8. If safe to do so, stop any leaks resulting from the accident.
9. Contain any spilled materials resulting from the accident.

NOTE

For Driver Safety information (i.e., potential hazards and/or first aid) reference the DOT Emergency Response Guidebook (ERG).

Reporting requirements are found in Control Room Abnormal Procedure ON1244.01 and the Regulatory Compliance Manual (NARC).

Figure 3-2-1
Definitions of Hazard Classes
(Sheet 1 of 4)

There are ten (including ORM-D) DOT classes of hazardous materials listed in the Hazardous Materials Regulations. Technically, ORM-D's are Class 9 materials. The hazard class is the second component of the proper shipping description. The hazard classes have undergone several modifications as a result of HM-181.

The ten hazard classes are described below.

Hazard Class and Divisions

1. Class 1 - Explosives

Any substance or article, including a device, which is designated to function by explosions or which, by chemical reaction within itself, is able to function in a similar manner even if not designated to function by explosion. This class has six divisions:

Division 1.1: Explosives that have a mass explosive hazard, one which affects the entire load instantaneously.

Division 1.2: Explosives that have a projectile hazard but not a mass explosion hazard.

Division 1.3: Explosives that have a fire hazard and either a minor blast hazard or minor projectile hazard or both, but not a mass explosion hazard.

Division 1.4: Explosive devices that present a minor explosion hazard and do not contain more than 25g of a detonating material.

Division 1.5: Very insensitive explosives.

Division 1.6: Extremely insensitive articles which do not have a mass explosive hazard.

2. Class 2 - Gases

Class 2 is divided into three divisions.

Division 2.1: (Flammable Gas) Any material which is a gas at 20 °C (68 °F) or less and 101.3 Kpa (14.7 psi) of pressure which is ignitable when in a mixture of 13 percent or less volume with air or has a flammable range with air of at least 12 percent regardless of the lower limit.

Division 2.2: (Nonflammable Gases) Any material or mixture which exerts an absolute pressure of 280 Kpa (41 psia) at 20 °C (68 °F) in the packaging and does not meet the definition of Division 2.1 or 2.7.

Division 2.3: (Poisonous Gas) Any material which is a gas at 20 °C (68 °F) or less and a pressure of 101.3 Kpa and which is known to be so toxic to humans as to pose a hazard to health during transportation of which has an LC⁵⁰ of not more than 5000 ppm. Other gas definitions are also provided in 49 CFR 173.115.

Figure 3-2-1
Definitions of Hazard Classes
(Sheet 2 of 4)

3. Class 3 - Flammable Liquids

Any liquid having a flash point of not more than 60.5 ° C (141 ° F), except any liquid meeting one of the definitions specified in 49 CFR 173.115, and except any mixture having one or more components with a flash point greater than 60.5 ° C (141 ° F) that makes up at least 99 percent of the total volume of the mixture.

Packing Group Designations

PG I	Flash point $\leq 73^{\circ}$ F (23° C) Boiling point $> 95^{\circ}$ F (35° C)
PG II	Flash point $< 73^{\circ}$ F (23° C) Boiling point $> 95^{\circ}$ F (35° C)
PG III	Flash point $\geq 73^{\circ}$ F (23° C) and $\leq 141^{\circ}$ F (60.5° C) Boiling point $> 95^{\circ}$ F (35° C)

Combustible Liquids

Any materials that do not meet the definition of any other hazard class and have a flash point above 60.5 ° C (141 ° F) and below 93 ° C (200 ° F). This supersedes the old definition of have a flash point between 38 and 93 ° C (100-199 ° F).

NOTE

The DOT provides an exception for domestic shipments which allows liquids with a flash point between 100 ° F and 140 ° F to be reclassified as combustible.

4. Class 4 - Flammable Solids

This has three divisions.

Division 4.1: (Flammable Solid) Any of three materials: wetting explosives, self-reactive, and readily combustible solids as defined in 49 CFR 173.124.

Division 4.2: (Spontaneously Combustible Material) Any material which is pyrophoric or self-heating. A pyrophoric material can ignite within five minutes after coming into contact with air without an ignition source. A self-heating material is one, which upon contact with air, is liable to self-heat as defined in 49 CFR 173.124.

Figure 3-2-1
Definitions of Hazard Classes
(Sheet 3 of 4)

Division 4.3: (Dangerous When Wet) Any material which by contact with water is liable to become spontaneously flammable or to give off flammable or toxic gases at a rate greater than 1 liter/kilogram/hour.

5. Class 5 - Oxidizer/Organic Peroxide

There are two divisions.

Division 5.1: (Oxidizer) Any material which may cause or enhance the combustion of other materials usually by evolving oxygen.

Division 5.2: (Organic Peroxide) Any organic compound containing oxygen in the bivalent (-O-O-) structure and which may be considered a derivative of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic constituents.

6. Class 6 - Poisonous/Infectious Substances

Class six has two divisions.

Division 6.1: (Poisonous Material) Any material other than a gas which is known to be so toxic as to afford a hazard to health during transportation. In the absence of human toxicity data, 49 CFR 173.123 sets criteria for the determination to be made.

Division 6.2: (Infectious Substance) A viable microorganism, or its toxin, which causes or may cause disease in humans or animals, and includes those agents listed in 42 CFR 72.3 of the Department of Health regulations. Infectious substances also include any other agent that has the potential to cause severe, disabling, or fatal disease. The term "infectious substance" replaces the hazard class named "etiologic agent."

7. Class 7 - Radioactive Material

Any material having a specific activity greater than 0.002 microcuries per gram.

8. Class 8 - Corrosive Material

A liquid or solid that causes visible destruction or irreversible alterations in human skin tissue at the site of contact, or a liquid that has a severe corrosion rate in steel or aluminum (49 CFR 173.135).

Packing Group Designations

PG I - Will attack exposed skin when in contact for more than 3 minutes.

PG II - Will attack exposed skin when in contact for more than 60 minutes.

PG III - Will attack exposed skin when in contact for more than 4 hours.

Figure 3-2-1
Definitions of Hazard Classes
(Sheet 4 of 4)

9. Class 9 - Miscellaneous Hazardous Material

A material which presents a hazard during transportation but is not included in any other hazard class. This class includes the following:

- a. Material which has an anesthetic, noxious, or other similar property which could cause extreme annoyance or discomfort to a flight crew member so as to prevent the correct performance of duty; and
- b. Material not included in any other hazard class, but is subject to the requirements of 49 CFR because it meets the definition in 49 CFR 171.8 for hazardous substance or a hazardous waste.

10. ORM-D

Any material, subject to the 49 CFR regulations which presents a limited hazard during transportation due to its form, quantity, or packaging.

In order to be transported under the proper shipping name of "Consumer Commodity," a material must be packaged and distributed in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for the purposes of personal care or household use.

The DOT determines the form, quantity, and packaging allowed for materials that may qualify as the Consumer Commodities for each hazard class.

Figure 3-2-2
Hazardous Material Employee Responsibilities
(Sheet 1 of 3)

GENERAL

All hazardous material employees are required, as a minimum, to receive General Awareness Training and DOT Safety Training.

VEHICLE DRIVERS

All drivers of vehicles which carry materials classified as hazardous by the Department of Transportation require training. Vehicle Operators are those individuals who control the use of a vehicle which transports hazardous materials over a public highway. A vehicle is a cargo-carrying vehicle (such as an automobile, van, truck, semi-trailer, tank car, tractor, or rail car) which is propelled or drawn by mechanical power and used upon the highways in the transportation of property or passengers. Drivers must possess a Commercial Drivers License (CDL) with a hazardous materials endorsement as a minimum.

FPLE Seabrook personnel driving FPLE Seabrook vehicles transporting hazardous materials require function-specific training.

Responsibilities

1. Must be able to recognize discrepancies in documents, packaging, labeling, and compatibility.
2. Must inspect all hazardous material shipments prior to loading and contact the appropriate staff person(s) for instructions concerning any suspect shipments offered to him/her.
3. Must make sure that all hazardous material is properly blocked and secured. Ensure proper placards are used when required. Make sure containers will not be damaged by other freight, by nails, or truck floor and sides.
4. Must have in his/her possession, and available for immediate use, proper shipping papers covering all hazardous materials on vehicle.
5. Must understand driver's responsibilities as to attendance requirements when transporting a hazardous material.
6. Must understand the proper procedures for handling, disposal, and/or decontamination in case of accident or incidents involving hazardous materials.
7. Must know what to do and what information to pass on to firefighters, police, and others should an emergency arise.
8. Must report full details concerning any hazardous material incident (cause, container damage, specific container identification, and corrective action taken).

Figure 3-2-2
Hazardous Material Employee Responsibilities
(Sheet 2 of 3)

SHIPPERS

Hazardous Material Shippers are those individuals who prepare or offer hazardous materials for transportation, perform storage (warehouse) and shipping tasks (loading and unloading of vehicles), or those individuals who may handle or come into contact with hazardous materials which are transported over a public highway, by air, water, or rail. FPLE Seabrook Hazardous Material Shippers require function-specific training (DOT Shipping Requirements).

Examples of Tasks

- Packaging
- Labeling
- Marking
- Repacking or breaking down containers
- Preparing shipping papers
- Placarding

Examples of Types of People

Function-specific trained individuals such as a Warehouse Foreperson or Hazardous Waste Coordinator. Check the Warehouse 2 office for a list of certified individuals.

Responsibilities

1. Must demonstrate familiarity with packaging, labeling, and marking. Must be able to ensure items are properly labeled and marked.
2. Must demonstrate familiarity with DOT specification containers as appropriate.
3. Must determine DOT proper shipping name, hazard class, label, and required container marking.
4. Should check repack or breakdown packages received from others to ensure they are correct. Do not assume it was done correctly.
5. Ensure no leaks are evident and containers are closed properly.
6. Must demonstrate familiarity with shipping documents (proper name, hazard class, etc.).
7. Ensure that noncompatibles are not issued for the same shipment in one vehicle (see §2.7.8).

Figure 3-2-2
Hazardous Material Employee Responsibilities
(Sheet 3 of 3)

8. Must inform the driver that the vehicle contains hazardous materials and ensure that the driver has a proper license, endorsements and training.
9. Must properly and safely load materials (proper location, secured and blocked). Includes the safe operation of materials handling equipment.

HAZARDOUS MATERIALS HANDLERS

Hazardous Materials Handlers are those individuals who may package, label, mark, pack, or unpack hazardous materials which are transported over a public highway. They require function-specific training: DOT Preparation of Non-Bulk Packages.

Examples of Types of People

Forklift operators or those who place items on vehicles.

Responsibilities

1. Must check to see that materials on board a vehicle are identified on shipping documents. Ensure that discrepancies are resolved before vehicle is moved.
2. Must inspect all hazardous material freight for leakage or damage each time it is handled.
3. When damaged containers are discovered, must isolate containers to make certain they are not moved until they are in proper condition to move.
4. Must make certain that hazardous material containers will not be damaged by other freight or other parts of the vehicle (rough walls, nails, bad flooring).

Figure 3-2-3
Deleted

Figure 3-2-4
Deleted

Figure 3-2-5
Segregation Table for Hazardous Materials
(Sheet 1 of 2)

Class or Division	Notes	1.1, 1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3 Gas Zone A	2.3 Gas other than Zone A	3	4.1	4.2	4.3	5.1	5.2	6.1 Liquids PG I Zone A	7	8 Liquids only	
Explosives 1.1 and 1.2	A	*	*	*	*	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Explosives 1.3		*	*	*	*	*	X		X	X	X		X	X	X	X	X			X
Explosives 1.4		*	*	*	*	*	O		O	O	O		O				O			O
Very insensitive explosives 1.5	A	*	*	*	*	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Extremely insensitive explosives 1.6		*	*	*	*	*														
Flammable gases 2.1		X	X	O	X				X	O								O	O	O
Non-toxic, nonflammable gases 2.2		X			X															
Poisonous gas Zone A 2.3		X	X	O	X		X				X	X	X	X	X	X				X
Poisonous gas other than Zone A 2.3		X	X	O	X		O				O	O	O	O	O	O				O
Flammable liquids 3		X	X	O	X				X	O					O		X			
Flammable solids 4.1		X			X				X	O							X			O
Spontaneously combustible materials 4.2		X	X	O	X				X	O							X			X
Dangerous when wet materials 4.3		X	X		X				X	O							X			O
Oxidizers 5.1	A	X	X		X				X	O							X			O
Organic peroxides 5.2		X	X		X				X	O							X			O
Poisonous liquids PG I Zone A 6.1		X	X	O	X		O				X	X	X	X	X	X				X
Radioactive materials 7		X			X		O													
Corrosive liquids 8		X	X	O	X		O		X	O		O	X	O	O	O	X			

See next page for key to Segregation Table.

Figure 3-2-5
Segregation Table for Hazardous Materials
(Sheet 2 of 2)

Key to Segregation Table

1. The "A" under notes means that notwithstanding the requirements of the letter "X," ammonia nitrate fertilizer may be loaded or stored with Division 1.1 or 1.5 explosives.
2. The "*" indicates that segregation among different Class 1 (explosive) materials is governed as in 49 CFR 177.848(f).
3. The absence of any hazard class or division or a blank space in the table indicates no restrictions apply.
4. The letter "X" indicates these materials may not be loaded, transported, or stored together in the same vehicle or storage facility during the course of transportation or prior to transport (i.e., on a loading dock).
5. The letter "O" indicates these materials may be transported, loaded, or stored together if separated by 1.2 m (4 feet) in all directions and packages must be on a pallet or they may be separated in a manner that prevents commingling of the hazardous material.

Figure 3-2-6
Illustration of Straight Bill of Lading
(Sheet 2 of 2)

Instructions for Completing Straight Bill of Lading

1. Enter carrier name.
2. Complete the consignee name, address, and telephone number.
3. Complete the shipper name, address, and telephone number.
4. Enter route vehicle should take (i.e., best possible route).
5. Enter vehicle number or license plate number.
6. Complete the number of shipping units for each hazardous material.
7. Enter proper DOT shipping name, hazard class, I.D. number, packing group, weight, rate, and the type of DOT labels on packages.
8. As appropriate, enter "Cash On Delivery" (C.O.D.) information.
9. Person who prepared the shipment (the Shipper) signs certifying statement - "This is to certify that the above named materials are..."
10. Indicate whether placards are required and whether they were supplied to driver. Obtain driver's signature for "Placards Supplied" portion of form.

Figure 3-2-7
Driver's Checklist to Ensure Compliance
(Sheet 1 of 2)

1. Determine if materials being transported are DOT Hazardous Materials.
2. Complete Hazardous Materials Shipping Paper (NAEC FORM 3-2A).
 - Enter facility name.
 - Select proper DOT name; determine hazard class.
 - Enter total number, weight, or volume for each hazardous material.
3. Enter DOT description for items not preprinted on shipping paper.
4. Keep shipping papers within reach of the driver while restrained by seat belt, readily visible, in a pouch on driver's door, or on driver's seat.
5. Place ID numbers and proper DOT name on packages.
6. Select proper DOT labels.
7. Select proper package based on quantity of material, cushioning materials if needed, proper closures, proper pressure, and good condition for use/reuse.
8. Legibly sign shipper's certification on shipping papers or Straight Bill of Lading form.
9. If you load/block or brace the load, you are responsible for doing it properly.
10. Determine if placards are needed and use appropriately.
 - Multiple placards near each other
 - On 4 sides of vehicle
 - Wording read horizontally
 - Three inches from other markings
 - Change as cargo changes
 - ID numbers on cargo tanks, portable tanks
11. If the material is a hazardous waste or hazardous substance, most, if not all, of the above steps will apply.

Figure 3-2-7
Driver's Checklist to Ensure Compliance
(Sheet 2 of 2)

12. Maintain emergency response information on vehicle in a readily visible location (e.g., door pouch). This may include either the DOT Emergency Response Guidebook (ERG) or Material Safety Data Sheet (MSDS). The DOT ERG is a government publication intended as a guide for first response to hazardous material incidents and is a small easy-to-read aid for the driver. Drivers must have this information in the vehicle. The ERG assists individuals in making the first critical decisions in a hazardous material incident. It includes a list of material by name, a list of materials by ID numbers, response guides which include a discussion of potential hazards, emergency actions, and first aid information.
13. No motor vehicle shall be driven unless the driver has satisfied himself/ herself that the following parts and accessories are in good working order, nor shall any driver fail to use or make use of such parts and accessories when and as needed:
 - Service brakes, including trailer brake connections
 - Parking (hand) brake
 - Steering mechanism
 - Lighting devices and reflectors
 - Tires
 - Horn
 - Windshield wiper or wipers
 - Rear-vision mirror or mirrors
 - Coupling devices
14. Discard shipping paper when hazardous materials are removed from vehicle.

Figure 3-2-8
Shipper's Checklist to Ensure Compliance
(Sheet 1 of 2)

CAUTION

When transporting, repacking, or breaking down shipments received from others for distribution, DO NOT assume the original shipments were correct.

Labeling

- Affix label to package near proper shipping name.
- Orient labels so that words are horizontal.
- Do not obscure labels - keep away from other markings.
- Ensure labels represent hazard class of materials.
- Multiple labels may be required for certain materials.
- Place multiple labels near each other.
- No labels required for Limited Quantity or ORM-D except Class 6 (Poisons).
- Tags are acceptable for small or irregularly shaped packages.

Marking

- Ensure proper DOT name and hazard ID (UN/NA) numbers are on packages.
- Liquids - Use "This End Up" mark for liquids in outer packages.
- Ensure "Inhalation Hazard" is used as appropriate.
- Marking must be durable, in English, printed or affixed to packages in contrasting color, unobscured, away from markings. Tags are acceptable.
- Place "ORM-D" marking on consumer commodity packages.

Figure 3-2-8
Shipper's Checklist to Ensure Compliance
(Sheet 2 of 2)

Packages

- Select appropriate DOT container or use original manufacturer container and outer package.
- Do not use tools which may damage containers.
- Watch for signs of leaking or damaged containers. Do **not** transport leaking packages.
- No smoking when loading/unloading explosives, oxidizers, flammables.
- Be aware of incompatible materials when loading/unloading or storing.
- Empty packages are not regulated by the DOT. Empty means that the hazard has been removed/purged from the container.
- Cargo tanks and portable tanks of hazardous materials must be properly marked and/or placarded.
- Ensure package is securely closed, clean, and compatible with contents.

Figure 3-2-9
Hazardous Material Accident Reporting Checklist

IDENTIFY the hazard(s). Placards, labels, shipping papers, and/or driver knowledge are sources of information. Consult the DOT Emergency Response Guide **before** placing yourself or others at risk.

- If necessary, approach the area cautiously from upwind.
- Secure the area. Move and keep people away.
- Do not walk in or touch spilled material.
- Avoid breathing fumes, smoke, and vapors.

OBTAIN HELP

1. Contact the following, as appropriate:

- Emergency Response Personnel (Police/Fire/911)

NOTE

A bystander may be asked to call rather than leave the area.

- Seabrook Station (603) 474-9521. Request to be connected to the Control Room.

State your name, location, and telephone number. Give a brief description of the emergency, including the hazardous materials involved and extent of injuries.

2. Contact your supervisor, if possible.

WRITTEN REPORT

A written report is required to be sent to the DOT for certain hazardous material accidents per 49 CFR 171.15 and 171.16. Each carrier who transports hazardous materials shall report in writing, in duplicate, on DOT Form F5800.1 to the Department within 30 days of the date of discovery, each incident that occurs during the course of transportation (including loading, unloading, and temporary storage) in which any of the circumstances set forth in paragraph 171.15(a) occurs or there has been an unintentional release of hazardous material from a package (including a tank).

3.0 POLYCHLORINATED BIPHENYLS (PCBs)

3.1 Purpose

This section outlines the system policy and general instructions for marking, handling spills, storage, disposal, inspections, notifications and reporting of Polychlorinated Biphenyls (PCBs).

3.2 General

Polychlorinated Biphenyls (PCBs) are a group of synthetic chlorinated organic compounds. Commercially produced since 1929, PCBs, generically known as askarel, were initially used as dielectric fluid in transformers and capacitors. The advantages of PCBs as an electrical insulator included its nonflammability, thermal stability and resistance to degradation.

Common trade names of PCBs used in the manufacture of transformers and capacitors include the following:

Aroclor	Chlorinol	Fenclor	Nonflammable Liquid
Arochlor B	Chlorphen	Hyvol	Pehnochlor
ALC	Clophen	Inclor	Pydraul
Apirolio	Clorinol	Inerteen	Pyralene
Asbestol	Diaclor	Keneclor	Pyranol
ASK	DK	Kenneclor	Pyroclor
Askarel	Dykanol	Magvar	Saf-T-Kuhl
Adkarel	EEC-18	MCS-1489	Santotherm
Capacitor 21	Elemex	No-Flamol	Santovac 1 and 2
Chlorextol	Cucarel	Nepolin	

3.3 Regulations

1. The PCB regulations of May 31, 1979, banned the manufacture, distribution in commerce and use of PCBs unless in a "totally enclosed manner." It also detailed specific storage and disposal requirements.
2. Continued use of existing PCB and PCB-contaminated equipment is authorized with three exceptions. The first and second involve equipment that may pose an unnecessary risk to human food and animal feed, the third involves equipment that may pose a high risk of exposure to byproducts of PCBs that may be involved in a fire. This third category involves use restrictions for PCB transformers including local fire department and nearby building owner notification, added electrical protection and specific response actions to be taken in the event of a fire involving the release of PCBs.

3.4 Applicability

The guidance in this section applies to all sources and potential sources of PCBs located at Seabrook Station. Figure 3-3-1 provides a listing of sources of PCBs.

3.5 References

1. EPA - 40 CFR 761 (PCBs)
2. DOT - 49 CFR part 172 (DOT - Hazardous Materials)
3. EPA - 40 CFR part 112 (SPCC)
4. NH DES - Env Ws 412 (Releases of Petroleum Products)

3.6 Definitions

See Figure 3-3-2, Definitions.

3.7 Responsibilities

3.7.1 Hazardous Waste Coordinator

Coordinates spill cleanup, sampling, marking, storage and disposal of PCBs.

3.7.2 Shift Manager

Provides immediate reports to federal, state and local regulatory agencies.

3.7.3 Licensing Manager

Provides written reports to regulatory agencies. Maintains the records required by this section.

3.8 Allowed Assumptions for Equipment While in Use

Federal regulations allow certain assumptions to be made regarding transformers and electrical equipment currently in use.

NOTE

PCB content **must** be determined prior to equipment disposal for electrical equipment and capacitors assumed to be non-PCB or PCB-free while in use.

1. The owner of mineral oil-filled electrical equipment, including transformers, manufactured before July 2, 1979, for which PCB concentration has not been established, must assume the equipment is PCB-contaminated (i.e., contains 50 ppm or greater PCB, but less than 500 ppm PCB). If date of manufacture is unknown, but the dielectric fluid is known to be mineral oil, the owner must assume the unit to be PCB-contaminated.

2. Transformers containing < 1.36 kg of dielectric fluid and manufactured prior to July 2, 1979, may be assumed to be PCB-free while in use.
3. The owner or operator of oil-filled electrical equipment, including transformers, manufactured after July 2, 1979, for which PCB concentration is not established, may assume the equipment is non-PCB (i.e., contains less than 50 ppm PCB).
4. The owner or operator of a transformer manufactured prior to July 2, 1979, and filled with a fluid other than mineral oil for which PCB concentration has not been established, must assume the transformer is a PCB transformer (i.e., contains 500 or greater ppm PCB) if it contains 1.36 kg (3 lbs.) or more of fluid. The assumption requirement does not apply to "dry" transformers (those containing no fluid). If date of manufacture and the type of dielectric fluid is unknown, the unit must be assumed to be PCB (i.e., ≥ 500 ppm).
5. All capacitors manufactured before July 2, 1979 must be assumed to be PCB capacitors with a PCB concentration > 500 ppm unless marked as non-PCB by the manufacturer. Capacitors manufactured after July 2, 1979 may be assumed to be non-PCB capacitors while in use.

3.9 Marking

Each of the following owned by FPLE Seabrook shall be labeled with an approved mark (see Figure 3-3-3, Marking and Recordkeeping Requirements):

NOTE

All marks are to be placed in a position on PCB items or transport vehicles so that they can be easily read by any person inspecting or servicing the item or vehicle.

1. All PCB Containers.
2. All PCB Transformers.
3. All Large High Voltage PCB Capacitors.
4. All equipment containing a PCB Transformer or a PCB Large High Voltage Capacitor.
5. All PCB Large Low Voltage Capacitors.
6. Electric motors using PCB coolants.
7. Hydraulic systems using PCB hydraulic fluids.
8. Heat transfer systems (other than PCB Transformers) using PCBs.
9. PCB Article Containers containing articles or equipment that must be marked.
10. Each storage area used to store PCBs and PCB Items for disposal.

11. All vault doors, machinery room doors, fences, hallways or means of access, other than grates or manhole covers, to a PCB Capacitor. This mark must be placed so it can be easily read by emergency response personnel fighting a fire involving this equipment.

If one or more PCB Large High Voltage Capacitors are installed in a protected location such as on a power pole, or structure, or behind a fence, then the pole, structure, or fence shall be marked and a record or procedure identifying the PCB Capacitor shall be maintained by the owner or operator at the protected location.

12. All transport vehicles (front, back and each side) when transporting ≥ 45 kg of PCB-containing liquid in concentrations ≥ 50 ppm. Marking is triggered by 45 kg total weight of the material containing 50 ppm or more of PCBs irrespective of the weight of the PCB molecules in the material.

3.10 Handling Spills

NOTE

In addition to the EPA's PCB Spill Cleanup Policy provisions, other CERCLA or RCRA requirements may apply to spill remediation activities particularly if other regulated constituents are present.

1. Based on a current inventory of all oil-filled electrical equipment on this site it has been determined that a spill would most likely occur from a failed PCB Capacitor.
2. The EPA generally expects the decontamination standards of the PCB Spill Cleanup Policy to apply. Occasionally, some small percentage of spills covered by the policy may warrant more stringent cleanup requirements because of additional routes of exposure or significantly greater exposures than those assumed in developing the final standards of this policy. While EPA Regional Offices have the authority to require additional cleanup in these circumstances, the Regional Administrator must first make a finding based on the specific facts of a spill that additional cleanup must occur to prevent unreasonable risk. Spills in proximity to sensitive human or environmental areas (residential areas, schools, endangered species habitats, wetlands, etc.) may be subject to more stringent remediation requirements as determined by the EPA Regional Administrator based on the site characterization notification.
3. The following actions shall be taken as quickly as possible and within no more than 24 hours after being notified or becoming aware of a spill:
 - a. The employee on site shall immediately notify the Control Room that there has been a spill. The employee shall provide pertinent information such as location, source, amount, PCB concentration of oil (estimate if necessary), etc.
 - b. Contain all spills and leaks as soon as possible. Care must be taken to prevent the flow or leak of any liquid into any storm drain, sewer, municipal water supply, waterway or other high visibility areas.
 - c. Requirements for personal protection when in contact with or in the immediate vicinity of PCB material have been developed and issued.

- d. For spills involving 1 pound or more of PCBs, the responsible party shall notify the EPA Regional Office, the NRC (National Response Center), and DES Air Resources Division. The 1 lb. threshold applies to the weight of the PCB waste material, not the specific PCB component in the waste.
- e. Steps must be taken to effectively cordon off and restrict access to the area where any visible traces of the spill is evident. A buffer zone of three feet around the spill must be established and signs posted in a clearly visible manner advising persons nonessential to the cleanup to avoid the area to minimize the spread of contamination as well as avoiding the potential for human exposure.
- f. The area of visible contamination shall be documented and recorded, including the center and extent of the visible trace area. If a spill has occurred and there are no visible traces, a record of that fact shall be made and Licensing will contact the regional office of the EPA for guidance in completing statistical sampling of the spill area to establish spill boundaries.
- g. Cleanup of all visible traces of fluid on hard surfaces and the removal of all visible traces of the spill on other areas such as sand, soil, gravel, etc., must be initiated within 24 hours of notification of the spill.

If oil has spilled onto vegetation or soil, remove vegetation visibly contacted by the oil. Remove soil visibly contacted plus a one foot buffer zone on all sides. Remove soil to a minimum of 10 inches. Do not replace soils removed since adequacy of cleanup must be determined by post-cleanup sampling.

Retain barricade around entire spill area as originally established until the spill cleanup is determined to be complete by analyses of the post-cleanup sampling.

- h. If response to the site has been delayed and there are insufficient visible traces remaining, an estimate of the contaminated area must be made based on the amount of material missing in the equipment or container. The area of suspected contamination must be cordoned off immediately and statistically based sampling completed as soon as practical.
- i. For spills from transformers containing PCBs or potentially containing PCBs, cleanup must be initiated within 48 hours of discovery. A completion time limit has not been established, but will be decided by the EPA on a case by case basis. The EPA expects that decontamination will be achieved promptly in all cases and will consider promptness of completion in considering whether the responsible party made good faith effort to clean up in accordance with this policy.
- j. All contaminated solid surfaces shall be cleaned up to 10 mg/100 sq. cm. This is determined by the standard wipe test. Use only approved decontamination procedures listed in 40 CFR 761.79. If a decontamination method under consideration is not listed, EPA approval is required prior to use as the method may constitute disposal.

- k. Soil contaminated by the spill will be decontaminated to 10 ppm PCBs by weight, provided that the soil is excavated to a minimum of 10 inches. All excavated soil will be replaced with clean soil containing < 1 ppm PCBs for the spill site to be considered restored.
- l. The responsible party shall document the cleanup with records of decontamination. The records must be maintained for a period of 5 years. Records shall include the following information:
 - (1) Identification of source of spill
 - (2) Date and time spill occurred (estimate if necessary)
 - (3) Date and time cleanup completed
 - (4) Description of spill location and nature of material contaminated
 - (5) Precleanup sampling data (no visible trace spill)
 - (6) Brief description of solid surfaces cleaned
 - (7) Approximate depth of excavation and amount of soil removed
 - (8) Postcleanup verification sampling data (>500 ppm spill or a no visible trace spill)

3.11 Storage for Disposal

- 1. Temporary storage of the following PCB items scheduled for disposal may occur for a maximum of 30 days provided that a notation is attached to the PCB item indicating the date the item was removed from service:
 - a. Non-leaking PCB Articles and PCB Equipment.
 - b. Leaking PCB Articles and PCB Equipment if the PCB items are placed in a non-leaking PCB Container that contains sufficient absorbent materials to absorb any liquid PCBs.
 - c. PCB Containers containing non-liquid PCBs such as contaminated soil, rags, and debris.
- 2. Temporary storage areas shall be located in areas least susceptible to accidental damage.
- 3. All equipment stored in temporary storage areas must be labeled as in §3.9.
- 4. All PCB Articles and PCB Containers in storage shall be checked for leaks at least once every 30 days. Any leaking PCB Article and PCB Container shall be transferred immediately to properly marked, non-leaking containers.
- 5. All items stored in the temporary storage area must be shipped for disposal within 30 days of the date removed from service for disposal.

6. If storage is to extend beyond 30 days, the more restrictive conditions of 40 CFR 761.65 would apply.
7. All storage areas must have floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, nonporous surface as defined in 40 CFR 761.3 to prevent or minimize penetration of PCBs. The EPA recommends that nonporous surfaces be used for curbing and flooring of storage units as cleanup of nonporous surfaces is easier and less costly. The EPA also recommends that porous surfaces be rendered nonporous by coating them with an epoxy sealant.
8. Any mixed waste containing PCBs at concentrations ≥ 50 ppm is subject to the storage and disposal requirements of 40 CFR 761. PCB/radioactive mixed waste removed from service for disposal is exempt from the 1-year time limit for storage provided that a written record documenting all continuing attempts to secure disposal is maintained and the written record is available for inspection or submission, if requested by the EPA.

3.12 Records

1. Licensing shall develop and maintain such records and documents as required under 40 CFR 761 Subpart J, "General Records and Reports." (See Figure 3-3-3, Marking and Recordkeeping Requirements.)

NOTE

Unless otherwise noted in the regulations, references to weights or volumes in part 761 apply to the total weight or volume of the PCB containing material (oil, soil, etc.), not the calculation weight or volume of the PCB molecules within the material.

2. Each owner or operator of a facility, other than a commercial storer or disposer of PCB waste, using or storing at any one time 45 kilograms (approximately 100 lbs) or more of PCBs in PCB Containers, or one or more PCB Transformers, or 50 or more PCB Large High or Low Voltage Capacitors, shall develop and maintain Annual Records and written Annual Document Logs on the disposition of all PCBs and PCB items. These records and logs shall be prepared by July 1 of each year covering the previous calendar year (January through December). These records and logs shall be maintained for at least three years after the facility ceases to use or store PCBs and PCB items.

The Annual Document Log shall be available for inspection by authorized representatives of the EPA during normal business hours at the facility where they are maintained and each owner or operator of a facility subject to these requirements shall know the location of these records. The Annual Document Log requirement does not currently apply to Seabrook Station as the threshold requirements are not met.

- a. Annual Records must include
 - (1) all signed PCB manifests generated during the calendar year.
 - (2) all certificates of PCB disposal received during the calendar year.

b. Annual Document Log must contain

- (1) the name, address, and EPA identification number of the facility and the calendar year covered by the log.
- (2) the unique manifest number of each manifest generated by the facility during the calendar year.
- (3) the serial number (if available) or other means of identifying each PCB Article (transformer, capacitor, etc.), weight in kilograms of PCB waste in each, date removed from service for disposal, date placed in transport for offsite storage or disposal, and date of disposal, if known.
- (4) a unique number identifying each PCB Container, a description of the contents (liquid, solid, soil, cleanup debris, etc.), including total weight of material in kilograms in each container, the first date material was placed in each PCB Container, the date each container was placed in transport for offsite storage or disposal, and the date of disposal, if known.
- (5) a unique number identifying each PCB Article Container, a description of the contents (pipes, capacitors, motors, pumps, etc.) including the total weight in kilograms of the contents of each PCB Article Container, date each PCB Article was placed in the PCB Article Container for disposal, total weight in kilograms of PCB Articles in each PCB Article Container, the date each PCB Article Container was placed in transport for offsite storage or disposal, and the date of disposal, if known.
- (6) the total number by specific type of PCB Articles and the total weight in kilograms of PCBs in PCB Articles, the total number of PCB Article Containers and total weight in kilograms of the contents of PCB Article Containers, the total number of PCB Containers and the total weight in kilograms of the contents of the PCB Containers, and the total weight in kilograms of bulk PCB waste that was placed in storage for disposal or disposed of during the calendar year.
- (7) the total number of Large Low or High Voltage PCB Capacitors remaining in service at the end of the calendar year.
- (8) the total weight in kilograms of any PCBs and PCB Items in PCB Containers, including the identification of container contents remaining in service at the end of the calendar year.

3.13 Processing and Disposal

1. In order to be burned for energy recovery, waste oil collected on site must meet the criteria for specification used oil in accordance with the provisions of Waste Management Rules ENV-Wm 807.02 and the facility Title V Air Emissions Permit. The specifications limit PCB content to < 2 ppm on a dry weight basis. Waste oil with a PCB content of ≥ 2 ppm may not be burned for energy recovery in space heaters currently in use at Seabrook Station.

Additionally, any waste oil containing ≥ 2 ppm PCBs may not be blended with other fuel oil or waste oil (dilution) to bring the waste oil into compliance with used oil specifications. Waste oil containing ≥ 2 ppm PCBs must be disposed of as hazardous waste in accordance with RCRA requirements. Waste oil containing ≥ 50 ppm PCBs must be disposed of as PCB waste in accordance with TSCA requirements.

2. PCB liquid waste to remediation waste from a PCB spill containing ≥ 500 ppm PCBs on a dry weight basis may only be disposed of at an EPA approved incineration unit in accordance with 40 CFR 761.75. The only known source of PCBs at Seabrook Station with concentrations of ≥ 500 ppm are PCB capacitors. Any leakage from these capacitors is considered a release requiring a spill response as described in §3.10.
3. If intact and not leaking, small PCB capacitors may be disposed of in a municipal landfill, however, the generator would be subject to liability under CERCLA in the event of any subsequent releases from the landfill. The EPA recommends that small PCB capacitors be disposed of at authorized PCB incineration units. Small PCB capacitors are properly disposed of by the Hazardous Waste Coordinator.
4. Incidental liquid waste that has become contaminated from exposure to nonliquid PCBs such as condensate, leachate, precipitation, and load separation are the only liquid PCB wastes permitted for landfill disposal. All other liquid PCB-contaminated waste streams require incineration or approved alternative disposal.
5. Drained PCB-contaminated electrical equipment, drained PCB articles, and waste oil containing > 50 ppm PCBs may be disposed of in an approved scrap metal recovery oven or smelter. This also includes metal surfaces which are included in PCB remediation wastes and PCB bulk product waste. Metal in PCB remediation waste includes scrap metal found in an industrial sludge lagoon or rinsed drums formerly used to contain cleanup solvents. Metal in PCB product waste includes pieces from disassembled drained PCB-contaminated transformers or metal surfaces coated with nonliquid PCBs such as painted pieces of fuel tanks. Nonmetal PCB remediation wastes (e.g., liquids, soils, sludges, and dredged sediments) and nonmetal PCB bulk product waste (e.g., shredder fluff and air handling system gaskets) are not approved for disposal in scrap metal recovery ovens and smelters.
6. PCB content is to be determined using ASTM Method D-4059, Standard Method for Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography, or other approved method outlined in SW-846, Test Methods for Evaluating Solid Waste.
7. Advanced written EPA approval is required for use of alternate disposal methods other than incineration.
8. Components in PCB-contaminated electrical equipment containing liquid PCBs must be removed prior to equipment disposal. PCB liquids must be disposed of in an authorized incinerator. The contaminated equipment from which PCBs have been removed may be disposed of in a TSCA approved disposal facility.

3.14 Manifests

NOTE

Unless otherwise noted in regulations, references to weights or volumes in part 761 apply to the total weight or volume of the PCB containing material (oil, soil, etc.), not the calculated weight or volume of the PCB molecules within the material.

1. A generator who offers PCB waste for transport to a commercial offsite storage or offsite disposal area shall prepare a manifest on EPA Form 8700-22 which shall specify:
 - a. For each PCB Article Container or PCB Container, a unique identifying number, the type of waste (i.e., soil, debris, etc.), earliest date removed from service for disposal, and weight in kilograms of the PCB waste.
 - b. For each article not in a PCB Container or PCB Article Container, a serial number or other identifying number, date removed from service for disposal, and the weight in kilograms of PCB waste in each PCB Article.
2. If the state to which the shipment is manifested, (i.e., the consignment state) supplies the manifest and requires its use, the generator must use that manifest.
3. If the consignment state does not supply the manifest and the generator state does supply the manifest and requires its use, the generator must use that manifest.
4. If both the consignment state and generator state supply the manifests and require their use, the generator must use the consignment state manifest.
5. If neither state supplies the manifest, the generator may obtain the manifest from any source.
6. The generator must designate one off-site commercial storage or disposal facility approved to handle the PCB waste. If the transporter is unable to deliver the waste, he must contact the generator for further instructions.
7. These requirements apply to all PCB waste over 50 ppm PCBs and also include all waste less than 50 ppm PCBs if the concentration was the result of dilution.
8. The generator must sign the manifest by hand, obtain a handwritten, signed, and dated copy of the manifest from the initial transporter, retain a copy for recordkeeping purposes, and give the remaining copies to the transporter.

9. If the generator does not receive a copy of the manifest signed by the commercial storer or disposer within 35 days after the waste was accepted by the initial transporter, the generator shall contact the initial transporter or owner/operator of the designated facility to determine the status of the waste. If a signed copy of the manifest is not received from the designated facility within 45 days of the date the waste was accepted by the initial transporter, an Exception Report shall be submitted to the EPA Regional Administrator. If a generator transfers PCBs or PCB Items to a disposer more than 9 months from the date of removal from service for disposal or has not received a Certificate of Disposal within 12 months from the date of removal from service for disposal, a One Year Exception Report must be filed with the EPA Regional Administrator within the next 45 days. The Hazardous Waste Coordinator will be responsible for initiating this function.
10. Disposal of all PCB material shall be the responsibility of the Hazardous Waste Coordinator.

3.15 Transport

NOTE

Unless otherwise noted in regulations, references to weights or volumes in part 761 apply to the total weight or volume of the PCB containing material (oil, soil, etc.), not the calculated weight or volume of the PCB molecules within the material.

The Hazardous Material Transportation Act (HMTA) is the basic federal safety net for hazardous materials in transit. Its intent is to adopt such measures which are deemed necessary to protect public health and safety during hazardous materials transport. The Department of Transportation (DOT) has adopted regulations covering all aspects of the safe transportation and handling of these materials by all modes of transport. These regulations include standards for packaging, labeling, marking and routing.

1. PCBs are a hazardous substance if a reportable quantity (RQ) is present. The RQ for PCBs is one pound. Askarel filled capacitors and transformers contain more than one pound of PCBs. The one pound threshold applies to the weight of the PCB waste material, not the specific PCB component in the waste.
2. All PCBs shipped for disposal must be listed on a manifest, EPA form 8700-22, which shall specify the following DOT proper shipping names:
 - a. For PCB oil: RQ, Polychlorinated Biphenyls, 9, Miscellaneous, UN 2315, PG III
 - b. For oil on soil which contains an RQ: RQ, Polychlorinated Biphenyls Mixture, 9, UN 2315, PG III
 - c. For PCB Capacitors: RQ, Polychlorinated Biphenyls Solids, UN 2315, PG III

Figure 3-3-1
Sources and Potential Sources of PCBs

(Sheet 1 of 3)

NOTE

Pole-mounted transformers on site, controlled by the Exeter and Hampton Electric Company or PSNH have been tested and confirmed to be PCB free.

The following sources or potential sources of PCBs are located at Seabrook Station:

- The following electrical equipment contains large capacitors which have been confirmed by the manufacturer to contain PCBs:

<u>Plant Equipment ID</u>	<u>Number of Capacitors</u>	<u>Capacitor Model, Style</u>
1-CO-P30A	3	9L18-BCG301
1-CO-P30B	3	9L18-BCG301
1-CO-P30C	3	9L18-BCG301
2-CO-P30A	3	9L18-BCG301
2-CO-P30B	3	9L18-BCG301
2-CO-P30C	3	9L18-BCG301

- Small oil-filled capacitors used in various electrical components on site and manufactured prior to July 1, 1978. Since that time, small capacitors are required to be marked by the manufacturer with the statement "No PCBs." Small oil-filled capacitors must be assumed to contain PCBs if they are not marked with this statement.

The following electrical equipment contains small capacitors containing PCBs:

<u>Plant Equipment ID</u>	<u>Number of Capacitors</u>	<u>Capacitor Model, Style</u>
1-ED-CP104* (Unit 1)	2	R7C (Cat. #28F5315FC)
Generator Excitation System	2	R8C (Cat. #28F5315FC)
Control Panel	2	R9C (Cat. #28F5315FC)
	1	1T1C (Cat. #23F1089FC)
	1	1T2C (Cat. #23F1089FC)
	1	6CDA
	1	6CDB

*1-ED-CP104 internal components were removed with static exciter installation (05DCR007). The control panel house is being utilized. The internal components were placed in storage.

Figure 3-3-1
Sources and Potential Sources of PCBs

(Sheet 2 of 3)

<u>Plant Equipment ID</u>	<u>Number of Capacitors</u>	<u>Capacitor Model, Style</u>
2-ED-CP104 (Unit 2)	1	2T1C (Cat. #28F1397FC)
Control Panel in Storage	1	2T2C (Cat. #28F1397FC)
	1	A9C (Cat. #23F1056FC)
	1	A1C (Cat. #23F1056FC)
	1	A2CC (Cat. #23F1056FC)
1-GSC-CP-41	1	(Cat. #23F1227FB)
1-DG-CP-75A	1	C2 (Cat. #28F5365FA)
	1	C3 (Cat. #28F5365FA)
	1	C4 (Cat. #28F5365FA)
	1	C5 (Cat. #28F5361FC)
	1	C6 (Cat. #28F5361FC)
	1	C7 (Cat. #28F5361FC)
1-SY-SWG-GCB-169	8	
1-SY-CP-84-85 <GB2>	8	
<GB3>	8	
<GB4>	16	
<GB5>	16	
<GB6>	8	
<G56>	36	
<G58>	36	
<G60>	36	

3. Fluorescent light ballasts, typically manufactured prior to July 1, 1978. Ballasts manufactured after this date are required to be labeled by the manufacturer with the statement "No PCBs." Any unlabeled light ballasts should be treated as if they contained PCBs.
4. Electrical equipment, appliances, and engine driven equipment, typically manufactured prior to July 1, 1978. This includes
 - Electrical equipment containing capacitors, voltage regulators, or small transformers.
 - Appliances such as refrigerators or air conditioning units.
 - Engine drive equipment such as generators, compressors, automotive vehicles, and off-road equipment.

Figure 3-3-1
Sources and Potential Sources of PCBs
(Sheet 3 of 3)

5. Electrical substations contain the following equipment containing or assumed to contain PCBs:

Sundial Substation

Nine potential transformers (3 from each substation were removed and shipped as hazardous waste to Transformer Service, Inc. in Concord, NH on March 7, 2002.

<u>Equipment</u>	<u>Number</u>	<u>Manufacturer/Model</u>	<u>Serial No.</u>
Electrical Bushings	3	PSC Cable Terminal Cat. No. J9284-2 Model C Max conductor size 500 MCM 34.5KV, 600 amp, 200KV BIL	
		Westinghouse Type S Drw. #53B2233 34.5KV, 1955	1R3633-1 1R3633-2 1R3633-3
Small Capacitors	2	Unknown	51743278

Lincoln Park Substation

Nine potential transformers (3 from each substation were removed and shipped as hazardous waste to Transformer Service, Inc. in Concord, NH on March 7, 2002.

West Rye Substation

Nine potential transformers (3 from each substation were removed and shipped as hazardous waste to Transformer Service, Inc. in Concord, NH on March 7, 2002.

6. The following lighting fixture models contain small PCB capacitors as noted below:
- GE Luminaire Lamp W, Cat. # C730G519 contains GE capacitor model 72F697.
 - Pyle National Series VM lighting fixtures contain GE capacitor model 72F606.

Figure 3-3-2

Definitions

(Sheet 1 of 4)

1. Annual Document Log: The detailed information maintained at the facility on the PCB waste handling at the facility.
2. Capacitor: A device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:
 - Small Capacitor: A capacitor which contains less than 1.36 kg (3 lbs.) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kgs. of dielectric fluid. A capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg of dielectric fluid. A capacitor whose volume is between 1.639 and 3,278 cubic centimeters may be considered to contain less than 1.36 kg of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lbs.).
 - Large High Voltage Capacitor: A capacitor which contains 1.366 kg or more of dielectric fluid and which operates at 2,000 volts (a.c. or d.c.) or above.
 - Large Low Voltage Capacitor: A capacitor which contains 1.36 kg or more of dielectric fluid and which operates below 2,000 volts (a.c. or d.c.).
3. Commercial Storer: The owner or operator of a facility who stores PCB waste generated by others.
4. Designated Facility: The Offsite Disposer or Commercial Storer of PCB waste designated on the manifest as the receiving facility.
5. Disposal: Intentionally or accidentally to discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB Items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, decontaminating, or confining PCBs and PCB Items.
6. Disposer: Any person who owns or operates a facility approved by the EPA for the disposal of PCB waste.
7. Double Wash/Rinse: A minimum requirement to cleanse solid surfaces (both impervious and nonimpervious) twice with an appropriate solvent or other material in which PCBs are at least 5% soluble by weight. A volume of PCB free fluid sufficient to cover the contaminated surface completely must be used in each wash/rinse. The wash/rinse requirement does not mean the mere spreading of solvent or other fluid over the surface, nor does the requirement mean a once-over wipe with a soaked cloth. Precautions must be taken to contain any run-off resulting from the cleansing and to dispose properly of wastes generated during the cleansing.

Figure 3-3-2

Definitions

(Sheet 2 of 4)

8. Generator of PCB Waste: Any person whose act or process produces PCBs that are regulated for disposal, or whose act first causes PCBs or PCB Items to become subject to disposal requirements, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated and therefore subject to disposal requirements. This includes all of the sites of PCB waste generation owned or operated by the person who generates PCB waste.
9. High Concentration PCBs: PCBs that contain 500 ppm or greater PCBs.
10. Impervious Solid Surfaces: Solid surfaces which are nonporous and thus unlikely to absorb PCBs within the short period of time required for cleanup including but not limited to, metals, glass, aluminum siding, and laminated surfaces.
11. Leak or Leaking: Any instance in which a PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.
12. Low-Concentration PCBs: PCBs that are tested and found to contain less than 500 ppm PCBs, or those PCB-containing materials which EPA requires to be assumed to be at concentrations below 500 ppm (i.e., untested mineral oil dielectric fluid.)
13. Manifest: The shipping document EPA form 8700-22 and any continuation sheet attached to EPA form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form.
14. Mark: The descriptive name, instructions, cautions, or other information applied to PCBs and PCB Items.
15. Marked: Applying a legible mark on PCB Items and PCB storage areas and transport vehicles by painting, fixation of an adhesive label, or by any other method that meets the requirement of these regulations.
16. Nonimpervious Solid Surfaces: Solid surfaces which are porous and are more likely to absorb spilled PCBs prior to completion of cleanup; nonimpervious solid surfaces include, but are not limited to, wood, concrete, asphalt, and plasterboard.
17. Nonrestricted Access Area: Any area other than restricted access, outdoor electrical substations, and other restricted access locations.
18. Other Restricted Access (Non Substation) Locations: Areas other than electrical substations that are at least 0.1 km from a residential/commercial area and limited by man-made barriers.

Figure 3-3-2

Definitions

(Sheet 3 of 4)

19. Outdoor Electrical Substations: Outdoor, fenced-off, and restricted access areas used in the transmission and/or distribution of electrical power. For the purpose of this policy rule, outdoor electrical substations are defined as being located at least 0.1 km from a residential/commercial area. Those located less than 0.1 km from a residential/commercial area are considered to be residential/commercial areas.
20. PCB or PCBs: Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such substances.
21. PCB Article: Any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. PCB Articles includes, capacitors, transformers, electric motor pumps, pipes, etc.
22. PCB Article Container: Any package, can, bottle, bag, barrel, drum, tank or other device used to contain PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.
23. PCB Contaminated Electrical Equipment: Any electrical equipment that contains 50 ppm or greater PCBs, but less than 500 ppm PCBs, or if drained of liquid, having a surface contamination level of $> 10 \text{ mg}/100\text{cm}^2$ and $< 100 \text{ mg}/100\text{cm}^2$. Oil filled electrical equipment, other than circuit breakers, reclosers, and cable, whose PCB concentration is unknown must be assumed to be PCB Contaminated Electrical Equipment including, but not limited to, transformers, voltage regulators, switches and sectionalizers.
24. PCB Item: Any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has as a part of it any PCB or PCBs.
25. PCB Transformer: Any transformer that contains 500 ppm PCBs or greater.
26. Residential/Commercial Areas: Those areas where people live or work in other than manufacturing or farming industries. Residential areas include housing and the property on which housing is located, as well as playgrounds, roadways, sidewalks, parks, and other similar areas within a residential community. Commercial areas are typically accessible to both members of the general public and employees and include public assembly properties, institutional properties, stores, office buildings, and transportation centers.
27. Soil: All vegetation, soil, and other ground media including, but not limited to, sand, grass, gravel and oyster shells. It does not include concrete and asphalt.

Figure 3-3-2

Definitions

(Sheet 4 of 4)

28. Spill: Both intentional and unintentional spills, leaks, and other uncontrolled discharges where release results in any quantity of PCBs running off or about to run off the external surface of the equipment as well as the contamination resulting from those releases. This section applies to spills of 50 ppm or greater PCBs. The concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the PCBs were spilled. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm, but less than 500 ppm PCBs and is subject to the relevant requirements of this section.
29. Spill Area: The area of soil on which visible traces of the spill can be observed plus a buffer zone of one foot beyond the visible traces. Any surface or object within the visible trace area or on which visible traces of the spilled material are observed is included in the spill area.
30. Spill Boundaries: The actual area of contamination as determined by post-cleanup verification sampling or by pre-cleanup sampling to determine actual spill boundaries.
31. Standard Wipe Test: For spills of high concentration PCBs on solid surfaces, cleanup to numerical standards and sampling by a standard wipe test to verify that the numerical standards have been met. A standard size template (10 cm X 10 cm) will be used to delineate the area of the cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Further, EPA requires the collection and testing of field blanks and replicates.
32. Storage for Disposal: Temporary storage of PCBs that have been designated for disposal.
33. Transporter of PCB Waste: Any person engaged in the transportation of regulated PCB waste for purposes other than consolidation by a generator.

Figure 3-3-3
PCB Marking and Recordkeeping Requirements
(Sheet 1 of 2)

Regulated Item	Marking Requirements	In-Service Records	Disposal and Storage-for-Disposal Records
PCB Containers	M<INF>L	<ul style="list-style-type: none"> - Total Kg weight of all containers* - Description of contents* 	<ul style="list-style-type: none"> - Date container - Serial or ID number - Description of contents* - Dates for removal, transport, disposal* - Total number and Kg weight*
PCB Article Containers	M<INF>L	<ul style="list-style-type: none"> - Total Kg weight of all containers* - Description of contents* 	<ul style="list-style-type: none"> - Date container - Serial or ID number* - Description of contents* - Dates for removal, transport, disposal* - Total number and Kg weight*
PCB Transformers	M<INF>L or approved mark on access to unit (i.e., vault doors)	<ul style="list-style-type: none"> - Total number of units* - Total Kg weight* - Inspection and maintenance - Registration with EPA - Record of sale 	<ul style="list-style-type: none"> - Date article - Serial or ID number* - Kg of fluid in each* - Dates for removal, transport - Total number and Kg weight*
PCB Large High or Low Voltage Number* Capacitors	M<INF>L on unit or on protected location	<ul style="list-style-type: none"> - Total number* (protected location records if applicable) - Record of sale 	<ul style="list-style-type: none"> - Date article - Serial or ID number - Kg of fluid in each* - Dates for removal, transport, disposal* - Total number and Kg weight*
PCB Small Capacitors	**		
PCB-Contaminated Electrical Equipment	Not Required	<ul style="list-style-type: none"> - Record of sale 	Not Required (once drained)
PCB Equipment that Contains PCB Large Capacitors or PCB Transformers	M<INF>L	Records required for PCB Large Capacitors or PCB Transformers	Records required for PCB Large Capacitors or PCB Transformers

Figure 3-3-3
PCB Marking and Recordkeeping Requirements
 (Sheet 2 of 2)

Regulated Item	Marking Requirements	In-Service Records	Disposal and Storage-for-Disposal Records
Natural Gas Pipelines, Compressors, Appurtenances, Air Compressor Systems	M<INF>L on above ground sources of PCB liquids	≥ 2 ppm	≥ 50 ppm
Bulk PCB Waste	M<INF>L on container		- Kg weight/quantity dates of each batch in or out. Also, disposition of each batch out.
Storage Areas	N<INF>L		- Annual records as required under Section 761.180 - Records of attempts to comply with 1-year limit (if necessary)
Transport Vehicles	M<INF>L if contains a PCB Transformer or 45kg liquid PCBs		
PCB Motors, Hydraulic, and Heat-Transfer Systems	M<INF>L NOTE: Use of these items is longer authorized.		

* Annual reporting requirement.

** Manufacturers are required to mark non-PCB Large Low Voltage capacitors, small capacitors, and fluorescent light ballasts with a "No PCBs" label until 7/1/98.

4.0 USE OF PESTICIDES AND HERBICIDES

4.1 Purpose

This section outlines the requirements for the use and control of pesticides and herbicides at Seabrook Station.

4.2 General

Seabrook Station personnel may need to apply pesticides or herbicides on site in order to mitigate problems such as insect infestations, weed overgrowth or pigeon habitation. Other pesticide products in use on site include disinfectant cleaning products, and diesel fuel additives to control biological growth in fuel storage tanks. Pesticides and herbicides are regulated federally by EPA and in New Hampshire by the Department of Agriculture's Division of Pesticide Control. The application of pesticides or herbicides at a facility like Seabrook Station generally requires that personnel applying the pesticide or herbicide must be licensed by the state and, in some cases, have a special permit. In all cases, pesticides and herbicides must be registered by the NH Department of Agriculture, Division of Pesticide Control in order to be used in the state.

4.3 Regulations

1. Federal Statutes

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

2. Applicable Federal Regulations

- a. 40 CFR 152 - Pesticide Registration and Classification Procedures
- b. 40 CFR 155 - Registration Standards
- c. 40 CFR 156 - Labeling Requirements for Pesticides and Devices
- d. 40 CFR 157 - Packaging Requirements for Pesticides and Devices
- e. 40 CFR 162 - State Registration of Pesticide Products
- f. 40 CFR 168 - Statements of Enforcement Policies and Interpretations
- g. 40 CFR 170 - Worker Protection Standard
- h. 40 CFR 171 - Certification of Pesticide Applicators

3. State of New Hampshire Revised Statutes Annotated (RSAs)

RSA Chapter 430, Insects, Pests and Plant Diseases

4. The New Hampshire Code of Administrative Rules, Department of Agriculture, Markets and Foods, Division of Pesticide Control, Pes 100-1103.

4.4 Applicability

This section applies to any Seabrook Station personnel involved in the selection, or application of pesticides or herbicides.

4.5 References

1. Expendable Products Control Manual (NAEP), procedure EP 2.1, Control of Expendable/Chemical Products

4.6 Definitions

Pesticide - under State rules, "pesticide" means

1. Any chemical or biological agent used to control a pest, including but not limited to, the following materials:
 - a. Acaricides or miticides
 - b. Insecticides
 - c. Herbicides
 - d. Dessiccants
 - e. Defoliants
 - f. Fungicides
 - g. Molluscicides
 - h. Repellents
 - i. Algaecides
 - j. Rodenticides
 - k. Disinfectants
 - l. Fumigants
2. Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, fungi, weeds, or other forms of plant or animal life or viruses the board declares to be a pest, except viruses on or in living man or other animals, and any substances or mixture of substances intended for use as a plant regulator, defoliant, or dessiccant.

4.7 Responsibilities

4.7.1 Licensing Manager

1. Determines which pesticides and herbicides may be used at Seabrook Station for specific applications and whether a permit and/or license is required.
2. Applies for applicable permits from the NH Department of Agriculture, Division of Pesticide Control.

3. Confirms annually that pesticide products in site inventories are registered with the NH Department of Agriculture, Division of Pesticide Control. Notifies the Inventory Department to remove products from inventory when product registrations are not renewed.
4. Ensures that designated station personnel maintain commercial pesticide applicator licenses and receive required training.
5. Maintains required pesticide application records and submits annual pesticide use reports.

4.7.2 Facilities and Site Support Manager

1. Identifies the need for the use of a pesticide or herbicide for a specific application.
2. Determines whether pesticides or herbicides are applied by FPLE Seabrook personnel or a licensed contractor.

4.7.3 Inventory Department Supervisor

Responsible for the removal of pesticide products from inventory when notified that product registrations are no longer maintained with the NH Department of Agriculture, Division of Pesticide Control.

4.7.4 Hazardous Waste Coordinator

Responsible for the proper disposal of residual or expired pesticide products used on site.

4.8 **Requirements**

4.8.1 Licenses and Special Permits

1. Herbicides

The application of a herbicide at Seabrook Station requires both a license and a special permit. Improper use of herbicides can have undesirable effects on the sensitive salt marsh environment surrounding Seabrook Station.

2. Pesticides

Certain pesticides, such as those used to control the roosting of pigeons may be applied by FPLE Seabrook personnel without a license or special permit. Division of Pesticide Control regulations allow certain general use pesticides to be used in non-food areas in buildings and property immediately adjacent to buildings by personnel responsible for the care of buildings.

3. Biocides

The most significant use of biocide at Seabrook Station is the application of sodium hypochlorite in the circulating water system, service water system, service water cooling tower, and the fire protection system. Sodium hypochlorite is regulated as a general use pesticide product. Application does not require supervision by a certified licensed applicator.

Other biocide application activities include the addition of a biocide to diesel fuel oil storage tanks to control the growth of microorganisms that contribute to particulate formation and corrosion.

4. Labeling of Pesticide Products

All pesticide products are subject to specific labeling requirements under FIFRA.

Manufacturer's labels must appear on all tanks and containers used in the application or storage of the product. When a product is dispensed from the manufacturer's original container to any other container, a copy of the manufacturer's label must also be transferred to the new container.

5. Storage

All pesticide storage areas must be identified with warning signs at all entrance points. Pesticide storage areas on site include the following:

- Production warehouse
- Chlorination building, sodium hypochlorite tank room
- Fire Pumphouse, west room
- Cooling Tower Pump room

4.9 Instructions

4.9.1 Chemical Review

As with any expendable product, before use, determine whether the pesticide has been reviewed per EP 2.1, Control of Expendable/Chemical Products. If not, initiate a chemical review per EP 2.1.

4.9.2 Surveillance Requirements

Pesticide bulk containers and storage tanks are subject to weekly visual inspections. Secondary containments are subject to monthly visual inspections.

4.9.3 Recordkeeping

Records are maintained documenting the pesticide products applied, the application areas, the concentrations, and the quantities used for all applications performed by licensed personnel.

4.9.4 Reporting Requirements

Annual pesticide application reports are submitted to the NH Department of Agriculture, Division of Pesticide Control for the period ending October 31, on or before December 1.

5.0 SUMMARY OF CHANGES

Rev. 40:

Deleted the following: There are several satellite storage areas in general areas on site, such as the Turbine Building and other buildings in the protected area. For these general locations, the Hazardous Waste Coordinator is defined as the operator generating the waste. Wastes stored at Satellite Storage locations are collected on a daily basis during the work week. Also updated company name and deleted reference to canceled manual (NASA).

Rev. 39:

Throughout chapter, changed Regulatory Compliance Supervisor and Regulatory Programs Manager to Licensing Manager and Regulatory Compliance to Licensing.

Rev. 38:

In §3.4, revised applicability to indicate that guidance applies to sources and potential sources of PCBs.

Relocated sources of PCBs in §3.4 to new Figure 3-3-1, Sources and Potential Sources of PCB. Renumbered existing figures.

Updated Figure 3-3-1, item 1, to reflect location of components associated with 1-ED-CP104 and 2-ED-CP104 and revised information in item 5 to indicate that potential transformers were removed from substations.

Deleted old Figure 3-3-3, PCB Signs, as a picture of the sign is not required.

Rev. 35 through Rev. 37:

This chapter was unaffected by this revision to the manual.

Rev. 34:

In §2.0 incorporated reference to Hazardous Materials Transportation Security Plan and added new record retention requirement for DOT shipping papers.

Rev. 33:

This chapter was unaffected by this revision to the manual.

Rev. 32:

Job titles and group name corrections.

Delete Figure 3-2-3 and Figure 3-2-4.

Remove references to Figure 3-2-3 and Figure 3-2-4.

Rev. 30 and 31:

This chapter was unaffected by these revisions to the manual.

Rev. 29:

Updated position titles.

Rev. 24 thru 28:

This chapter was unaffected by these revisions to the manual.

Rev. 23:

This revision was initiated in response to CR 01-13111 and CR 01-12570. Specific changes are as follows:

- In §1.3 updated references.
- Updated the heading of §1.5.5.
- In §1.7.1, step 2, revised sentence to reflect creation of the Environmental, Health and Safety Committee.
- Throughout §1.0 updated department names.
- In §1.8.1, step 4, updated recordkeeping and reporting requirements.
- Revised §1.8.4 to reflect new mixed waste regulations.
- In §3.4.2 updated the listing of electrical equipment with small capacitors that contain PCBs. Added step 6 on lighting fixture models containing small PCB capacitors.
- Added §4.3, Regulations. Renumbered subsequent sections.
- In §4.7.1 added steps 4 and 5.
- In §4.7.2 deleted step 3.
- In §4.8 added steps 3, 4 and 5 on biocides, labeling of pesticide products and storage.
- Added §4.9.2, §4.9.3 and §4.9.4 on surveillance requirements, recordkeeping and reporting requirements.

6.0 CHAPTER 3 NAEC FORMS

Reproducible copies of the following NAEC FORMs for Chapter 3 are included in this section:

		<u>REV.</u>
NAEC FORM 3-2A	Hazardous Materials Shipping Paper	32
NAEC FORM 3-2B	Hazardous Material Emergency Response Information (49 CFR 171.15, 171.16)	20

1.0 OIL STORAGE

1.1 Purpose

This section describes the administrative control measures to protect waterways from oil discharges pursuant to the requirements under the Clean Water Act of 1972 and the Oil Pollution Prevention Act of 1990.

The Clean Water Act prohibits the discharge of harmful quantities of oil into the navigable waters of the United States. The United States Environmental Protection Agency (EPA), the Coast Guard (USCG) and the New Hampshire Department of Environmental Services (NHDES) have created regulations designed to protect waterways from oil discharges. The EPA regulation (40 CFR 112) requires certain facilities that drill, produce, gather, store, process, refine, transfer or consume oil and oil products to prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.

SPCC Plans are a cornerstone of EPA's strategy to prevent oil spills from reaching our nation's waters. Unlike oil spill contingency plans that typically address spill cleanup measures after a spill has occurred, SPCC Plans ensure that facilities put in place containment and other countermeasures that would prevent oil spills that could reach navigable waters. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. The purpose of an SPCC Plan is to form a comprehensive Federal/State spill prevention program that minimizes the potential for discharges. Under EPA's Oil Pollution Prevention regulation, facilities must detail and implement spill prevention and control measures in their SPCC Plans. A spill contingency plan is required as part of the SPCC Plan if a facility is unable to provide secondary containment (e.g., berms surrounding the oil storage tank).

The SPCC Plan developed for Seabrook Station employs both procedures and plans, as well as identifying physical structures and systems used to prevent and contain discharges of oil. In addition, the SPCC Plan addresses the prevention of releasing hazardous chemicals and hazardous wastes that are used and/or stored at Seabrook Station into or upon navigable waters. The SPCC Plan is contained in Appendix C.

1.2 Applicability

The applicable regulations require that any facility using or storing oil, which, due to its location, could reasonably expect spilled oil to reach navigable waters of the United States, and meets one or more of the following criteria, must develop a plan (i.e., SPCC) certified by a Registered Professional Engineer, to prevent any discharge of oil. These criteria are as follows:

1. Above ground storage capacity in a single container is in excess of 660 gallons,
2. Aggregate storage capacity is greater than 1,320 gallons (counting containers 55 gallons or greater), or
3. Total underground (completely buried) storage capacity is greater than 42,000 gallons.

Containers less than 55 gallons capacity are exempt from SPCC planning per 40 CFR 112.1(d)(5) and, therefore, are not specifically incorporated in the SPCC Plan. However, spill control measures for such containers are required by federal and state regulations and therefore addressed in Section 1.6.7, Containers, Drums and Temporary Equipment Management Program.

1.3 References

1. 40 CFR Part 109, Oil Removal Contingency Plans
2. 40 CFR Part 110, Discharge of Oil
3. 40 CFR Part 112, Oil Pollution Prevention
4. 40 CFR Part 302, Designation, Reportable Quantities, and Notification
5. NPDES Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities
6. EPA, SPCC Guidance for Regional Inspectors, Version 1.0, 11/28/2005
7. New Hampshire Oil Pollution Law, Chapter 146-A
8. NHDES Rule Env-1402, Control of Aboveground Petroleum Storage Facilities
9. NHDES Rule Env-Wm 1600, Reporting and Remediation of Oil Discharges
10. Marine Safety Office Boston, Oil, and Hazardous Substance Pollution Contingency Plan, MSO Boston Instruction M16465.4

1.4 Definitions

1.4.1 NPDES

National Pollutant Discharge Elimination System, administered by the United States Environmental Protection Agency, is a permit program that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.4.2 SPCC Plan

Spill Prevention Control and Countermeasure Plan.

1.4.3 Navigable Waters of the United States

For the purposes of SPCC planning at Seabrook Station, namely surface water: streams, creeks, lakes, and ponds connected to the tributary system in a river basin, as well as perennial and seasonal streams, lakes, ponds, wetlands, tidal waters, marshes, watercourses, and other bodies of water, natural or artificial.

1.4.4 Groundwater

Subsurface water that occurs beneath the water table in soils and geologic formations.

1.4.5 Oil

Namely, petroleum products and their by-products of any kind, and in any form including, but not limited to, petroleum, fuel, sludge, crude, oil refuse or oil mixed with wastes and all other liquid hydrocarbons regardless of specific gravity and which are used as motor fuel, lubricating oil, or any oil used for heating or processing. The term "oil" shall not include natural gas, liquefied petroleum gas or synthetic natural gas regardless of derivation or source."

1.4.6 NAPL

Non-aqueous phase liquid. A liquid containing oil, that is immiscible or only partially miscible in water, and which exists as a separate phase.

1.4.7 Discharge

Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under Section 402 of the Clean Water Act.

1.4.8 Spill

Discharge of a harmful quantity of oil upon the navigable waters of the United States or adjoining shorelines.

1.4.9 Harmful Quantity

Any amount which violates a water quality standard or causes a sheen, film or discoloration of navigable water or adjoining shore line.

1.4.10 Secondary Containment

A dike or berm sufficiently impervious to contain spilled oil. Sized to contain the entire contents of the largest container plus sufficient freeboard to allow for precipitation.

1.5 **Responsibilities**

1.5.1 Plant General Manager

Responsible for oil spill prevention at Seabrook Station. Ensures certification of the SPCC Plan and any subsequent technical amendments by a State of New Hampshire Registered Professional Engineer.

1.5.2 Station Personnel

It is the responsibility of everyone at Seabrook Station to be environmental stewards and be vigilant for signs of oil and chemical spills. Upon discovery of an oil or chemical spill, as well as fire or explosion, immediately contact the Control Room. Indications of oil spills that are of a questionable nature (e.g., oil sheen on water) shall be forwarded to the Licensing Department for investigation and assessment.

1.5.3 Supervisors

Responsible for ensuring personnel under their control, who are involved with oil and/or chemical handling activities, comply with the requirements contained herein and the SPCC Plan.

1.5.4 Licensing Manager

1. Responsible for maintaining the SPCC Plan.
2. Responsible for the performance of monthly inventory monitoring of tanks subject to the requirements contained herein, Section 1.6.6.c.
3. Reviews the SPCC Plan every five (5) years to determine if amendments are required, and amend the plan as required within six (6) months of the review.
4. Responsible for the performance of weekly and monthly visual inspections of aboveground oil storage tank installations and secondary containments subject to the requirements of the SPCC Plan.
5. Responsible for performance of oil sheen assessments, as well as assessments for non-routine evolutions and usage of temporary outdoor oil storage containers, on a case-by-case basis to address specific spill prevention needs. Additionally, directs draining of secondary containments, as needed.
6. Responsible for reporting and/or follow-up reports of oil spills to the EPA, US Coast Guard and NHDES, pursuant to regulatory requirements.
7. Responsible for ensuring applicable tank inspection and cleaning records are maintained per regulatory requirements.
8. Responsible for ensuring a copy of the SPCC Plan is provided to the Town of Seabrook Fire Department as an offsite response organization.

1.5.5 Fire Protection Supervisor / Fire Brigade Leader

Responsible for maintaining the Hazmat Response Trailer, as well as inventorying, maintaining and restoring spill response equipment at designated locations throughout the station. Assumes incident command as initial primary responder to spill or fire events.

1.5.6 Hazardous Waste Coordinator

Responsible for ensuring that all hazardous wastes that have been generated as a result of a spill, including spill cleanup, are managed in accordance with the Hazardous Wastes' Department Instructions for on-site storage and/or shipment.

1.5.7 Operations Manager

Ensures that oil separator vaults are pumped out on an as-needed basis. Responsible for routine (informal) monitoring of tank exteriors for signs of leakage into diked areas.

1.5.8 Shift Managers

Ensure operators on rounds maintain a high level of surveillance to detect oil spillage. Responsible for oil transfer operations at the Station and emergency operations related to spills.

1.5.9 Maintenance Manager

Responsible for the implementation of required cleaning and interior inspections of aboveground oil storage tanks at the frequencies prescribed under NHDES Rule Env-Wm 1402.

1.5.10 Maintenance Services Supervisor

Responsible for the deployment and maintenance of temporary secondary containment systems and handling of oily water that is not processed through the station's permanent oil/water separator system.

1.5.11 Nuclear Training Manager

Provides required training for fire brigade personnel, waste services personnel and Spill Event Response Team (SERT) members, as prescribed in the Hazardous Materials Training Program. Also provides training to personnel involved with NPDES Multi-Sector General Permits Storm Water Discharges and Aboveground Storage Tank visual inspection activities.

1.5.12 Hazardous Materials Training Review Committee

Responsible for the implementation and maintenance of the Hazardous Materials Training Program, including training and certification of site personnel with active roles in response to oil or chemical spills or hazardous material releases.

1.6 Requirements

NOTE

Section 1.6 is a compilation of the pertinent requirements stated in the SPCC Plan, FPL Best Management Practices, EPA, USCG and NHDES regulations; however, Section 1.6 is not an exhaustive compilation of all requirements and regulations. Refer to the SPCC Plan and regulations for more detail of specific requirements.

1.6.1 General Spill Controls and Precautions for Aboveground Oil Storage and Usage Locations

1. Oil-containing systems will be maintained in a secure manner such that only authorized personnel are allowed to operate valves, pumps, and transfer stations, in accordance with written station procedures.
2. Fill pipes, drain valves, caps and covers on outdoor oil and chemical containers / drums shall be tightly capped or locked in the closed position when not in use.

3. Stationary oil storage equipment cannot be installed in areas having a direct pathway to the environment unless protected by a berm of sufficient size to contain the maximum spill.
4. Temporary and portable oil storage container/tanks are not permitted in areas having a direct pathway to the environment (wetlands, surface water, wells, property lines, flood zones, and drainage areas), unless at least one of the following occurs:

NOTE

On no account, shall any container containing, or has contained, Hazardous Waste be stored outdoors within 50 feet of such areas

- (a) The container is under the direct control of workers with constant awareness, and who could immediately respond to prevent a spill.

Example: Leaving a 2.5 gallon gasoline container next to a stream or storm drain while mowing the grass would not be considered under constant awareness because immediate response to prevent surface water pollution would not be possible. However, leaving the container in an area far removed (>50 feet) from streams, storm drains or nearby wells would be acceptable provided additional common sense precautions are taken to ensure:

- (1) the container is securely capped and placed in a manner that it won't tip over spilling its contents onto the ground,
- (2) the worker is aware of its location and has reasonable expectations that the container will not be tampered with while left unattended, and
- (3) the container is not left unattended for longer than one working shift.

- (b) A spill would be detected under normal Station surveillances before release to the environment occurs, i.e., Operations has been notified of the location of the temporary container such that it would be surveilled during routine shiftly rounds.

Note: A container left by a storm drain in the GOB parking lot would not qualify since Operations personnel do not normally surveil this area.

- (c) Installing a temporary berm to provide secondary containment around the container or yard drains. A temporary berm can be in the form of oil absorbent pillows, oil "pigs" (sausages), sand, speedy dry, etc.

Note: (1) The type of temporary berm selected/used must be appropriate for the application to ensure proper secondary containment. Licensing should be contacted for guidance to ensure that the spill control measures are appropriate for the specific application.

- (2) Temporary berms shall be periodically inspected and maintained as necessary, while deployed.

5. Whenever bulk transfers of oil or chemicals are made, storm drains that may be impacted (within 50 feet downgrade) by an oil/chemical spill shall be protected with covers, dikes or berms to preclude the discharge of these materials to the environment during transfers.
6. Workers required to handle or use oil in areas having a direct pathway to the environment are to minimize the volume handled and use good housekeeping practices.
7. Drip pans should be used for mobile equipment to collect incidental leakage.
8. Oil residues from equipment in use in areas having a direct pathway to the environment must be immediately contained or cleaned up with oil absorbent materials.
9. Station personnel should, particularly for non-routine evolutions, contact Licensing to conduct an assessment of specific spill prevention needs on a case-by-case basis to ensure effective oil spill controls. Evolutions such as routine fuel or chemical deliveries will not be subjected to prior review by Licensing provided such evolutions are controlled by station procedures, specific to the evolution.
10. The Contract Coordinator or department responsible for the evolution involving the flushing or transfer of oil and hazardous substances will confirm prior to performing the evolution, that the environmental requirements in Attachment B of the SPCC Plan have been satisfied.

Note: To ensure compliance with applicable state and federal requirements, Licensing personnel may specify additional criteria. Any exceptions to the Attachment B criteria established for each evolution will be provided by Licensing and documented for inclusion in the work package.

11. Prior to the performance of any non-routine evolution involving the flushing or transfer of oil or other hazardous substances, an inspection of hoses and associated couplings must be performed and ensure spill prevention controls have been implemented. Refer to Section 1.6.7 below and Attachment B of the SPCC Plan guidelines for hoses and associated couplings.
12. Whenever any type of oil / chemical transfer will occur, supervisors / operators must be cognizant of the likelihood of fluctuating flow rate and potential problems associated with changing product temperature during the transfer.

Example: Tanker truck with cold fuel oil filling a heated stationary tank that is inservice supplying operating equipment, whereby temperature changes in tank contents, whether mixed or stratified, may cause inservice equipment to operate erratically or malfunction.
13. If tanker truck unloading is not governed by station procedures, the generalized unloading procedures in Attachment C of the SPCC Plan shall be used. Licensing must approve any deviation from this guideline and may impose additional requirements.

14. Whenever an oil transport vehicle (tanker truck, railcar, or other vehicle engaged in the transport of oil) is used for bulk transfer of oil, the transfer should occur within an area constructed of a concrete pad or other impermeable surface.

- Note: (1) If the transfer is from the oil transport vehicle to an AST system the impermeable area shall be of sufficient size so that all connection points are situated over the impermeable area; however,
- (2) If the transfer is from an AST system to the oil transport vehicle then the entire portion of the oil transport vehicle being filled must be situated over the impermeable area while being filled.
- (3) Direct transfer of oil from one oil transport vehicle to another is prohibited except during an emergency situation, as authorized by emergency response personnel.
- (4) Transfer areas that do not have impermeable surfaces must be evaluated by Licensing on a case-by-case basis before the transfer occurs.

15. Temporary portable berms must be used at transfer areas that do not have permanent containment provisions at the loading/unloading truck connections or equipment fill line connections. These areas include but are not limited to:

- Dirty oil truck connection at 1-LO-V-148, Turbine Bldg. south side
- Clean oil truck connection at 1-LO-V-85, Turbine Bldg. south side
- Fuel oil fill connection for both SEPS diesel generator tanks
- Temporary onsite equipment (e.g., air compressors, generators, portable storage tanks, etc.) must be evaluated by Licensing on a case-by-case basis; however as a minimum, nearby storm drains within 50 feet downgrade must be covered / blocked during transfer.

Additionally, a mobile/ temporary secondary containment system shall be setup at job location whenever the mobile Hipotronics Resonant Test System is used.

16. During fuel deliveries a 5-gallon or greater catch bucket shall be used if the loading connection is either not within secondary containment or does not have an integral secondary containment.
17. During filling / fuel transfer operations, station personnel assigned to the transfer evolution shall:
- Block nearby storm drains as necessary (within 50 feet downgrade),
 - Use available level indications to monitor the transfer,
 - Be in direct communication with the tank truck operator, and
 - Have the ability to stop the transfer in the event of a problem or spill.
18. All fueling operations associated with the Vehicle Maintenance Shop Gasoline and Diesel Fuel Storage Tanks shall be continuously monitored.

19. When oil transfer on the station transformers is necessary, all necessary oil spill equipment will be assured for immediate availability.
20. Station operations personnel shall check all oil/water separator vault control panels daily.
21. To ensure that drainage does not inadvertently discharge to an in-plant treatment system (like an oil/water separator vault), dewatering valves and controls for secondary containment / diked areas are to be normally maintained in the locked-closed / off position, or operated by a specialty tool (e.g., T-handle).

1.6.2 Oil Sheen and Dewatering of Accumulated Precipitation

- Note: (1) Allowable discharges to storm drains or building drains are controlled through the non-radiological release permit procedure CP 9.3, "Non-Radiological Effluent Releases," in order to ensure NPDES Permit compliance.
- (2) Licensing environmental personnel must be notified if oil sheen or oil is observed in any dike area prior to draining dike area.
1. Secondary containment / diked areas shall be periodically dewatered (after visually checking for oil sheen) from accumulated precipitation as soon as possible and frequently enough to ensure the secondary containment / dike is able to contain the entire contents of the tank should a rupture event occur.
 2. If only a slight oil sheen is observed on the water surface in the diked areas, the oily water must be collected and processed in one of the oil/water separator vaults, or collected and processed by other suitable means (e.g., waste collection container/drum or tanker).
 3. Excessive oily water (more than a slight sheen) shall not be discharged to or be processed through the station's oil/water separator vaults. Licensing must be contacted for determination of proper handling and disposal.
 4. Draining of accumulated precipitation in the secondary containment enclosure for the Vehicle Maintenance Shop Gasoline and Diesel Fuel Storage Tanks to the local storm drain shall not be performed if there is oil sheen on the water. Licensing must be contacted for determination of proper handling and disposal.
 5. Prior to discharging/draining Sump 4 (fire pumphouse) to Oil / Water Separator Vault No. 3, the sump must be inspected for the presence of oil.

1.6.3 Oil Spills

1. In the event of an oil spill, immediately notify the Control Room and follow the requirements of station procedure ON1244.01, "Oil/Chemical Spill," and actions addressed in the SPCC Plan. Obtain spill-diking materials from the nearest spill kit, or as otherwise available, and contain the spill.

2. If an oil or chemical spill reaches the storm drain system, refer to the storm drain system diagram in Figure 3 of the SPCC Plan and take appropriate action to prevent oil or chemicals from reaching Manhole 34 (Storm Drain System connection to Circulating Water System piping).
3. Oil spills involving Polychlorinated Biphenyls (PCBs) require additional control measures and shall be managed in accordance with NAEC Chapter 3, Section 3.0.
4. Prior to spill cleanup (depending on type and size of spill), any emergency showers or eyewash stations in the area of the spill must be operational. If these are not available, a hose and dedicated person shall be present for personnel protection. The Incident Commander / SERC will make the determination for need of emergency showers or eyewash stations.
5. The Hazardous Waste Coordinator shall ensure that all wastes generated as a result of a spill and follow-up cleanup are managed in accordance with Hazardous Wastes Department Instructions for on-site storage and/or shipment.
6. Prior to resuming activities in the area of the oil spill the Fire Protection Supervisor shall ensure that all spill response equipment has been restored.

1.6.4 Reporting Requirements

Refer to the Regulatory Compliance Manual (NARC), Chapter 3, for reporting requirements to State, Federal and Local agencies.

1.6.5 Maintaining the SPCC Plan

1. Regulatory Compliance personnel maintain the SPCC Plan. The SPCC Plan will be made available to the EPA and NHDES representatives during normal working hours if requested during an audit.
2. Pursuant to 40 CFR 112.5(a), the SPCC must be revised to reflect any changes to the facility whenever there is a change in design, construction, operation, or maintenance which materially affects the potential for discharge of oil. The revision must be made as soon as possible, but no later than six (6) months after the change is made.
3. The spill contingency portion of the plan will be reviewed and amended immediately whenever:
 - a. Applicable regulations are revised,
 - b. The plan fails in an emergency,
 - c. The facility changes in its design, construction, operation, maintenance or other circumstances in a way that materially increases the potential for fires, explosions or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency,
 - d. The list of emergency coordinators changes, or

- e. The list of emergency equipment changes.
4. The SPCC Plan must be approved and certified by a professional engineer registered in the State of New Hampshire.
5. Licensing shall initiate a review of the SPCC Plan every five (5) years and amend the plan within six (6) months of such review to include more effective prevention and control technology if available and proven (40 CFR 112.5(b)). A professional engineer registered in the State of New Hampshire shall certify each 5-year review of the SPCC Plan.
6. Technical amendments to the SPCC Plan shall be certified by a State of New Hampshire Registered Professional Engineer within six (6) months after a change. Non-technical amendments (e.g., contact information) do not require additional review and certification by a registered professional engineer but shall be recorded in the SPCC Plan's "Summary of Changes," noting the date of incorporation and the description of the amendment.

1.6.6 Tank and Associated Piping Management Program

Note: The requirements stated herein are excerpts from NHDES Waste Management Administrative Rule Part Env-Wm 1402, Control of Aboveground Petroleum Storage Facilities.

a. General Design and Construction Requirements

1. Tanks and containers used for storage will be engineered to contain, and shall be compatible with, the materials being stored and the storage conditions.
2. Aboveground tanks constructed after April 25, 1997 must comply with NHDES Env-Wm 1402.21 requiring secondary containment with sufficient freeboard to accommodate 24 hour precipitation during a 10-year storm event or 110% capacity of the largest tank within the enclosure, whichever is greater.
3. Secondary containments shall be constructed so that spills will not permeate into the soil more than one foot in 72 hours, or infiltrate or otherwise escape to the groundwater or surface waters before clean-up occurs. (NHDES Env-1402.21).

Note: The purpose of secondary containment is to stop (contain) the oil from moving and creating more environmental damage and cleanup. Any impact to soils of berms or dikes, or traprock over soils that meet the definition above is not an issue.

4. Drainage from secondary containments will be controlled by manually operated valves such that collected water may be inspected for oil contamination and treated as necessary prior to discharge.

5. Secondary containment drain pipes shall be designed and constructed to prevent a release in the event of a fire.
6. Consideration will be given to providing easy-read level gauges, high-level alarms, high-level pump cutoffs, and direct communication between level gauges and pumping stations.
7. New transformers shall meet the requirements of Env-Wm-1402.32.
8. New oil piping shall be installed aboveground whenever possible and shall be protected from collision either by location or by protective measures (e.g., bollards, walls, etc.).
9. New underground piping systems must be double-walled pipe or set in an engineered trench liner per Env-Wm 1402.22. Such piping must also be provided with leak detection within the piping interstitial space, or annular space for secondary containment systems, per Env-Wm 1401.27.
10. New underground secondary containment metal piping must be protectively wrapped and provided with cathodic protection (40 CFR 112.8(d)(1) & Env-Wm 1402.19).
11. Existing underground pipelines not in active use shall be marked as to origin and securely valved-close and/or blanked/capped at termination points to prevent leakage and line contamination.

b. Inspection and Test Requirements

1. Inspections and tests will be performed in accordance with approved written procedures.
2. A API or STI-certified tank inspector shall perform non-routine tank inspections. Such inspections shall be performed in accordance with API 653 or STI SP001-05.
3. Tank inspections shall be performed at an interval determined by the API or STI-certified tank inspector.
4. Inspection frequency and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). However, in no case shall the inspections or testing interval exceed the stated acceptable intervals, as documented in the respective standards and summarized in Tables 2 and 3 of the SPCC Plan.
5. Cleaning and inspection of tanks greater than 5,100 gallons capacity shall be periodically performed in accordance with Env-Wm 1402.29(c) and (d).
 - Every five (5) years for gasoline tanks, and
 - Every ten (10) years for oil tanks.

Note: (1) Technical Requirements Program (TRP) 5.1 only governs cleaning of the Emergency Diesel Generator Fuel Oil Storage Tanks. Inspection and testing is per NHDES requirements.

(2) The intervals stated here and elsewhere in this section are maximums, no grace period is allowed unless written permission for extension is approved by NHDES. This requirement supercedes any grace period extensions allowed by either the Technical Specifications or Technical Requirements.

6. Internal appurtenances must be inspected each time the tank is cleaned.
7. All oil storage tanks are subject to the above requirements; however, regularly scheduled tank inspection and testing of tanks less than 5,100 gallons shall not be required, as long as the following conditions are met:
 - a. The tank is designed, constructed, installed, maintained and inspected in accordance with the manufacturer's requirements and all applicable standards;
 - b. The entirety of the tank (including bottom) can be visually inspected;
 - c. The bottom of the tank is elevated to prevent direct contact with the ground;
 - d. Regular visual inspections of the tank show no abnormal conditions that could affect shell wall or bottom thickness (e.g., corrosion, contact with water, coating failure, chaffing at supports, corrosion within the tank vent); and
 - e. No modifications are made to the tank.

Note: If regular inspections of tanks less than 5,100 gals. indicate a wall or bottom thickness concern then certified inspections or integrity testing must be performed.

8. Notwithstanding the above exclusion for tanks less than 5,100 gallons capacity, these tanks are required to be internally inspected at a maximum interval of:
 - STI - ten (10) years; and
 - API - twenty (20) years, unless the bottom corrosion rates are unknown than every ten (10) years per API 653-2001, Section 6.4.2.2.
9. Visual inspections combined with regular tank integrity testing, as required per 40 CFR 112.8(c)(6) & NHDES Env-Wm 1402.29(d), must be performed for all applicable aboveground containers on a regular schedule, and whenever material repairs or other tank construction is undertaken. These requirements do not apply to oil filled equipment, including electrical transformers or underground storage tanks.

10. Inspections may include tank thickness measurements (ultrasonic testing or magnaflux gauging) and other integrity testing techniques such as hydrostatic testing, radiographic testing, acoustic emissions testing, or another system of non-destructive shell testing. Records must be retained to provide comparisons between tests.
11. Internal inspections subject to the requirements of Env-Wm 1402.29 must also include tightness testing for all connected underground piping (in accordance with NFPA 30 or manufacturer's specifications), as well as the visual inspection of the tank's interior per Env-Wm 1402.29(e).

Note: Robotic inservice internal inspection equipment cannot be used to fulfill these requirements.
12. If deficiencies are identified during the inspection, the tank will be repaired as soon as possible. Depending on severity of the deficiency, inservice tanks may be taken out of service and pumped down in accordance with Env-Wm 1402.11.
13. In the event that an abnormal condition is observed, which could affect tank shell or bottom thickness, integrity testing shall be performed as soon as practicable. Follow up testing shall be in accordance with the mandatory provisions of this section.
14. Tanks (regardless of capacity) must also be inspected whenever making material (significant) changes in service or repair, in accordance with 40 CFR 112.8(c)(6) and Env-Wm 1402.11
15. After tank repairs, alterations, reconstruction or change in service, an assessment shall be performed to determine if brittle fracture tests are required (40 CFR 112.7(i)). The methodology for determining whether a brittle fracture test should be conducted will be in accordance with API 653 Section 5 by a certified API 653 inspector.
16. Underground piping must be leak and integrity tested at time of installation, modification, construction, relocation or replacement per 40 CFR 112.8. Testing should follow guidelines provided in API 570 Section 9 or equivalent.
17. Periodic integrity testing of underground piping is not required. However, such integrity or leak testing may be necessary if visual inspection shows evidence of leaks (such as oil percolation, stressed vegetation around pipeline areas, etc.) or tank inventory reconciliation shows evidence of loss. This is especially critical in pipelines, which are not cathodically protected and the soil resistivity is less than 2,000 ohm-cm.
18. If a section of underground oil pipeline is exposed, it will be examined for deterioration (e.g., coating, wrapping, corrosion).

19. If water or product is detected in the interstitial space of a double-walled tank, the tank shall be inspected to determine the source. If determined to be a potential failure of the tank wall (either inner or outer) the tank shall be immediately placed out of service until repairs can be made. Accumulated storm water or condensation within the interstitial space will be removed and processed through the oil/water separator or by other suitable means.

c. Surveillance Requirements

1. Above ground oil storage tanks (AST) are subject to weekly and monthly visual external inspections in accordance with 40 CFR 112.7(e)(2)(vi), NHDES Env-Wm 1402.29 and the Storm Water Multi-Sector General Permit (Section 6.O.4.2.8).

The Weekly inspections include:

- (1) Tank exteriors and exposed piping for evidence of leaks, damage or weeping;
- (2) Secondary containment systems including, walls, bases and diversionary structures for damage and degradation, especially in areas where piping penetrates the containment; and
- (3) Checking storm water discharge valves and drainage systems for proper control position and to ensure that the valves for gravity drains are locked or otherwise secured from tampering.

The Monthly inspections include the following:

- (1) Testing tank monitoring systems for proper operation, including interstitial monitors and high level alarms;
- (2) Testing impressed current cathodic protection systems (where provided) for tank bottoms;
- (3) Inventory reconciliation for tanks in contact with the ground (per Env-Wm 1402.09);
- (4) Spill control equipment and temporary secondary containment equipment for proper inventory and acceptable condition; and
- (5) Above ground piping systems associated with oil storage tanks should be visually surveyed as part of monthly inspections.

Supports, foundations and secondary containments are also included in these inspections.

2. Monthly inventory monitoring shall be performed on aboveground storage tank systems where any portion of the primary tank shell, primary piping, or both, is in contact with the ground, soil, or concrete foundation slab and does not have release detection pursuant to Env-Wm 1402.28. Inventory monitoring consists of:

- (a) Reconciling AST inventory control measurements by comparing product measurements with shipments, deliveries, and internal transfers.
- (b) Investigating and resolving the cause of any significant loss in inventory, such as any unexplained difference of 2.0 percent or more of throughput in one month, as indicated by the recording and reconciliation of inventory records.
- (c) Maintaining separate records for each AST or interconnected system, certifying the accuracy of the inventory monitoring.

If an unexplained physical loss of oil is evident following the investigation, NHDES shall be notified immediately.

Note: Currently, the Auxiliary Boiler Fuel Oil Tank (1-AB-TK-29) is the only AST onsite subject to inventory monitoring.

3. Monthly visual inspections shall be performed on all aboveground oil-filled electrical equipment (station, substation, load center and construction transformers), storage tanks, and associated structures (piping, sumps, dikes, etc.). Inspections entail:
 - (1) Exteriors of electrical equipment for signs of leaks, weeping or damage;
 - (2) Cooling fins for signs of damage;
 - (3) Check of electrical equipment's monitoring systems, including level or temperature gauges and alarms (if present);
 - (4) Condition of trap rock or other containment or diversionary structures surrounding the electrical equipment;
 - (5) Drain valves securely shut and drains plugged with pipe caps (where equipped); and
 - (6) Presence of vegetation surrounding the electrical equipment, which could interfere with prompt inspection and response, as well as create a fire hazard.
4. A semi-annual visual survey shall be conducted above the path of underground piping systems (from storage tank to receiving equipment) for signs of potential oil release. Signs of potential oil release are:
 - A change in the surface contour of the ground
 - Discoloration of the soil
 - Softening of paving asphalt
 - Pool formation
 - Bubbling water
 - Puddles, or

- Noticeable odor (per API 570 Section 9.1.1)
5. A semi-annual inspection of the interstitial space between the inner and outer tank walls of double-walled tanks shall be performed for the presence of water or product. Tanks with interstitial monitoring are not subject to this inspection requirement.

Note: Currently, the SEPS fuel oil tanks are the only double-walled tanks onsite that have interstitial monitoring systems; however, there are other double-wall tanks onsite, mainly portable fuel tanks, that will require semi-annual inspection.

6. Annual testing (activation) of overflow and interstitial alarm sensors on specified tanks shall be performed.

1.6.7 Containers, Drums and Temporary Equipment Management Program

1. All 55 gallon drums issued from the warehouse shall have a blank label attached. Regardless of the drum contents all drums shall be labeled. The owner of the drum shall fill out the label. Refer to Figure 4-1-1, Best Management Practices for 55-Gallon Drums.
2. Containers, drums and temporary equipment used for transfer and storage of oil and chemicals will be engineered to contain, and shall be compatible with, the materials being transferred / stored and the storage conditions.
3. Spill prevention/containment provisions shall be made for oil or chemicals stored in temporary equipment such as tanker trucks, fuel tanks, chemical tanks, etc., when located on site for periods greater than one shift. The provisions shall include one or more of the following:
 - Secondary containment, i.e., dikes or berms lined with plastic.
 - Conduct surveillances at least once per shift (8 hours or 12 hours depending on schedule).
 - Isolation of nearby storm drains with covers, dikes or berms.
4. Drums and containers, particularly those containing liquid, should be raised off the ground or floor (e.g., placed on pallets) regardless if within a bermed area. Refer to Figure 4-1-1, Best Management Practices for 55-Gallon Drums.
5. Outdoor storage of any drum or container whether full, partially full or empty, that contains or previously contained oil, a regulated chemical, or hazardous substance with the anticipation of being stored outdoors for longer than one shift requires notification to Licensing for evaluation of location suitability and need for spill controls.
6. Drums or containers stored outdoors shall not be stored within 50 feet of surface water. (NHDES Env-Wm 507.01(f)).

7. Outdoor storage of regulated chemicals and oil in a container equal to or greater than five (5) gallons, for periods of ten (10) or more consecutive days must be evaluated on a case-by-case basis by Licensing to determine need for additional spill controls.

These additional controls may include the following provisions:

- Secondary containment structure with impervious surface adequate to contain any spills or leaks with sufficient freeboard to accommodate any collected storm water precipitation. (For oil tanker with multiple compartments, the secondary containment structure shall be adequate to contain the contents of the largest single compartment.)
- Weekly inspection of storage areas for signs of spills and/or leakage of regulated containers.
- Readily available spill control and containment equipment, including as a minimum, absorbents to pick up spills and leaks.
- Each container clearly and visibly (without need for the observer to rotate drum) labeled with the chemical and trade name of the material stored within.
- Nearby storm drains covered or blocked to prevent discharge of spill oil or chemicals.

8. Outdoor container storage inspection shall be conducted weekly. Inspection entails:

- (1) Condition of the containers for signs of wear or damage;
- (2) Condition of paint, coatings and welds along the bottom chime of the container (for corrosion);
- (3) Position and location of container's cover, which should be secured unless adding or removing product;
- (4) Condition of all labels and markings;
- (5) Not stored in direct contact with the ground; and
- (6) Condition of all supports, racks, bracing and other structural elements used to secure the storage containers.

9. Visual inspection of applicable storage containers (i.e., 55-gallon drums or greater) stored indoors shall be done on a monthly basis.

10. Portable containers such as 55-gallon drums or intermodal bulk containers are also subject to the testing requirements in 40 CFR 112.8(c)(6), as outlined in Section 1.6.6.b, Inspection and Test Requirements. However, as an alternative, testing may be waived as long as the portable containers are not used as fixed vessels and the following conditions are met:

- (1) The containers meet the construction standards for performance-oriented packaging as prescribed in 49 CFR 178 Subpart L,

- (2) The containers are tested by the manufacturer in accordance with the testing requirements of 49 CFR 178 Subpart M,

Note: Containers provided with manufacturer markings specified in 49 CFR 178.503 are considered to meet this requirement.

- (3) The containers are always maintained in shippable condition in accordance with 49 CFR 173 Subpart B,
- (4) The containers are inspected at least monthly, and
- (5) At no time are the containers stored in direct contact with the ground.

11. When using temporary equipment such as hoses, tanks and pumps, the department responsible for the evolutions involving the flushing or transfer of chemicals or hazardous substances must ensure the following:

- Flushing / transfer evolutions are performed in accordance with approved written procedures incorporating the elements listed below,
- Assign a designated person-in-charge (PIC) with responsibility to oversee and instruct the start of the evolution, be immediately available should problems arise, and be physically present during coupling and uncoupling of hoses,
- Appropriate spill-containment measures have been instituted around hoses and temporary equipment, particularly in manifold and coupling/uncoupling areas,
- An inspection walkdown of equipment condition and hose layout has been performed prior to any flushing or transfer evolution,
- A satisfactory leak test of the installed flushing/transfer system at NOP/NOT is performed,
- Pressure gauges indicate within 10 percent of actual working pressure,
- Adequate lighting is available to illuminate areas, particularly where couplings are located, when transfer operation is in progress,
- When transferring flammable products, consideration for use of "Intrinsically Safe" portable radios, certified by a USCG-recognized lab or certifying organization. Certification documentation should be retained for USCG inspection. If intrinsically safe radios are not available, a safe distance (i.e., out of the plume) should be maintained away from flammable or potentially explosive products when using non-intrinsically safe radios.
- Spill response trailer or other appropriate spill equipment at job location,
- All requirements established by Licensing have been met, and
- Written confirmation and/or copies of test certification have been obtained from the vendor verifying that the hose and coupling criteria (as specified in Attachment B of the SPCC Plan) have been met.

Note: Hose assembly end connections other than that specified in Attachment B of the SPCC Plan will be considered on a case-by-case basis by Licensing.

12. Consideration shall be given to minimizing the number of hose sections required. Licensing may reject applications that have an unreasonable number of coupled connections.
13. Per USCG Specification in Title 33, Chapter 1, Paragraph 154.500, hose assemblies used for transferring petroleum or hazardous material products must be subjected to an annual static pressure test by the vendor to at least 1.5 times the rated working pressure.

1.6.8 Training and Certifications

1. Personnel involved with oil handling activities will be trained on an annual basis, as specified in the Hazardous Materials Training Program. The required training shall incorporate the following elements:
 - The contents and purpose of the SPCC Plan;
 - Applicable pollution control laws, rules, and regulations;
 - The operation and maintenance of equipment to prevent the discharge of oil;
 - Malfunctioning components and recently developed precautionary measures;
 - Spill response procedures for applicable personnel, and
 - Review of previous onsite spill events.
2. Personnel involved with NPDES Multi-Sector General Permits Storm Water Discharges and Aboveground Storage Tank (AST) routine inspection activities will be trained on an annual basis. The required training will incorporate the elements of storm water pollution prevention and AST visual inspections, as well as the training elements identified in section 1.6.8.1 above.
3. Training attendance records are to be maintained for a minimum of three (3) years.
4. Personnel supervising the installation of an AST system or AST system component shall be certified for AST installation and retrofitting by the International Code Council (ICC) Ref. NHDES Env-Wm 1402.38.

1.6.9 Records

1. Records of the results of monthly inspections of above ground oil storage containers and tanks, associated piping systems, and oil and water waste processing systems required by 40 CFR 112.7(e) and Env-Wm 1402.34 are to be maintained for three (3) years.
2. Records of tank integrity tests will be will be maintained for a minimum of three years to provide comparisons between tests.

3. Records of detailed cleaning, inspections, repairs, replacement of permanent components, and substantial modifications to AST systems are to be maintained for the life of the facility.
4. Copies of all correspondence from NHDES, NH state fire marshal or the Town of Seabrook fire department are to be maintained for three (3) years.
5. Records of the type of oil stored in each tank and the date of any applicable conversion are to be maintained for three (3) years.
6. Records of weekly inspections, though not required by regulation, should be retained for three (3) years.
7. Records of brittle fracture tests shall be maintained for a minimum of ten (10) years.

Figure 4-1-1
Best Management Practices for 55-Gallon Drums
(Sheet 1 of 2)

Since many drums may contain, or may have contained, hazardous materials that could impact the environment or lead to personnel health and safety concerns, it is imperative that the personnel here at Seabrook Station follow these best management practices for managing and using new and previously used drums. Examples of hazardous materials include oil, glycol, cleaning solutions and chemicals.

Drum Handling Guidelines

NOTE

All 55-gallon drums shall be issued with a blank label attached. Regardless of contents all drums shall be labeled. The owner of the drum shall fill out the label with the proper contents of the drum and the owner's name and contact information.

EMPTY, USED DRUMS

- Empty drums collected for reuse or recycling should be brought to the Hazardous Waste Facility drum storage area. Storage of empty drums is not authorized anywhere else on-site.
- Drums should be empty, with no residual materials inside, on the top or outside.
- Prior to use, drums shall be inspected for structural integrity (rust, cracks, leaks, etc.).

DRUMS IN USE- POTENTIALLY HAZARDOUS MATERIAL

- Drums should be clean and structurally sound, without big dents or rust.
- Drums should be located in areas clearly visible to prevent damage from motor vehicles.
- Open head drums should be covered with lids sealed by bolt clamps or snap rings or bungs.
- Drums stored outside for greater than 8 hours should be placed off the ground, within a containment device on an impermeable surface and in a covered containment area to prevent corrosion and discharges to the environment. Drums shall not be located within 50 feet of surface water, wetlands, storm drains, and drainage areas. Drums should be stored away from the eaves of a roof and any heat sources.
- Drums stored outside for longer than 8 hours requires notification to Licensing for evaluation of location suitability and need for spill control.
- Drums stored inside should be placed off the ground on an impermeable surface. The building itself may serve as the secondary containment provided it is capable of preventing an inadvertent spill from reaching the environment.

Figure 4-1-1
Best Management Practices for 55-Gallon Drums
(Sheet 2 of 2)

DRUMS IN USE- POTENTIALLY HAZARDOUS MATERIAL (Continued)

- Drums stored in any location for greater than 30 days require a containment device and a revision to the Spill Prevention Control and Countermeasures Plan.
- Drums should not be covered with other materials where they may become forgotten, knocked over, or develop unseen leaks.
- Drums shall be labeled and face "out" so as to be easily read, and accessible year round in case of fire, removal, or spills. The labels should include the contents as well as the department and/or responsible person. Labels are available through the Hazardous Waste Coordinator and Inventory Department).
- The residue on the bottom of one drum should not be added to the residue of another drum as this may lead to the mixing of incompatible materials or the accumulation of a hazardous waste mixture.

DRUMS IN USE- NON HAZARDOUS MATERIAL

- Drums being used to store non hazardous material such as demin water and scaffold equipment should be clearly labeled to differentiate these drums from those containing a hazardous material.

DRUMS CONTAINING WASTES

- The department or responsible person is required to contact either the Maintenance Services Department or the Hazardous Waste Coordinator to ensure those full drums or drums no longer needed are managed appropriately.
- Drums that contain solid non-regulated waste such as sandblast grit, walnut shells, plasticor, etc. are managed by the Facilities and Site Support Department.
- Drums containing regulated waste, such as hazardous waste or used oil, are managed by the Hazardous Waste Coordinator.

2.0 HAZARDOUS MATERIAL / HAZARDOUS WASTE SPILL PREVENTION AND EMERGENCY PLANNING

2.1 Purpose

This section provides guidance and work practices designed to prevent the uncontrolled release of hazardous materials or hazardous waste to the environment. It describes the administrative control measures in effect to prevent accidental releases of hazardous materials, including inventory limits for extremely hazardous materials regulated under the Clean Air Act, Section 112(r) and the Occupational Safety and Health Act. It also identifies the appropriate emergency response references and notification requirements in the event of an uncontrolled release of a reportable quantity of a hazardous substance.

NOTE

This section provides general guidance for prevention and control of chemical and hazardous material / waste spills. The administrative control measures contained in NAEC Chapter 4, §1.0, Oil Storage, are comprehensive and should be used as additional guidance for the prevention and control of chemical and hazardous material / waste spills, particularly the requirements for tanks, dikes, piping, containers, drums and temporary equipment management.

2.2 Applicability

These regulations apply to owners and operators of all facilities that utilize hazardous materials, hazardous substances, or hazardous chemicals in process applications or generate, treat, or store hazardous waste.

2.3 References

1. 40 CFR Part 68, Chemical Accident Prevention Provisions
2. 40 CFR Part 116, Designation of Hazardous Substances
3. 40 CFR Part 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Subpart C - Preparedness and Prevention
4. 40 CFR Part 302, Designation, Reportable Quantities, and Notification
5. 40 CFR Part 355, Emergency Planning and Notification
6. NHDES Env-Wm 1403, Groundwater Management and Release Detection Permits
7. Marine Safety Office Boston, Oil, and Hazardous Substance Pollution Contingency Plan, MSO Boston Instruction M16465.4

2.4 Definitions

2.4.1 Environment

Includes water, air and land and the interrelationship that exists among and between water, air and land and all living things. This includes navigable waters, waters of the contiguous zone, ocean waters, and other surface water, groundwater, drinking water supply, land surface and subsurface strata, or ambient air. Releases to the environment can include both onsite and offsite environments, indoor or outdoor.

2.4.2 Hazardous Chemical

Any hazardous chemical as defined under 29 CFR 1910.1200(c), except that such term does not include the following substances:

1. Any food, food additive, color additive, drug, or cosmetic regulated by the Food and Drug Administration.
2. Any substance present as a solid in any manufactured item to the extent exposure to the substance does not occur under normal conditions.
3. Any substance to the extent it is used for personal, family, or household purposes, or is present in the same form and concentration as a product packaged for distribution and use by the general public.
4. Any substance to the extent it is used in a research laboratory or a hospital or other medical facility under the direct supervision of a technically qualified individual.
5. Any substance to the extent it is used in routine agricultural operations or is a fertilizer held for sale by a retailer to the ultimate customer.

2.4.3 Hazardous Substance

This term has several definitions under applicable environmental regulations.

- Any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.
- Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of CERCLA.
- Any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress).
- Any toxic pollutant listed under Section 307(a) of the Clean Water Act.
- Any hazardous air pollutant listed under Section 112 of the Clean Air Act.

- Any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act.
- Any substance designated pursuant to 40 CFR Part 302.

The term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance in the above referenced sources. The term also does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and synthetic gas).

2.4.4 Extremely Hazardous Substance

A substance listed under 40 CFR 355, Appendices A and B.

2.4.5 Reportable Quantity

For any CERCLA hazardous substance, the reportable quantity established in Table 302.4 of 40 CFR Part 302, for such substance; for any unlisted hazardous substance, the reportable quantity is 100 pounds.

2.4.6 Discharge

Includes, but is not limited to, any non-permitted spilling, leaking, pumping, pouring, emitting, emptying, or dumping to the environment, but excludes discharges in compliance with a permit under Section 402 of the Clean Water Act.

2.4.7 SPCC Plan

Spill Prevention Control and Countermeasure Plan. (NAEC Appendix C)

2.4.8 Spill

Discharge of a harmful quantity of oil upon the navigable waters of the United States or adjoining shorelines.

2.4.9 Secondary Containment

A dike or berm sufficiently impervious to contain spilled oil. Sized to contain the entire contents of the largest container plus sufficient freeboard to allow for precipitation.

2.5 Responsibilities

2.5.1 Station Personnel

It is the responsibility of everyone at Seabrook Station to be environmental stewards and be vigilant for signs of chemical and oil spills. Upon discovery of a chemical or oil spill, as well as fire or explosion, immediately contact the Control Room. Indications of chemical / oil spills that are of a questionable nature (e.g., sheen on water) should be forwarded to the Licensing Department for investigation and assessment.

2.5.2 Licensing Manager

1. Responsible for the review of hazardous materials, hazardous chemicals, and hazardous substances brought on site for potential environmental and regulatory impacts.
2. Responsible for identifying administrative limits and restrictions for hazardous chemicals and hazardous substances, when needed, for compliance with applicable regulatory requirements.
3. Responsible for reporting and/or follow-up reports of chemical spills to the EPA, US Coast Guard and NHDES, pursuant to regulatory requirements.
4. Responsible for performing and/or coordinating inspections specified herein.

2.5.3 Supervisors

1. Responsible for ensuring personnel under their control, who are involved with chemical and hazardous material / waste handling activities, comply with the requirements contained herein and the SPCC Plan.
2. Ensure personnel under their control observe Station administrative controls and programs governing the procurement, use, storage, and disposal of hazardous materials, hazardous chemicals, and hazardous substances.

2.5.4 Fire Protection Supervisor / Fire Brigade Leader

Responsible for maintaining the Hazmat Response Trailer, as well as inventorying and maintaining spill response equipment at designated locations throughout the station. Assumes incident command as initial primary responder to spill or fire events.

2.5.5 Hazardous Waste Coordinator

Responsible for ensuring that all hazardous wastes that have been generated as a result of a spill, including spill cleanup, are managed in accordance with the Hazardous Wastes' Department Instructions for on-site storage and/or shipment.

2.5.6 Operations Manager

Ensures that oil separator vaults are pumped out on an as-needed basis. Responsible for routine (informal) monitoring of tank exteriors for signs of leakage into diked areas.

2.5.7 Shift Managers

Ensure operators on rounds maintain a high level of surveillance to detect chemical spillage. Responsible for chemical transfer operations at the station and emergency operations related to spills.

2.5.8 Maintenance Services Supervisor

Responsible for the deployment and maintenance of temporary secondary containment systems.

2.5.9 Nuclear Training Manager

Provides required training for fire brigade personnel, site services personnel and Spill Event Response Team (SERT) members, as prescribed in the Hazardous Materials Training Program.

2.5.10 Hazardous Materials Training Review Committee

Responsible for the implementation and maintenance of the Hazardous Materials Training Program, including training and certification of site personnel with active roles in response to chemical spill events.

2.5.11 Purchasing and Inventory Managers

Responsible for the implementation of administrative limits on hazardous chemical inventories when prescribed by the Regulatory Programs Manager.

2.6 **Requirements**

2.6.1 General Spill Controls and Precautions for Chemical Storage and Usage Locations

1. Chemical-containing systems will be maintained in a secure manner such that only authorized personnel are allowed to operate valves, pumps, and transfer stations, in accordance with written station procedures.
2. Fill pipes, drain valves, caps and/or covers on outdoor chemical tanks, containers and drums shall be securely capped and/or secured in the closed position when not in use.
3. Workers required to handle or use chemicals in areas having a direct pathway to the environment are to minimize the volume handled and use good housekeeping practices.
4. Chemical residues from equipment in use in areas having a direct pathway to the environment must be immediately contained or cleaned up with compatible absorbent materials.
5. Stationary chemical storage equipment cannot be installed in areas having a direct pathway to the environment unless protected by a berm of sufficient size to contain the maximum spill.

6. Temporary and portable chemical storage container/tanks are not permitted in areas having a direct pathway to the environment (wetlands, surface water, wells, property lines, flood zones, and drainage areas), unless at least one of the following occurs:

NOTE

On no account, shall any container containing, or has contained, Hazardous Waste be stored outdoors within 50 feet of such areas

- (a) The container is under the direct control of workers with constant awareness, and who could immediately respond to prevent a spill.

Example: Leaving a 2.5 gallon pesticide container next to a stream or storm drain while spraying an area 100 yards away would not be considered under constant awareness because immediate response to prevent surface water pollution would not be possible. However, leaving the container in an area far removed (>50 feet) from streams, storm drains or nearby wells would be acceptable provided additional common sense precautions are taken to ensure

- (1) the container is securely capped and placed in a manner that it will not tip over spilling its contents onto the ground,
- (2) the worker is aware of its location and has reasonable expectations that the container will not be tampered with while left unattended, and
- (3) the container is not left unattended for longer than one working shift.

- (b) A spill would be detected under normal Station surveillances before release to the environment occurs, i.e., Operations has been notified of the location of the temporary container such that it would be surveilled during routine shiftly rounds.

Note: A container left by a storm drain in the GOB parking lot would not qualify since Operations personnel do not normally surveil this area.

- (c) Installing a temporary berm to provide secondary containment around the container or yard drains. A temporary berm can be in the form of oil absorbent pillows, oil "pigs" (sausages), sand, speedy dry, etc.

Note: (1) The type of temporary berm selected/used must be appropriate for the application to ensure proper secondary containment. Licensing should be contacted for guidance to ensure that the spill control measures are appropriate for the specific chemical application.

(2) Temporary berms shall be periodically inspected and maintained as necessary, while deployed

7. Spill prevention/containment provisions shall be made for chemicals stored in temporary equipment such as tanker trucks, fuel tanks, chemical tanks, etc., when located on site for periods greater than one shift. The provisions shall include one or more of the following:
 - Secondary containment, i.e., dikes or berms lined with plastic.
 - Conduct surveillances at least once per shift (8 hours or 12 hours depending on schedule).
 - Isolation of nearby storm drains with covers, dikes or berms.
8. Drums and containers, particularly those containing liquid, should be raised off the ground or floor (e.g., placed on pallets) regardless if within a bermed area. Refer to NAEC Chapter 4, Section 1.0, Figure 4-1-1, Best Management Practices for 55-Gallon Drums.
9. Outdoor storage of any drum or container whether full, partially full or empty, that contains or previously contained a regulated chemical or hazardous substance and will be stored outdoors for longer than one shift requires notification to Licensing for evaluation of location suitability and need for spill controls.
10. Drums or containers stored outdoors shall not be stored within 50 feet of surface water. (NHDES Env-Wm 507.01(f)).
11. Outdoor storage of regulated chemicals in a container equal to or greater than five (5) gallons, for periods of ten (10) or more consecutive days must be evaluated on a case-by-case basis by Licensing to determine need for additional spill controls.

These additional controls may include the following provisions:

- Secondary containment structure with impervious surface adequate to contain any spills or leaks with sufficient freeboard to accommodate any collected storm water precipitation. (For tanker with multiple compartments, the secondary containment structure shall be adequate to contain the contents of the largest single compartment.)
 - Weekly inspection of storage areas for signs of spills and/or leakage of regulated containers.
 - Readily available spill control and containment equipment, including as a minimum, absorbents to pick up spills and leaks.
 - Each regulated container clearly and visibly labeled with the chemical and trade name of the material stored within.
 - Nearby storm drains covered or blocked to prevent discharge of spill oil or chemicals.
12. Outdoor container storage inspection shall be conducted weekly. Inspection entails the following:
 - (1) Condition of the containers for signs of wear or damage;

- (2) Condition of paint, coatings and welds along the bottom chime of the container (for corrosion);
 - (3) Position and location of container's cover, which should be secured unless adding or removing product;
 - (4) Condition of all labels and markings;
 - (5) Not stored in direct contact with the ground; and
 - (6) Condition of all supports, racks, bracing and other structural elements used to secure the storage containers.
13. Visual inspection of storage containers (i.e., 55-gallon drums or greater) stored indoors, other than pesticides, herbicides, biocides, and hazardous wastes stored in designated 90-day hazardous waste storage areas, shall be done on a monthly basis.
14. Tanks, containers and/or drums used for storage of pesticides, herbicides, biocides, and hazardous wastes stored in designated 90-day hazardous waste storage areas, are subject to weekly visual inspections.
15. Secondary containments are subject to monthly visual inspections (ref. NAEC Chapter 3, Section 4.9.2, Surveillance Requirements).
16. Whenever bulk transfers of chemicals are made, storm drains that may be impacted by a chemical spill shall be protected with covers, dikes or berms to preclude the discharge of these materials to the environment during transfers.
17. Station personnel should, particularly for non-routine evolutions, contact Licensing to conduct an assessment of specific spill prevention needs on a case-by-case basis to ensure effective chemical spill controls. Evolutions such as routine chemical deliveries will not be subjected to prior review by Licensing provided such evolutions are controlled by specific station procedures.
18. During filling / transfer operations station personnel assigned to the transfer evolution shall
 - Block nearby storm drains (within 50 feet downgrade) as necessary,
 - Use available level indications to monitor the transfer,
 - Be in direct communication with the tank truck operator, and
 - Have the ability to stop the transfer in the event of a problem or spill.
19. Whenever any type of chemical transfer will occur, supervisors / operators must be cognizant of the likelihood of fluctuating flow rate and potential problems associated with changing product temperature during the transfer.

Example: Tanker truck with cold fuel oil filling a heated stationary tank that is inservice supplying operating equipment, whereby temperature changes in tank contents, whether mixed or stratified, may cause inservice equipment to operate erratically or malfunction.

20. If tanker truck unloading is not governed by station procedures, the generalized unloading procedures in Attachment C of the SPCC Plan shall be used. Licensing must approve any deviation from this guideline and may impose additional requirements.
21. The Contract Coordinator or department responsible for the evolution involving the flushing or transfer of chemical and hazardous substances will confirm prior to performing the evolution, that the environmental requirements in Attachment B of the SPCC Plan have been satisfied.

Note: To ensure compliance with applicable state and federal requirements, Licensing personnel may specify additional criteria. Any exceptions to the Attachment B criteria established for each evolution will be provided by Licensing and documented for inclusion in the work package.

22. Prior to the performance of any non-routine evolution involving the flushing or transfer of chemical or other hazardous substances, an inspection of hoses and associated couplings must be performed and ensure spill prevention controls have been implemented. Attachment B of the SPCC Plan contains guidelines for hoses and associated couplings.
23. When using temporary equipment such as hoses, tanks and pumps, the department responsible for the evolutions involving the flushing or transfer of chemicals or hazardous substances must ensure the following:
 - Flushing / transfer evolutions are performed in accordance with approved written procedures incorporating the elements listed below,
 - Assign a designated person-in-charge (PIC) with responsibility to oversee and instruct the start of the evolution, be immediately available should problems arise, and be physically present during coupling and uncoupling of hoses,
 - Appropriate spill-containment measures have been instituted around hoses and temporary equipment, particularly in manifold and coupling/uncoupling areas,
 - An inspection walkdown of equipment condition and hose layout has been performed prior to any flushing or transfer evolution,
 - A satisfactory leak test of the installed flushing/transfer system at NOP/NOT is performed,
 - Pressure gauges indicate within 10 percent of actual working pressure,
 - Adequate lighting is available to illuminate areas, particularly where couplings are located, when transfer operation is in progress,

- When transferring flammable products, consideration for use of "Intrinsically Safe" portable radios, certified by a USCG-recognized lab or certifying organization. Certification documentation should be retained for USCG inspection. If intrinsically safe radios are not available, a safe distance (i.e., out of the plume) should be maintained away from flammable or potentially explosive products when using non-intrinsically safe radios.
- Spill response trailer or other appropriate spill equipment at job location,
- All requirements established by Licensing have been met, and
- Written confirmation and/or copies of test certification have been obtained from the vendor verifying that the hose and coupling criteria (as specified in Attachment B of the SPCC Plan) have been met.

Note: Hose assembly end connections other than that specified in Attachment B of the SPCC Plan will be considered on a case-by-case basis by Licensing.

24. Consideration shall be given to minimizing the number of hose sections required. Licensing may reject applications that have an unreasonable number of coupled connections.
25. Per USCG Specification in Title 33, Chapter 1, Paragraph 154.500, hose assemblies used for transferring petroleum or hazardous material products must be subjected to an annual static pressure test by the vendor to at least 1.5 times the rated working pressure.

2.6.2 Administrative Controls for Extremely Toxic or Flammable Materials

Under the provisions of the Clean Air Act, Section 112(r), the EPA has identified 77 extremely toxic and 63 extremely flammable materials that pose exceptional risk to the public and the environment when present in excess of specified threshold quantities (see Appendix C, Table 1).

When present in excess of the specified threshold in a process, the facility is required to develop and submit to the EPA a formal risk management program. For those listed materials in use on site, the following administrative controls have been established to maintain site inventories below the regulatory threshold limits which mandate the development and implementation of a formal risk management plan.

Chemical Name	Threshold Quantity (lbs.)	Seabrook Inventory Limit (lbs.)
Ammonia (conc. 20% or greater)	20,000	18,000
Hydrazine	15,000	13,500
Hydrochloric Acid (conc. 30% or greater)	15,000	13,500

Acetylene	10,000	9,000
Hydrogen	10,000	9,000

In the event that any of the regulated materials is to be introduced to the site in excess of the specified threshold, a formal risk management plan must be submitted to the EPA beforehand. The Licensing Department must be notified in advance of any plans to bring a Clean Air Act, Section 112(r) listed material on site in excess of its threshold value.

Additionally, general provisions of Section 112(r) require the performance of a hazard analysis for the use, storage or disposal of any hazardous material, not necessarily listed or above a threshold limit.

2.6.3 Chemical Spills or Hazardous Waste Releases

1. In the event of a chemical spill or release of a hazardous substance, immediately notify the Control Room and follow the requirements of ON1244.01, Oil/Chemical Spill, and actions addressed in the SPCC Plan. Obtain spill diking materials from the nearest spill kit or as otherwise available, and contain spill.
2. If a chemical spill or release of a hazardous substance reaches the storm drain system, refer to the storm drain system diagram in Figure 3 of the SPCC Plan and take appropriate action to prevent chemicals from reaching Manhole 34 (Storm Drain System connection to Circulating Water System piping).
3. Spills involving Polychlorinated Biphenyls (PCBs) require additional control measures and shall be managed in accordance with NAEC Chapter 3, Section 3.0.
4. Prior to spill cleanup, any emergency showers or eyewash stations in the area of the spill must be operational. If these are not available, a hose and dedicated person shall be present for personnel protection.
5. The Hazardous Waste Coordinator shall ensure that all hazardous waste generated as a result of a spill and follow-up cleanup are managed in accordance with Hazardous Wastes Instructions for on-site storage and/or shipment.
6. Prior to resuming activities in the area of the hazardous waste release the Fire Protection Supervisor shall ensure that all spill response equipment has been restored.

2.6.4 Reporting Requirements

Refer to the Regulatory Compliance Manual (NARC) Chapter 3 for reporting requirements to State, Federal and Local agencies.

2.6.5 Tank, Container and Drum Management

1. Tanks and containers used for chemical storage will be engineered to contain, and shall be compatible with, the materials being stored and the storage conditions.

2. Consideration will be given to providing easy-read level gauges, high-level alarms, high-level pump cutoffs, and direct communication between level gauges and pumping stations.
3. Hazardous Waste Storage and satellite storage areas shall have security features to prevent unauthorized access (e.g., locked doors, fenced areas, security guard, etc.)
4. Signs with wording similar to "DANGER-UNAUTHORIZED PERSONNEL KEEP OUT" and "HAZARDOUS WASTE STORAGE AREA: are posted at each entrance and that "NO SMOKING" signs are posted where there is a hazard from ignitable or reactive waste.
5. Tanks / containers / drums shall be labeled / marked with the accurate description of the waste.
6. Communication equipment (telephone/radio) shall be readily available nearby each area used for storage of Hazardous Waste.
7. Emergency equipment (e.g., fire extinguisher and spill cleanup materials) shall be readily available nearby each area used for storage of Hazardous Waste.
8. All areas of bulk chemical storage will be provided with secondary containment or diversionary structures, unless found impractical. If found impractical, a strong chemical spill contingency plan must be implemented, which contains a written commitment of manpower, equipment, and materials required to rapidly control and remove any harmful quantity of chemicals discharged.
9. Drainage from secondary containments will be controlled by manually operated valves and pumps, such that collected water may be inspected for chemical contamination and treated as necessary prior to discharge.
10. Chemical pipelines that are not in active use shall be capped or blanked off, and marked as to origin.
11. Drums used for storage of chemical products should be placed on/over an impervious surface and raised off the floor (e.g., pallets or equivalent) and not stacked.

Note: Drums need not be placed on pallets if:

- (1) drums are stored in bermed areas where pallets may pose a safety hazard for handlers when moving drums, or
 - (2) drums are stored in designated hazardous waste 90-day storage areas, provided they are surveilled weekly and will be shipped off-site within 90 days.
12. If it is necessary for hazardous waste drums to be placed outside, they shall have secured lids and be placed in a covered containment area to prevent precipitation coming in contact with the tops of the containers.
 13. Containers of highly flammable waste must be electrically grounded.

14. Incompatible wastes must be separated by a wall, dike, berm or other structure, or by distance.
15. Adequate aisle space (preferably 3 feet) should be taken into account for easy access and movement during emergency situations.
16. Portable containers such as 55-gallon drums or intermodal bulk containers are also subject to the testing requirements in 40 CFR 112.8(c)(6), as outlined in NAEC Chapter 4, Section 1.6.6.b, Inspection and Test Requirements. However, as an alternative, testing may be waived as long as the portable containers are not used as fixed vessels and the following conditions are met:
 - (1) The containers meet the construction standards for performance-oriented packaging as prescribed in 49 CFR 178 Subpart L,
 - (2) The containers are tested by the manufacturer in accordance with the testing requirements of 49 CFR 179 Subpart M,
Note: Containers provided with manufacturer markings specified in 49 CFR 178.503 are considered to meet this requirement.
 - (3) The containers are always maintained in shippable condition in accordance with 49 CFR 173 Subpart B,
 - (4) The containers are inspected at least monthly, and
 - (5) At no time are the containers stored in direct contact with the ground.
17. Refer to NAEC Chapter 4, Section 1.0, Figure 4-1-1, Best Management Practices for 55-Gallon Drums, for additional guidance.
18. Inspections will be performed in accordance with industry standards using written procedures, signed by the appropriate supervisor, and maintained as part of the SPCC for three years. Refer to NAEC Chapter 4, Section 1.6.6.b, for general inspection and test guidance. The requirements in NAEC Chapter 4 are not mandatory for chemical storage but provide opportunity for best management practices (BMPs).
19. Integrity tests should be performed as necessary, in accordance with industry standards, on tanks and tank supports, and a record of tests will be maintained for a minimum of three years, or long enough to provide comparisons between tests.

2.6.6 Training

Personnel will be periodically trained in the operation and maintenance of equipment to prevent the discharge of chemicals or hazardous substances and applicable pollution control laws, rules, and regulations as specified in the Hazardous Materials Training Program.

3.0 SUMMARY OF CHANGES

Rev. 40:

In §1.6.7, step 1, clarified requirements for labeling 55-gallon drums (AR215958 Action 08). Added Note to Figure 4-1-1 with these requirements.

Rev. 39:

Throughout chapter, changed Regulatory Compliance Supervisor and Regulatory Programs Manager to Licensing Manager and Regulatory Compliance to Licensing.

Rev 38:

Updated Figure 4-1-1 to reflect revised best management practices for 55-gallon drums.

Rev. 37:

This chapter was unaffected by this revision to the manual.

Rev. 36:

Updated §1.0 and §2.0, to reflect revised SPCC (Appendix C) and changes to NHDES regulations.

Rev. 33 thru 35:

This chapter was unaffected by these revisions to the manual.

Rev. 32:

Updated position titles.

Rev. 30 and 31:

This chapter was unaffected by these revisions to the manual.

Rev. 29:

Updated position titles.

Rev. 22 thru 28:

This chapter was unaffected by these revisions to the manual.

Rev. 21:

Throughout the chapter updated position titles.

1.0 NONRADIOLOGICAL ENVIRONMENTAL IMPACT REVIEW

1.1 Background

The Nonradiological Environmental Impact Review process described in this chapter is designed to satisfy the requirements of both Seabrook Station's Operating License and the NextEra Energy Seabrook Environmental Policy.

Appendix B to the Facility Operating License contains the Nonradiological Environmental Protection Plan (EPP). This part of Seabrook Station's operating license requires that changes in Station design or operation and the performance of tests or experiments be reviewed to ensure they do **not** involve an unreviewed environmental question (UEQ). A change or test that involves a UEQ is one that has the potential to have a significant adverse environmental impact that has neither been analyzed nor enveloped by existing analyses reviewed and approved by the NRC as part of the licensing process. Activities that do **not** affect the environment are **not** subject to these requirements nor are changes and tests that are required to achieve compliance with other Federal, State, and local environmental regulations.

The NextEra Energy Seabrook Environmental Policy (see NAEC Figure 1-1-1) requires programs and standards that will, in part, ensure that activities potentially affecting the environment are evaluated, mitigated, and documented in a timely manner. The policy also states that changes in Station design or operation shall be reviewed to ensure that they fulfill the Environmental Policy environmental stewardship philosophy and Station Environmental Compliance Program requirements.

To meet both the letter of the licensing requirement and the spirit of the company's Environmental Policy, the Nonradiological Environmental Impact Review process will provide a mechanism for evaluating changes and activities that have the potential to affect the environment and a means to minimize and measure the effect of Station operations. The Nonradiological Environmental Impact Review will ensure that the change or activity is thoroughly reviewed, required notifications are made, and approvals received to ensure the requirements of Appendix B and the Environmental Policy objectives are met.

Station changes to design and procedures undergo formal review processes in accordance with the MNPR, NADC, and SSMA. The Nonradiological Environmental Impact Review process ensures that these Station changes that undergo a formal review process are also screened for nonradiological environmental impact at the same time. It also notifies Licensing when a final review of environmental impact is necessary. The Environmental Impact Review will start with a Nonradiological Environmental Impact Screening using the guidance contained in this chapter. The purpose of the environmental screening is to determine if the change or activity has the potential to have a significant environmental impact. If the change or activity is determined to have such potential, Licensing personnel will perform the final review and determine if an unreviewed environmental question exists.

Activities governed under the Work Control process will be screened for environmental impact by work request evaluators and planners in NAMS Work Management. Activities **not** governed by specific NextEra Energy Seabrook programs, such as those performed by the Facilities and Site Support Department, will be periodically reviewed for significant environmental impact by the Licensing Department. Environmental awareness training of site personnel will provide knowledge to individuals to ensure environmental concerns are addressed during daily work activities.

The formal documentation for environmental impact screening for Station changes that undergo screening in accordance with the documented review processes governed by the MNPR, NADC, and SSMA satisfies the requirements of Appendix B to the Operating License. Formal documentation for environmental impact screening of Station changes that do **not** otherwise require a formal review process is **not** required. The intent of the NextEra Energy Seabrook Environmental Policy will be met in these instances by environmental awareness training and monitoring by the Licensing Department.

1.2 Purpose

This section contains the requirements for preparing, reviewing and approving environmental evaluations in conjunction with the formal review processes screenings associated with

- a. Proposed changes to Seabrook Station
- b. Procedure changes
- c. Manual revisions

The guidance provided in Figure 5-1-2, Nonradiological Environmental Impact Screening Guidance, may be used to perform environmental impact screenings of activities **not** subject to these formal review requirements.

1.3 Applicability

This section is applicable to all changes and activities that may have the potential to significantly affect the environment at Seabrook Station.

1.4 References

1. Seabrook Station Operating License No. NPF-86, Appendix B, Environmental Protection Plan (EPP)
2. Nuclear Group Environmental Policy, Seabrook Team Management Manual (STMM)
3. Regulatory Compliance Manual (NARC)
4. Manuals and Procedures Administration Manual (MNPR)
5. Design Control Manual (NADC)
6. Maintenance Manual (SSMA)
7. Adverse Condition Report 97-0834

8. Licensee Event Report 97-007-00
9. Nuclear Asset Management System (NAMS)

1.5 Definitions

1.5.1 Environmental Protection Plan (EPP)

Appendix B to the Seabrook Station operating license contains the non-radiological environmental protection requirements imposed by the NRC. The principal objectives of the EPP are to

1. verify that NextEra Energy Seabrook is operating in an environmentally acceptable manner as established by the Final Environmental Statement - Operating License Stage (FES-OL) and other NRC environmental impact assessments.
2. coordinate NRC requirements and maintain consistency with other Federal, State, and local requirements for environmental protection.
3. keep the NRC informed of the environmental effects of facility construction and operation and actions taken to control those effects.

1.5.2 Unreviewed Environmental Question

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns

1. a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or in any decision of the Atomic Safety and Licensing Board,
2. a significant change in effluents or power level, or
3. a matter, **not** previously reviewed and evaluated in the documents specified in item 1 above, which may have a significant adverse environmental impact.

1.5.3 Annual Environmental Operating Report

Annual report describing the implementation of the EPP to include summaries and analyses of the results of environmental protection activities and assessment of observed impacts of plant operations on the environment. Also included is a list of EPP noncompliances and corrective actions and changes in station design or operation, tests, and experiments which involved a potentially significant unreviewed environmental question.

1.6 Responsibilities

1.6.1 Licensing Manager

1. Responsible for establishing and maintaining the Nonradiological Environmental Impact Review process defined in this section.
2. Responsible for ensuring that the potential for significant environmental impact is considered for activities **not** covered by specific NextEra Energy Seabrook programs by providing either a review of the activity or environmental awareness training and/or guidance.
3. Responsible for conducting environmental evaluations to assess whether an unreviewed environmental question exists and whether it constitutes a change to the EPP.
4. Responsible for preparing written evaluations of proposed changes or activities constituting an unreviewed environmental question and licensing amendments for proposed changes to the EPP for submittal by the Licensing Manager to the NRC for prior approval.

1.6.2 Work Request Evaluators and Planners

Perform environmental screenings as required in NAMS Work Management.

1.6.3 Seabrook Station Personnel

Consider the environmental impact pertaining to their activities.

1.7 Requirements

1. As part of the formal review process for design changes, procedure changes, or manual and procedure revisions, a screening shall also be conducted to determine if the change has a potential to significantly affect the environment using the criteria in Figure 5-1-2, Nonradiological Environmental Impact Screening Guidance. If the answer to any question is "Yes," a potential unreviewed environmental question exists and the proposed change shall be forwarded to Licensing for a final environmental evaluation.

NOTE

Non-intent procedure changes do **not** require screening for unreviewed environmental questions.

2. For changes or activities that do **not** require a formal review process, the reviewer of the change or activity shall determine that it does **not** have a potential to significantly affect the environment. Any purchase of equipment that contains or uses a regulated substance such as oil, gasoline or Freon needs to be reviewed by Licensing for environmental permitting considerations. Figure 5-1-2, Nonradiological Environmental Impact Screening Guidance, may be used to determine if a potential exists. If there is a potential for environmental impact, the change or activity shall receive a final review by Licensing.
3. Licensing shall perform a final environmental evaluation of the proposed change using Figure 5-1-3, Seabrook Station Final Nonradiological Environmental Evaluation.
4. If the proposed change does **not** constitute an unreviewed environmental question and does **not** require a change to the EPP, Licensing **shall transmit the signed final environmental evaluation, NAEC FORM 5-1A, to the preparer for transmittal with the entire package.** The final environmental evaluation shall be transmitted to RMD for retention.
5. If the proposed change constitutes an unreviewed environmental question, prior NRC approval is required. Licensing shall prepare a written evaluation of the change for submission to the NRC by the Licensing Manager.
6. If the proposed change requires a change to the EPP, prior NRC approval is required via a license amendment. Environmental Compliance shall prepare a license amendment request for submission to the NRC by the Licensing Manager.
7. A list of all proposed changes that involved a potentially significant unreviewed environmental question shall be included in the Annual Environmental Operating report.

1.8 Instructional Steps

Screener/Reviewer

1. Perform the Nonradiological Environmental Impact Screening using the guidance in Figure 5-1-2.
2. Answer and provide basis for the environmental screening question on the formal review documentation.
3. If the answer to the environmental screening question is "No," further environmental review is **not** required.
4. If the answer to the environmental screening question is "Yes," forward to Licensing for a final review.

Licensing

5. Perform Final Nonradiological Environmental Evaluation using the guidance in Figure 5-1-3.
6. Complete NAEC FORM 5-1A, provide basis for the review, and return documentation to initiator.
7. If required, perform a written evaluation of the change involving an unreviewed environmental question for submission to the NRC for prior approval.

8. If change involves a change to the EPP, process as a license amendment in accordance with the NARC.

**Figure 5-1-1
Nonradiological Environmental Impact Review Process**

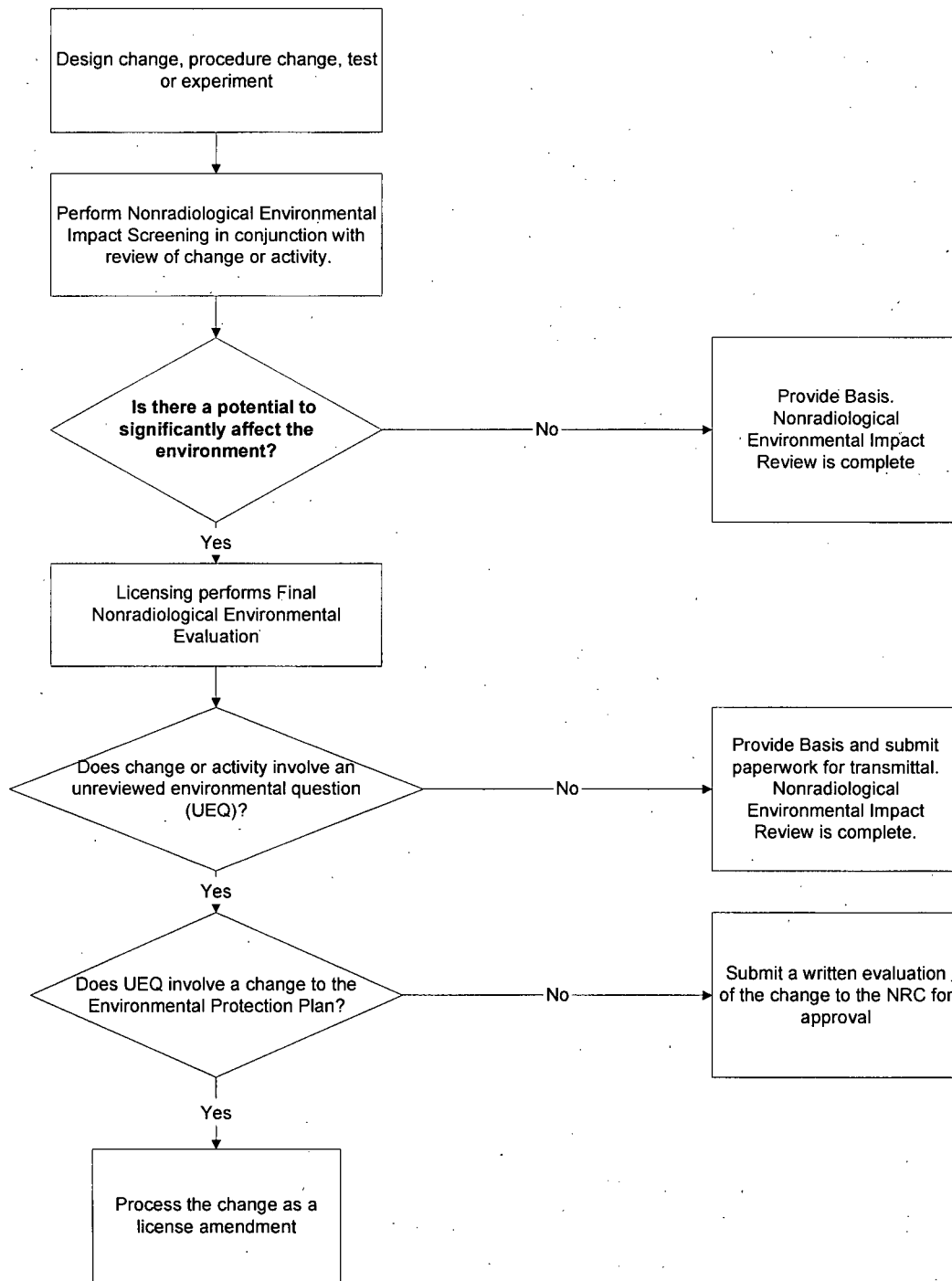


Figure 5-1-2
Nonradiological Environmental Impact Screening Guidance

Does the proposed change or activity involve

1. Any excavation on site property inside or outside of the protected area involving soil runoff, the introduction of a chemical substance into the ground, or the discharge of groundwater other than in a manner described by the Storm Water Pollution Prevention Plan?
2. An adverse impact on site or adjacent wetland, wildlife, or vegetation?
3. An increase in the facility's potential for an oil spill, chemical spill, or a sanitary spill? If Spill Prevention Control and Countermeasure (SPCC) Plan provisions are followed, this question may be answered no.
4. An increase in the facility's potential for the discharge of oil into or upon the navigable waters of the U.S.? If Spill Prevention Control and Countermeasure (SPCC) Plan provisions are followed, this question may be answered no.
5. A change in the rate, quantity, concentration, or composition of liquid effluents of any NPDES or other permitted outfall?
6. An increase to the circulating water system thermal rise?
7. A change in the rate, quantity, concentration, or composition of gaseous effluents or emissions?
8. The identifying, handling, removing, disturbing or disposing of asbestos, lead, or PCBs other than in a manner prescribed by the Environmental Compliance Manual, the Safety and Health Manual or other approved Station procedures?
9. The use of ozone depleting substances, such as certain refrigerants (e.g., CFCs and HCFCs) and SF₆ gas, in a manner other than that prescribed by the Environmental Compliance Manual or other approved Station procedures?
10. A significant and sustained increase in the noise level outside of the site boundary?

If any of the above questions are answered yes, then the change or activity has the potential to significantly affect the environment and a final environmental evaluation shall be performed by Licensing.

The Licensing Department may be contacted for further assistance on answering the above screening questions.

Figure 5-1-3
Seabrook Station Final Nonradiological Environmental Evaluation

Unreviewed Environmental Question Evaluation

Is the change required to achieve compliance with other Federal, State and local environmental regulations?

Are all measurable nonradiological environmental effects confined to onsite areas previously disturbed during site preparation and plant construction?

If the answer to either of these questions is "Yes," a review for an unreviewed environmental question is not necessary. Review the activity for other environmental impacts using the criteria in Figure 5-1-2, complete NAEC FORM 5-1A, and return to the initiator for transmittal with the entire package.

Will there be a significant increase in any adverse environmental impact previously evaluated in the ER or FES-OL as modified by supplements to the FES-OL, environmental impact appraisals or any decisions of the Atomic Safety Licensing Board?

Will there be a significant change in effluents or power level?

Will the activity result in a significant adverse environmental impact that was **not** previously reviewed and evaluated in the documents specified in the EPP?

If the answer to all of the above questions is "No," an Unreviewed Environmental Question does not exist. Review the activity for other environmental impact using the criteria in Figure 5-1-2, complete NAEC FORM 5-1A, and return to the initiator for transmittal with the entire package.

If the answer to any question above is "Yes," an unreviewed environmental question exists.

Will the activity involving the unreviewed environmental question involve a change to the EPP (Appendix B of the Seabrook Station Operating License)?

If the answer is "Yes," the change to the EPP must be processed as a license amendment in accordance with the NARC.

If the activity does not involve a change to the EPP, a written evaluation of the activity must be performed and prior NRC approval obtained.

2.0 SUMMARY OF CHANGES

Rev. 40:

Replaced reference to WM 8.1A with NAMS Work Management. Updated company name..

Rev. 39:

Throughout Chapter, changed Regulatory Compliance Supervisor and Regulatory Programs Manager to Licensing Manager and Regulatory Compliance to Licensing.

In §1.7.2 added "Any purchase of equipment that contains or uses a regulated substance such as oil, gasoline or Freon needs to be reviewed by Licensing for environmental permitting considerations." (CR 08-09766-06)

Rev. 33 thru 38:

This chapter was unaffected by these revisions to the manual.

Rev. 32:

Updated position titles.

Rev. 30 and 31:

This chapter was unaffected by these revisions to the manual.

Rev. 29:

Updated position titles.

Rev. 23 thru 28:

This chapter was unaffected by these revisions to the manual.

Rev. 22:

This revision was initiated to reflect changes in the 10 CFR 50.59 program.

- Updated NAMM reference to STMM.
- Throughout the chapter replaced references to 10 CFR 50.59 screening with "formal review process."
- In Figure 5-1-1 changed "10 CFR 50.59 screening" to "review of change or activity."

Rev. 21:

Throughout the chapter updated position title.

APPENDIX A: NPDES PERMIT NH0020338

The current copy of the NPDES Permit is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans

or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the permit.

Rev. 38:

Relocated permit to the Seabrook Home Page.

APPENDIX B: STORM WATER POLLUTION PREVENTION PLAN

The current copy of the Storm Water Pollution Prevention Plan is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans
or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the plan.

Rev. 38:

Relocated plan to Seabrook Home Page. Plan can be located in Environmental Permits and Plans under the Home Page Library Tab.

Rev. 37:

Updated Attachment D, Site Drain System.

Rev. 36:

This appendix was unaffected by this revision to the manual.

Rev. 35:

Added sheet 8 to Table 4 to show results of visual examination of storm water discharges and benchmark monitoring results through fourth quarter 2005.

Rev. 34:

There were no changes affecting Appendix B.

Rev. 33:

- Changed Environmental Compliance Department / personnel to Regulatory Compliance Department/personnel throughout.
- Added sheet 7 to Table 4 to show results of visual examination of storm water discharges and benchmark monitoring results through fourth quarter 2004.

Rev. 32:

- In §5.3.4, added timeframe to correct deficiencies identified during inspections.
- Added sheet 5 and 6 to Table 4, to show results of visual examination of storm water discharges and benchmark monitoring results of third quarter 2003 through first quarter 2004.
- Revised organizational titles throughout.

APPENDIX C: SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

The current copy of the Spill Prevention Control and Countermeasure Plan is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans
or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the plan.

Rev 38:

In Revision 38, this plan was relocated from Appendix C of the Environmental Compliance Manual and relocated to the Seabrook Home Page Library. A current copy of the plan is located in Environmental Permits and Plans under the Seabrook Home Page Library Tab.

Rev. 37:

This non-intent revision updated Figure 3, Plan View Storm Drains, and corrected references and corrected information.

APPENDIX D: TITLE V OPERATING PERMIT

The current copy of the Title V Operating Permit is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans
or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the permit.

Rev. 38:

Relocated Title V Permit to the Seabrook Home Page.

Rev. 29 thru 37:

This appendix was unaffected by these revisions to the manual.

Rev. 28:

Replaced page D-1.

Rev. 20:

Updated with current Title V Operating Permit.

APPENDIX E: INDUSTRIAL WASTE WATER DISCHARGE PERMIT

The current copy of the Industrial Waste Water Discharge Permit is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans
or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the permit.

Rev. 38:

Relocated permit to the Seabrook Home Page.

Rev. 32 through 37:

This appendix was unaffected by these revisions to the manual.

Rev. 31:

Updated Appendix E with renewed Industrial Wastewater Discharge Permit.

Rev. 21 through 30:

This appendix was unaffected by these revisions to the manual.

Rev. 20:

Updated with current permit revision.

APPENDIX F: HAZARDOUS WASTE LIMITED PERMIT

The current copy of the Hazardous Waste Limited Permit is located at

Start Menu/All Programs/Seabrook Applications/Library/Environmental Permits and Plans
or

P: Drive/Environmental Permits and Plans.

SUMMARY OF CHANGES

Rev. 39:

Updated the location of the permit.

Rev. 38:

Relocated permit to the Seabrook Home Page.

Rev. 29 through Rev. 37:

This appendix was unaffected by these revisions to the manual.

Rev. 28:

Combined the previous two permits to one.

1.0 Cultural Resources Protection Plan

1.1 Background

The National Historic Preservation Act (NHPA) requires federal agencies to consider effects on archaeologically and historically significant cultural resources prior to issuing a permit or license or amendment thereto. NextEra Seabrook is licensed by the Nuclear Regulatory Commission (NRC) to operate Seabrook Station. As a result, ground disturbing activities requiring prior approval by the NRC may be subject to NHPA consultation.

The vast majority of ground disturbing activities at Seabrook Station which could impact archaeological, cultural and/or historic resources do not require prior NRC approval and so would not be a federal undertaking subject to NHPA requirements. Nevertheless NextEra Seabrook will voluntarily assess these undertakings to assure the protection of archaeologically and historically significant cultural resources. To meet this commitment NextEra has developed this Cultural Resource Protection Plan (CRPP).

1.2 Purpose

The purpose of this plan is to assist the mission of the New Hampshire Division of Historical Resources (NHDHR) as New Hampshire's State Historic Preservation Office (SHPO). The legislature of New Hampshire has determined that the historical, archeological, architectural, engineering, and cultural heritage of New Hampshire is among the most important environmental assets of the state and that the rapid social and economic development of contemporary society threatens the remaining vestiges of this heritage; therefore, it is public policy and in the public interest of the state to engage in a comprehensive program of historic preservation to promote the use and conservation of such property for the education, inspiration, pleasure, and enrichment of the citizens of New Hampshire. (RSA 227-C)

There are seven Native American archaeological sites present on the Station property and recorded with the State of New Hampshire: Healy's Island (27 RK 162), South Rock Storage Area (27 RK 170), Bolian # 2 (27 RK 452), Rock's Road (27 RK 75), Bolian #5 (27 RK 453), Hunt's Island (27 RK 164) and Seabrook Marsh (27 RK 165). In addition, several areas have been identified as having high site potential for the presence of Native American archaeological sites. As of the time of the writing of this plan, no development had been proposed within these areas. Thus, no impact to identified sites and areas of high site potential has occurred. Both the seven identified sites and the areas of high site potential should be avoided by any future construction. If future proposed construction cannot avoid these areas, then archaeological investigation should be undertaken in advance of the proposed construction.

This plan describes the actions NextEra has taken and will take to enhance the protection of archaeological, cultural and historic resources at Seabrook Station.

1.3 Applicability

This plan is applicable to land disturbing activities within the Owner Controlled Area, but outside the Protected Area. Areas identified as archeologically sensitive and areas known to contain archeological sites are documented in Cultural Resources Management Plan, Seabrook Nuclear Power Plant contained in Appendix G. (See specifically Figures 4, and 5-F thru %-N.)

1.4 References

- 1.4-1. Cultural Resources Management Plan, Seabrook Nuclear Power Plant, Seabrook & Hampton Falls, New Hampshire; Brian Valimont, Ma ; New England Archaeology Co., LLC; May 2010
- 1.4-2. 36 CFR 800; Advisory Council on Historic Preservation – Protection of Historic Properties; Section 106 Process
- 1.4-3. New Hampshire Statutes; Chapter 227-C: Historic Preservation

1.5 Definitions

- 1.5-1. **Culturally Protected Area** – Areas delineated as having a potential or containing known archeological sites.
- 1.5-2. **Cultural Resources** – Resources that include but are not limited to:
 - a. Cemeteries, burial sites, funeral monuments, or other sites with human remains.
 - b. Historic buildings, structures, or building remains
 - c. Native American sites containing cultural artifacts (such as pottery, tools, weaponry, and other implements) and features (such as storage pits, hearth, fire pits, structural remains, etc.)
 - d. Ritual Artifacts
 - e. Discarded material (shells / animal bones)
- 1.5-3. **Disturbed Land Areas** – Surface and Subsurface land areas that were significantly disturbed during construction phase of the site (i.e. Protected Area) or with ongoing activities.
- 1.5-4. **Land-Disturbing Activities** – Within the context of the National Historic Preservation Act, these are activities that involve grading, construction of buildings, excavations, reforestation, landscaping, placement of any fill or spoil or other terrestrial impact.
- 1.5-5. **Mitigation Plan** – A plan to avoid or minimize impact to an eligible historical property, or mitigate the adverse effect prepared in consultation with the NRC and State Historic Preservation Office.

1.6 Responsibilities

1.6.1 Licensing Manager –

- a.** Conduct environmental reviews of land disturbance activities in accordance with the NAEC to ensure either existing or potentially existing cultural resources are protected to the maximum extent practicable.
- b.** Ensuring that the State Historic Preservation Office (SHPO) is notified of activities that may affect existing or potentially existing cultural resources.

1.6.2 Seabrook Station Personnel – Identifying the need to perform an environmental and cultural resource review in accordance with the NAEC.

1.7 Requirements

1.7-1 Land disturbing activities planned within areas containing or potentially containing archaeological, cultural or historic resources as identified in the Cultural Resources Management Plan, Seabrook Nuclear Power Plant (Appendix G) will be surveyed by a state approved archaeologist prior to initiating ground disturbing activities. NextEra Seabrook will forward completed surveys to the New Hampshire Division of Historic Resources.

1.7-2 If a survey identifies archaeological, cultural or historic resources or makes recommendations to protect archaeological, cultural or historic resources the New Hampshire Division of Historic Resources will be consulted prior to undertaking the ground disturbing activity.

1.7-3 If NextEra encounters unexpected archaeological, cultural or historic resources during any ground disturbing activity the activity will be stopped and the New Hampshire Division of Historic Resources will be consulted prior to recommencing work. If these resources include human remains the area will be secured, Security and Control Room notified and the Seabrook Police shall be called immediately to determine the need for criminal investigation.

1.7-4 The identification or discovery of any new archaeological, cultural or historic resources will be conveyed to the New Hampshire Division of Historic Resources.

1.8 Instructional Steps

1.8-1 For land disturbing activities occurring in the Protected Area or in non sensitive areas as identified in Appendix G, no reviews or surveys are required.

1.8-2 For land disturbing activities in areas identified as potentially containing archaeological, cultural or historic resources, contact the Licensing Manager to determine if a archaeological survey will need to be performed and to determine need to submit project to the New Hampshire Division of Historic Resources for review.

- 1.8-3 Develop necessary mitigation and protection plans to protect potentially impacted or known cultural resources for review by the New Hampshire Division of Historic Resources.
- 1.8-4 At least once per year the Licensing Department will perform a visual inspection of the seven known archaeological site and visual inspection of potential and sensitive areas to verify no activities that could have affect archaeological, cultural or historic resources have occurred.
- 1.8-5 If NextEra encounters unexpected archaeological, cultural or historic resources during any ground disturbing activity the activity will be stopped and the New Hampshire Division of Historic Resources will be consulted prior to recommencing work. If these resources include human remains the area will be secured, Security and Control Room notified and the Seabrook Police shall be called immediately to determine the need for criminal investigation.

Figure 5-1-2
Nonradiological Environmental Impact Screening Guidance

Does the proposed change or activity involve

1. Any excavation on site property inside or outside of the protected area involving soil runoff, the introduction of a chemical substance into the ground, or the discharge of groundwater other than in a manner described by the Storm Water Pollution Prevention Plan?
2. Any excavation on site property which has the potential for discovery of cultural resources during land-disturbing activities or may impact any of the seven known archaeological resources on the plant site or areas of historical potential.
3. An adverse impact on site or adjacent wetland, wildlife, or vegetation?
4. An increase in the facility's potential for an oil spill, chemical spill, or a sanitary spill? If Spill Prevention Control and Countermeasure (SPCC) Plan provisions are followed, this question may be answered no.
5. An increase in the facility's potential for the discharge of oil into or upon the navigable waters of the U.S.? If Spill Prevention Control and Countermeasure (SPCC) Plan provisions are followed, this question may be answered no.
6. A change in the rate, quantity, concentration, or composition of liquid effluents of any NPDES or other permitted outfall?
7. An increase to the circulating water system thermal rise?
8. A change in the rate, quantity, concentration, or composition of gaseous effluents or emissions?
9. The identifying, handling, removing, disturbing or disposing of asbestos, lead, or PCBs other than in a manner prescribed by the Environmental Compliance Manual, the Safety and Health Manual or other approved Station procedures?
10. The use of ozone depleting substances, such as certain refrigerants (e.g., CFCs and HCFCs) and SF₆ gas, in a manner other than that prescribed by the Environmental Compliance Manual or other approved Station procedures?
11. A significant and sustained increase in the noise level outside of the site boundary?

If any of the above questions are answered yes, then the change or activity has the potential to significantly affect the environment and a final environmental evaluation shall be performed by Licensing.

The Licensing Department may be contacted for further assistance on answering the above screening questions.

**SEABROOK STATION
ADMINISTRATIVE PROCEDURE**

Dig Safe

SH 6.4

Rev. 12

Approved By: _____ Date: _____

Procedure Owner:
Safety Manager

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1.0 OBJECTIVE

This procedure provides information and direction to prevent injury and equipment damage whenever the plane of the ground is broken.

2.0 PROCEDURAL REFERENCES

1. OSHA 29 CFR 1926 Subpart P, Excavations and Trenches
2. FP 2.6, Confined Space Entry
3. MS0517.19, Placement of Backfill
4. CR 04-07070, 04-08910, 04-11106, 05-15106, 07-05027
5. NAEC 6-1 Cultural Resource Protection Plan

3.0 SCOPE

Employees and contractors **shall** use this procedure, or have an alternate procedure approved per the NextEra Energy Policy on Constructing Facilities, when working within trenches and/or excavations, or performing other digging, drilling, or driving activities that are done utilizing mechanical or hydrological equipment that penetrates the plane of the ground. This procedure also applies to excavations by hand that are more than 12" below grade.

This procedure is not applicable if restoring ground level such as removing a pile of dirt from the ground surface, or removing debris from a culvert. It is also not applicable to the cutting of asphalt or routine grading of ground.

This procedure applies to all activities within the scope of the procedure within the owner-controlled area.

Land disturbing activities planned within areas containing or potentially containing archaeological, cultural or historic resources as identified in the Cultural Resources Management Plan, Seabrook Nuclear Power Plant will be surveyed by a state approved archaeologist prior to initiating ground disturbing activities. NextEra Seabrook will forward completed surveys to the New Hampshire Division of Historic Resources Refer to the Environmental Compliance Manual procedure 6-1.

4.0 INSTRUCTIONS

4.1 Definitions

1. Competent Person - A person who has documented specific training in OSHA trenching applications and rules. A Competent Person is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous or dangerous to workers. The Competent Person is authorized to stop work and initiate prompt corrective measures to eliminate those conditions.

2. Excavation - Any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal. **For the purposes of this procedure vacuuming, drilling, driving, digging, augering, and trenching are considered excavations.**
3. Protective system - A means of protecting workers from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide necessary protection.
4. Registered professional engineer - A person registered as a professional engineer in the state where work is performed.
5. Shielding (shield system) - A structure able to withstand the forces imposed on it by a cave-in, thereby protecting workers within the structure. Shields can be permanent or portable structures that are moved along as work progresses. Shields used in trenches are usually referred to as trench boxes or trench shields.
6. Shoring (shoring system) - A structure (e.g., metal hydraulic, mechanical, or timber) that supports the sides of an excavation and is designed to prevent cave-ins.
7. Sloping (sloping system) - Excavations with sides inclined away from the excavation to prevent cave-ins. The angle of incline required to prevent cave-in varies with differences in such factors as the soil-type, environmental conditions of exposure, and application of surcharge loads.
8. Trench - A narrow (in relation to its length) excavation made below the surface of the ground. In general the depth is greater than the width, but the width measured at the bottom does not exceed 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.
9. Vacuum Excavation - The use of jets of air or water to loosen soil which is then picked up through a vacuum hose. Typically used for utility location.

4.2 Responsibilities

4.2.1 Nuclear Projects Manager

1. Is the process owner for any drilling, digging, excavation and trenching activities that fall within the scope of this procedure.
2. Is responsible for, or designates approval of Dig Safe Permit (form SH 6.4A).
3. Authorizes mechanical, hydrological, or vacuum excavation in the immediate vicinity of underground obstructions.
4. Determines the length of time Dig Safe Permit (form SH 6.4A) is maintained in his/her files for future reference in case of similar work or work in the same areas.

4.2.2 Work Group Supervisor

1. Ensures that the personnel performing work within the scope of this procedure understand and comply with the requirements of this procedure.
2. Ensures an underground Penetrating Radar Survey/Scan is completed prior to excavation being started as part of the Dig Safe Permit (form SH 6.4A) preparation.
3. Works with IRG and Maintenance Electrical to identify any potential underground obstructions from temporary power or communication lines.
4. Ensures the Dig Safe Permit (form SH 6.4A) has had an Engineering review that has identified the potential underground obstructions from the drawings.
5. Verifies that the Competent Person is qualified.
6. Ensures that the Dig Safe Permit (form SH 6.4A) is obtained, properly completed and appropriate signatures are obtained.
7. **Shall** promptly eliminate any identified or predictable hazardous condition in a trenching/excavation work environment.
8. If the work is outside the protected area, **shall** determine in conjunction with the Regulatory Compliance Supervisor if the area is an "Activities and Use Restriction Area". Worker and environmental protection requirements may be needed for subsurface activities in these areas. (Protected: Ref. 2.4)

4.2.3 Competent Person

1. Maintains full working knowledge of OSHA requirements and this procedure to ensure a safe work environment for employees that are working in or around an excavation.
2. Specifies appropriate measures on the Dig Safe Permits (form SH 6.4A) to ensure worker safety when requested by the Work Group Supervisor or work order planning personnel.
3. Classifies and documents soil type and determine protection requirements for excavations greater than 4 feet deep.
4. Performs inspections of excavations greater than 4 feet deep prior to personnel working in the excavation and on a daily basis in accordance with the requirements of §4.4.1.
5. Performs inspections of excavations greater than 4 feet deep after significant events such as rainstorms, freezing temperatures, etc.
6. Designs or approves the design of ramps used for personnel access and egress into excavations.

7. Periodically monitors to ensure proper operation of water removal equipment and inspects the means used to divert runoff (see §4.4.6).
8. Promptly eliminates any identified or predictable hazardous condition in a trenching/excavation work environment.
9. Determines if trenches or excavations blasted into solid rock with stable walls may be vertical in rise without protection.

4.2.4 Employees and Contractors

Comply with this procedure when working within trenches and/or excavations, or performing other digging, drilling, or driving that is done by machine or by hand within the scope of this procedure.

4.2.5 Engineering Personnel

When providing input to the Dig Safe Permit (form SH 6.4A), review all drawings that exist for the site that could show any material/commodities buried in the ground for the area to be worked, including construction era drawings for temporary services. Review outstanding change documents that affected the drawings.

Any potential obstructions in the area of excavation **shall** be entered on the Dig Safe Permit (form SH 6.4A) with either a written explanation or by referencing and attaching a drawing or sketch that the implementer can easily interpret. These entries are to be made on the permit. Drawings and sketches become part of the permit when attached.

4.2.6 Radiation Protection Personnel

Approves the removal of asphalt or soil from the protected area.

4.2.7 Contract Coordinators

Ensure contractors, vendors, and/or visitors who perform excavation activities under the scope of this procedure or work within an excavation are aware of and comply with the requirements of this procedure.

4.2.8 Registered Professional Engineer

1. Approves the design of structural ramps used by equipment to access an excavation.
2. Evaluates the structural integrity of the structure where the stability of adjacent buildings, walls or other structures may be endangered by an excavation.
3. Determines the support system to ensure the stability of adjacent structures to ensure the stability of such structures for the protection of workers.
4. Prepares and/or approves shoring designs and any changes to the shoring design and approves the use of trench boxes.

5. Designs sloping or benching for trenches or excavations greater than 20 feet deep in accordance with the requirements of §4.5.4.

4.3 General – Process Requirements

NOTE

Finding an unexpected underground obstruction or commodity while excavating (includes trenching, digging, drilling or driving, etc.) is an unwanted condition. This includes cathodic protection and ground cables. Work **shall** be put into a safe condition and will then be stopped until the situation can be assessed. An action request **shall** be initiated using NAMS.

If encounters unexpected archaeological, cultural or historic resources during any ground disturbing activity the activity will be stopped and the New Hampshire Division of Historic Resources will be consulted prior to recommencing work. If these resources include human remains the area will be secured, Security and Control Room notified and the Seabrook Police shall be called immediately to determine the need for criminal investigation.

This section applies to all operations within the scope of this procedure.

4.3.1 General

1. Form SH 6.4A, Dig Safe Permit, **shall** be used any time an activity within the scope of this procedure is to be performed.
2. If the implementation of a design change will require an activity within the scope of this procedure, the need for the completion of form SH 6.4A, Dig Safe Permit, **shall** be identified in the “Implementation Considerations” section of the applicable design change document.
3. If the work is outside the protected area, Work Group Supervisor **shall** determine, in conjunction with the Regulatory Compliance Supervisor, if the area is an “Activities and Use Restriction Area.” Worker and environmental protection requirements may be needed for subsurface activities in these areas.
(Protected: Ref. 2.4)
4. The Work Group Supervisor **shall** ensure form SH 6.4A, Dig Safe Permit, is completed prior to beginning any activity within the scope of this procedure.

4.3.2 Dig Safe Permit (Form SH 6.4A) Initiation

1. Form SH 6.4A, Dig Safe Permit, is initiated by the Planner during the Work Order Planning.

2. The Work Group Supervisor **shall** ensure that the location of the proposed excavation, including the shape and depth of the excavation are properly identified on the Dig Safe Permit (form SH 6.4A).
3. The Work Group Supervisor **shall** ensure that IRG and Maintenance Electrical have identified any communication lines or temporary power lines in the vicinity of the planned excavation on the Dig Safe Permit (form SH 6.4A)
4. The Work Group Supervisor **shall** ensure Engineering is contacted to review and provide input to all excavation activities with regard to underground utilities/commodities such as water lines, electrical installations, system piping, or communication lines.
5. The Engineering personnel providing input to the Dig Safe Permit (form SH 6.4A) **shall** walk down the activity with the implementing organization prior to approval of the permit to ensure that the scope of the activity is understood and consistent with the engineering review. Also the walkdown will provide an opportunity to observe the physical environment to aid in the identification of potential obstacles.

NOTE

Both Mechanical and Electrical Design Engineering **shall** be contacted to determine if potential underground obstacles/commodities are present.

6. The Engineering personnel that provide input into the Dig Safe Permit (form SH 6.4A) **shall** ensure that the appropriate Engineering drawings have been reviewed prior to any excavation activities to prevent any damage to underground utilities such as water lines, electrical installations, or system piping. The specific drawings reviewed **shall** be identified in the Engineering Review section of form SH 6.4A. A partial listing of drawings is included in Figure 5.2.
7. The Engineering personnel that provide input to the Dig Safe Permit (form SH 6.4A) **shall** determine if an adjoining building, wall, or other structure could be endangered by the excavation operations. Section 4.4.7 requires this to be a Registered Professional Engineer.

NOTE

Information from the engineering review regarding potential obstacles and notes **shall** be captured and entered on form SH 6.4A, Dig Safe Permit. If drawings or sketches are used to communicate potential hazards, they **shall** become part of the permit.

8. The Work Group Supervisor **shall** ensure that physical measures are taken to identify potential underground obstacles by the use of ground penetrating radar for the potential hazards (see Figure 5.3, Limitations of Electronic Equipment). Use of a qualified vendor to perform the dig safe scanning survey is the preferred method. The Work Group Supervisor **shall** ensure that the final Ground Penetrating Radar Survey results are obtained and attached to the Dig Safe Permit prior to initiation of work.
9. When underground obstructions are identified prior to excavating, either with the ground penetrating radar, or by a review of drawings, specific provisions will be made to minimize the potential for personnel injury and/or equipment damage. These provisions **shall** be documented on the Dig Safe Permit (form SH 6.4A). Hand digging is the preferred method to dig in the immediate vicinity of underground obstructions. Excavating mechanical or hydrological equipment in the immediate vicinity of underground obstructions can only be authorized by the Nuclear Projects Manager.
10. The Work Group Supervisor **shall** determine the need for de-energizing any of the potential obstacles underground with the appropriate organization, Operations for plant related equipment, Maintenance Electrical for campus power or IRG for communications equipment.
11. The Work Group Supervisor and the Nuclear Projects Manager, or Designee, **shall** sign the Dig Safe Permit (form SH 6.4A) before employees are allowed to start of excavation activities.
12. When a Dig Safe Permit (form SH 6.4A) is approved, a copy of the permit **shall** be maintained by the Nuclear Projects Department until the work scope has been completed.

4.3.3 Pre-Job Requirements

1. Before starting any excavation activity, the Work Group Supervisor **shall** ensure that the location that is going to be excavated has been inspected and marked for any potential underground obstacles.
2. Prior to beginning any work, the Work Group Supervisor **shall** ensure that the appropriate requirements of §4.4. and §4.5 are included in the Dig Safe Permit (form SH 6.4A) or the work order job plan.

3. A pre-job brief **shall** be held using Figure 5.4, Excavation Pre-Job Briefing Considerations, and documented to familiarize all employees and groups with the work processes and potential hazards associated with the work prior to work.
4. Page 3 of the Dig Safe Permit (form SH 6.4A) is used to document initial entry inspections required by §4.4.1 of this procedure.

4.3.4 During Excavations Activities

1. Follow the specific requirements of §4.4 and 4.5. Page 3 of the Dig Safe Permit (form SH 6.4A) is used to document periodic inspections required by §4.4.1 of this procedure.
2. While the job is in progress, a copy of the permit **shall** be either posted or included in the work order. If the permit is posted at the work site it **shall** be removed when all work is completed and no further entry is required.

CAUTION

Underground piping that has a protective coating could contain asbestos. The requirements of SH 6.1, Asbestos Handling and Training Requirements, shall be met before proceeding if underground piping with a protective coating is uncovered and will be disturbed.

NOTE

Notify Plant Engineering to perform a visual inspection when underground piping is exposed.

If unexpected archaeological, cultural or historic resources during any ground disturbing activity the activity will be stopped and the New Hampshire Division of Historic Resources will be consulted prior to recommencing work. If these resources include human remains the area will be secured, Security and Control Room notified and the Seabrook Police shall be called immediately to determine the need for criminal investigation.

3. If an underground commodity is struck with a power tool, whether it is known or unknown, the job **shall** be stopped immediately and equipment placed in a safe condition and an action request **shall** be generated using NAMS. Work may not be restarted without approval of the Nuclear Projects Manager.

4. Scope changes to Work Orders and/or Design Change Notices must be reviewed by the Work Group Supervisor for potential revisions to the existing Dig Safe Permit. Changes to work activities that affect the scope of the reviews performed as part of the original permit approval process require that the permit be reviewed and reapproved. Changes to the excavation method require the permit to be re-approved.
5. Any material from an excavation that will be removed from the protected area **shall** be released by the Radiation Protection Department before it exits the protected area.

4.3.5 Job Completion

1. Upon the completion of the installation of field run commodities underneath the surface of the ground, as-built drawings **shall** be submitted to the appropriate design engineering supervisor on an action request for incorporation into the appropriate drawings.
2. When the job is completed, the Work Group Supervisor **shall** include the original copy of the Dig Safe Permit (form SH 6.4A) with the work package. The Nuclear Projects Manager may retain a copy of the permit for future reference and/or program assessment.
3. After work is complete and the trench/excavation has been cleared, the excavation should be backfilled as soon as possible, per MS0517.19, Placement of Backfill.

4.4 **Specific Safety Requirements**

4.4.1 Inspections and Excavation Entry/Exit Criteria

1. **Before entering and performing any work within a trench or excavation greater than 4 feet deep**, entrants **shall** ensure a Competent Person has inspected the trench/excavation to ensure no potential of injury from a cave-in or other hazards exists. This inspection **shall** include the appropriate elements from the specific safety requirements of §§ 4.4 and 4.5 of this procedure.
 - Both the work supervisor and the Competent Person **shall** sign page 3 of the Dig Safe Permit (form SH 6.4A) before employees are allowed into any trench/excavation.
 - When work is in progress, a Competent Person **shall** inspect the trench/excavation daily and sign-off on page 3 of the Dig Safe Permit (form SH 6.4A).

NOTE

Inspections are required only when employee exposure can be reasonably anticipated. If entry **will not** be made, a Competent Person is **not** required to sign off the Dig Safe Permit (form SH 6.4A) on that day.

2. The daily inspections of the excavations, adjacent areas, and protective systems required by §4.4.1.1 **shall** include the following:
 - a. verification that sampling for hazardous atmospheres has been performed when required (reference §4.4.5)
 - b. unsafe conditions
 - c. evidence of potential cave-ins
 - d. indications of failure of protective systems
 - e. unsanitary conditions (sewage, waste water, insects or rodents)
3. When entry is required into a trench or excavation greater than 4 feet deep, a Competent Person **shall** classify and document soil type(s) and determine protection requirements. Soil classification(s) **shall** be made
 - a. upon starting work.
 - b. per 100 feet of trenching/excavation work.
 - c. for each layer of soil identified in the excavation.
 - d. when soil conditions change.

Soil classification by the Competent Person **shall** include at least one visual and one manual test method. Soil classification is performed using Figure 5.1 and the Soil Analysis Checklist, (form SH 6.4B). If no soil testing is performed, the trench/excavation must be classified as Type C soil.

4. If the Competent Person expresses concern and does **not** allow initial entry, the supervisor **shall** take corrective measures and request a re-inspection.
5. A Competent Person **shall** re-inspect and sign-off on the Dig Safe Permit (form SH 6.4A) before entry into excavations greater than 4 feet deep after significant events such as rainstorms, freezing temperatures, etc.

6. Employees **shall** exit any trench/excavation when told to do so by a Competent Person, or when warning signs of failure are identified. Warning signs of failure include, but are not limited to the following:
 - tension cracks within the soil
 - ground settlement
 - changes in wall slope
 - spalling or sloughing of the walls or bank
 - water seepage into the trench or excavation
 - boiling/bubbling of trench bottom
 - unusual deformation of bracing struts
 - bowing of structural members
 - cracking or popping sounds
7. Employees **shall not** enter or re-enter any trench/excavation determined or suspected to be unsafe. Employees **shall** notify the Work Group Supervisor of any concerns and resolve all concerns with a Competent Person.
8. Excavations 5 feet or greater in depth **shall** have an adequate protection system. (Reference §4.5)

4.4.2 Access and Egress

1. Equipment for Egress

In case of emergency, employees must be able to leave the trench/excavation quickly. For excavations deeper than 4 feet, employees **shall** have ladders or ramps in position for access and egress.

- a. Ladders or ramps **shall** be spaced at intervals of no more than 25 feet or lateral travel distance from any point in the trench/excavation.
- b. Ladders must be in good condition, extend from the floor of the trench to 3 feet (minimum) above the top of the excavation, and be secured at the top (when possible).

2. Structural Ramps

- a. Structural ramps that are used solely by workers as a means of egress from excavations **shall** be designed by a Competent Person.
- b. A registered professional engineer **shall** design structural ramps used by equipment.

4.4.3 Protection of Workers and the Excavation from Exposure to Vehicular Traffic/Equipment

1. Employees exposed to vehicular traffic **shall** wear vests made of reflective or high-visibility material. Trenching and excavation sites located in an area of vehicular traffic **shall** be protected with orange traffic cones, signs, and flaggers, as required.
2. Trenches or excavations that are left open or unattended **shall** have physical barriers in place, such as barricades, guardrails, or covers.
3. Occupied or attended excavations with a depth of 6 feet or more, that cannot be readily seen due to plant growth or other visual barrier(s), **shall** be protected by using guardrails, barricades, or covers to prevent employees from unknowingly approaching, or working near the edge, and falling into the excavation.
4. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system **shall** be utilized such as barricades, hand or mechanical signals, or stop logs. If possible the grade should be away from the excavation.

4.4.4 Exposure to Falling Loads

When involved in trenching/excavation activities, employees **shall** stand clear of backhoes, front-end loaders, etc. Employees **shall not** work beneath suspended loads handled by lifting or digging equipment.

4.4.5 Hazardous Atmospheres

Where the potential for hazardous atmosphere/oxygen deficiency exists, employees **shall** follow the requirement of procedure FP 2.6; Confined Space Entry, and ensure appropriate tests are conducted before entering the trench/excavation.

1. Contact Fire Protection and have the trench/excavation evaluated to determine if it meets the definition and criteria of a confined space.
2. If the trench/excavation is classified as a confined space, entrants must have completed confined space training.

4.4.6 Water Accumulation

1. Workers **shall** not work in an excavation in which there is accumulated water, or in which water is accumulating, unless adequate precautions have been taken to protect workers from the hazards posed by water accumulation.
2. If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations **shall** be periodically monitored by a Competent Person to ensure proper operation.
3. If the excavation work interrupts the natural drainage of surface water, diversion ditches, dikes or other suitable means **shall** be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. The Competent Person **shall** inspect the means used to divert the runoff.

4.4.7 Stability of Adjacent Structures

Where the stability of adjacent buildings, walls or other structures is endangered by excavation operations, a Registered Professional Engineer **shall** evaluate the structural integrity of the structure for the excavation. The Registered Professional engineer **shall** determine the support systems such as shoring, bracing, or underpinning to ensure the stability of such structures for the protection of the workers.

4.4.8 Protection of Workers from Loose Rock or Soil

1. To keep the spoil (excavated dirt) or material from falling back into the trench/excavation, workers should ensure excavated or other material is effectively stored and retained at least 2 feet from the edge of the excavation. The excavated material must be covered by suitable means to prevent run-off of the material into storm drains, catch basins, etc.
2. Where it is not possible to keep material two feet from the edge of the excavation, retaining devices/protective barricades that are sufficient to prevent materials or equipment from falling or rolling into the excavation **shall** be used.

4.4.9 Fall Protection

Walkways **shall** be provided where workers or equipment are required or permitted to cross over excavations. Guardrails **shall** be provided where walkways are 6 feet or more above lower levels.

4.5 Sloping/Shoring

All trenches/excavations with wall height between 5 and 20 feet are sloped, shored, sheeted, braced, or otherwise supported. When soil conditions are unstable, excavations lower than 5 feet must also be sloped, supported, or shored.

NOTE

Competent Persons must consider and determine the degree to which actual slopes are reduced because of surcharge loading, operating equipment or traffic.

1. Walls of unsupported trenches/excavations must be sloped according to the soil classification (i.e., Type A, B, or C). Soil type is determined using Figure 5.1, Types of Soil, and the Soil Analysis Checklist, form SH 6.4B.

Soil or Rock Type	Max. Allowable Slope	Angle
Stable Rock (most stable)	Vertical	90 degrees
Type A Soil (very stable)	0.75:1 slope	53 degrees
Type B Soil (average soil)	1:1 slope	45 degrees
Type C Soil (least stable)	1.5:1 slope	34 degrees

2. Trenches or excavations blasted into solid rock with stable walls may be vertical in rise without protection, as determined by inspection of a Competent Person.
3. A registered professional engineer must approve the use of trench boxes. When sloping methods are used in conjunction with a trench box, begin sloping 18 inches below the top of the box and continue sloping to the original ground elevation.
4. A registered professional engineering **shall** design sloping or benching for trenches or excavations greater than 20 feet deep.
 - a. All designs by a registered professional engineer **shall** be in written format and convey configurations deemed safe for each particular project.
 - b. All designs **shall** identify the registered professional engineer approving the design.
 - c. At least one copy of the design **shall** be kept at the job site while work is performed.
 - d. After job completion, a copy of the design **shall** be retained in the work order and may be retained by the Nuclear Projects Department for future reference and the OSHA record keeping requirements of 29 CFR 1926.

5. Removal **shall** be performed as follows:
 - a. If shoring must be removed, workers should remove the shoring from the bottom up, taking care to release jacks or braces slowly.
 - b. In unstable soil, ropes should be used to pull out the jacks or braces from above.

Figure 5.1
Types of Soil
(Sheet 1 of 2)

TYPE A

NOTE

For Type A soil excavations less than 20 feet deep, the maximum allowable slope is 0.75:1 (H:V).

- Cohesive soils such as the following with an unconfined compressive strength of 1.5 tons per square foot (TFS) (144 kPa) or greater:
 - ◆ Clay
 - ◆ Silty clay
 - ◆ Sandy clay
 - ◆ Clay loam
 - ◆ Silty clay loam and sandy clay loam in some cases
- Cemented soils (e.g., caliche, hardpan).

Soils Not Considered Type A

- Fissured soil
- Soil subject to vibration from heavy traffic, pile driving, or similar effects.
- Previously disturbed soil (which includes the majority of the soil around the site).
- Soil that is part of a sloped, layered, system where the layers dip into the excavation on a slope of 4 horizontal to 1 vertical (4H:1V) or greater.
- Soil subject to other factors that would require it to be classified as a less stable material.

TYPE B

NOTE

For Type B soil excavations less than 20 feet deep, the maximum allowable slope is 1:1 (H:V).

- Cohesive soils with an unconfined compressive strength greater than 0.5 TSF (48 kPa), but less than 1.5 TSF (144 kPa).

Figure 5.1
Types of Soil
(Sheet 2 of 2)

TYPE B (Continued)

- Granular cohesionless solids including
 - ◆ Angular gravel (similar to crushed rock)
 - ◆ Silt
 - ◆ Silt loam
 - ◆ Sandy loam
 - ◆ Silty clay loam and sandy clay loam in some cases
- Previously disturbed soils except those that would otherwise be classed as Type C soil.
- Soils that meet the unconfined compressive strength or cementation requirements for Type A, but not fissured or subject to vibration.
- Dry rock that is not stable.
- Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than 4 horizontal to 1 vertical (4H:1V), but only if the material would otherwise be classified as Type B.

TYPE C

NOTE

For Type C soil excavations less than 20 feet deep, the maximum allowable slope is 1.5:1 (H:V).

- Cohesive soils with an unconfined compressive strength of 0.5 TSF (49 kPa) or less.
- Granular soils, including gravel, sand, and loamy sand.
- Submerged soil or soil from which water is freely seeping.
- Submerged rock that is not stable.
- Material in a sloped, layered system where the layers dip into the excavation on a slope of 4 horizontal to 1 vertical (4H:1V) or steeper.

Figure 5.2 Drawings Showing Underground Obstructions

The following is a partial listing of drawings showing potential underground obstructions.

9763-FSU-282
9763-F-300245
1-NHY-301605
1-NHY-301606
1-NHY-301607
1-NHY-301608
1-NHY-301609
1-NHY-301802
9763-F-301623
9763-F-301624
9763-F-301625
9763-F-310248
9763-F-310249
9763-F-310223
9763-F-320223
9763-F-320251
9763-F-320252
9763-F-604051
9763-F-604052
9763-F-604076
9763-F-604149
9763-F-604150
9763-F-604151
9763-F-604152
9763-F-604153
9763-F-604154
9763-F-604155
9763-F-604156
9763-F-604157
98DCR015 Cathodic Protection Underground System Enhancements.

Figure 5.3

Limitations of Electronic Equipment

The following limitations of electronic survey equipment should be considered during performance of all dig safe ground surveys:

Ground Penetrating Radar (GPR)

- Signal penetration is site specific and is determined by dielectric properties of the soil or fill materials.
- Objects deeper than the signal's maximum penetration depth remains undetected.
- Interpretations are subjective and are based on identifying reflection patterns that may not uniquely represent a subsurface object.
- Varying an antenna's speed along a survey traverse can cause slight errors in horizontal distance interpolations and inferred object positions.
- GPR is most likely to detect concrete or metallic objects with the exception of metallic objects located under reinforced concrete because the signal couples onto the metal rebar and mesh in the concrete, and the signal on a particular metallic object cannot then be traced with any reliability. Plastic or vitreous clay pipes, or Fiberglas objects are unlikely to be detected.
- Small diameter objects may be difficult to detect unless they are quite shallow (less than 1.5 feet).
- Closely spaced pipe may produce reflections that resemble a single object.
- If two pipes occupy the same trench at different depths, only the shallower pipe may be detected.

Metal Detector

- A change in ground mineral conditions can give a visual indication.
- It is possible to get a null reading if directly over a source.

Figure 5.4
Excavation Pre-Job Briefing Considerations
(Sheet 1 of 3)

OBJECTIVE:

The objective of this document is to provide specific expectations, considerations, and Operating Experience to support the conduct of Pre-Job Briefings associated with Dig Safe related activities. This document should be used with WM 8.0A, Job Briefing Guideline.

REFERENCES:

- NPDI-001, Nuclear Projects Expectations and Conduct of Business
- SH 6.4, Dig Safe
- Work Management Manual (NAWM)
- OSHA 29 CFR Part 1926 Subpart P (Excavations and Trenches)
- MS0517.19, Placement of Backfill
- CR# 02-01822, 02-11928, 03-05931, 03-10422, 04-03556, 04-06261, 04-07070, 04-08428, 04-08429, 04-08910, 04-08979, 04-09283, 04-09336, 04-09757, 04-09858, 04-10626, 04-10850, 04-11106, 04-12266, 05-04908, 05-06168, 05-08750, 05-10360, 05-15106
- INPO Industry OE (eg. OE#'s 16790, 17394, 17418, 17752, 17939, 18832, 18839, 18840, 18910, 19145, 19108, 21580, etc.)
- SBK CS602I, CS6003I

Summary:

Protecting employees from job-related hazards is a **top priority** at Seabrook Station. The job briefing is a forum that provides an opportunity for workers and supervisors to identify, discuss, and mitigate potential job hazards, discover human error traps and promotes the exchange of ideas and experience.

CR# 05-15106 was the most recently generated condition report pertaining to an excavation related event at Seabrook Station. As indicated above in the "Reference" section, there have been numerous documented occurrences associated with excavation related activities since 2002.

Why is this significant?

Subsurface excavation activities creates significant potential hazards to personnel and the operating equipment/components that support the safe effective operation of Seabrook Station. Due to site-specific, as well as industry events that resulted from excavation and/or trenching activities, administrative and technical controls have been established to ensure that underground obstructions or commodities are not unexpectedly encountered. The specific requirements for working within trenches and/or excavations, or performing other digging, drilling, or pile driving activities that are done by machine that penetrates the plane of the ground surface, as well as excavations performed by hand that exceed a depth of 12" below grade, are contained in this procedure (NASH, procedure SH 6.4).

Figure 5.4
Excavation Pre-Job Briefing Considerations
(Sheet 2 of 3)

What do I need to consider?

- SH 6.4 is the governing document and **shall** be used for all excavation-related activities at Seabrook Station.
- The Nuclear Projects Manager, or designee, is responsible for approving Dig Safe Permits (form SH 6.4A).
- The Work Group Supervisor is responsible for ensuring that personnel performing work within the scope of SH 6.4 are qualified prior to initiating work activities, and understand and comply with the requirements set forth in SH 6.4.
- A subsurface scan **shall** be completed by an approved geotechnical surveying service, and the result will be reviewed prior to Dig Safe Permit approval.
- Consider vacuum excavation to locate services before major work.
- If required, a qualified “competent person” **shall** be designated to support the excavation/trenching activity, in accordance with SH 6.4, §4.2.3.
- A copy of the Dig Safe permit **shall** be posted at the work site at all times until the excavation activities are completed.
- A Work Order will be the implementing document for any excavation activities at Seabrook Station.
- Any change in condition or work scope will not be implemented prior to the Dig Safe permit being revised to reflect the change, as well as a scope change being generated for the implementing Work Order.
- All subsurface components are to be considered permanent and energized regardless of belief, and are not to be physically altered, modified, or removed without approved documentation.
- A dedicated safety spotter will be assigned for excavation/digging activities that requires mechanical equipment, when being operated directly adjacent to, or having the potential to come into contact with, operating structures, systems, or components (SSC).
- Upon discovery of an unexpected or unwanted condition, workers are to immediately STOP and notify supervisory personnel so the condition can be assessed. If unexpected archaeological, cultural or historic resources during any ground disturbing activity the activity will be stopped and the New Hampshire Division of Historic Resources will be consulted prior to recommencing work. If these resources include human remains the area will be secured, Security and Control Room notified and the Seabrook Police shall be called immediately to determine the need for criminal investigation.
- Whether expected or unexpected, when an underground commodity is struck, the work **shall** be immediately stopped and the equipment placed in a safe condition. Work may not be restarted without approval of the Nuclear Projects Manager.
- Following any occurrence of an excavation-related (Dig Safe) event, work can recommence **only** following approval by the Nuclear Projects Manager.

What else should I consider every day before I begin work?

- All personnel will STOP when unsure and obtain supervisory guidance for resolution.

Figure 5.4
Excavation Pre-Job Briefing Considerations
(Sheet 3 of 3)

- The use of Human Performance Tools (STAR, Self-Checking, Peer Checking, 3-Way Communication, QV&V, STOP When Unsure) and the 5 Activity Preview Questions **shall** be covered every day during each Pre Job Briefing prior to initiating work activities.
- Work documentation will be prepared and approved prior to implementation of any work activity.
- Work Order documentation is to be maintained current on a daily basis.
- All permits are to be reviewed daily to ensure they are appropriate for the existing conditions.
- PPE will be donned at all times in accordance with the posted or communicated requirements.
- Action requests will be generated for any unwanted/unexpected situation or result.

Figure 5.5 Summary of Changes

Rev 12:

Added reference and note to Cultural Resource Protection Plan within the Environmental Compliance Manual.

Rev. 11:

After §4.3.4, step 2, added a Caution concerning underground piping that has a protective coating that could contain asbestos.

Updated company name.

Changed references to condition report to action request to reflect NAMS terminology.

Removed references to canceled procedures (OE 3.1 and 3.6).

Rev. 10:

Included a Drawing 9763-F-301625 to Figure 5.2 due to 06MMOD507, DFS Security and Electrical Enclosure.

Rev. 09:

Included a definition and description of vacuum trenching.

Rev. 08:

This revision was initiated in response to CR 07-05027. Specific changes are as follows:

- In §4.3.2, step 8, added, "Use of a qualified vendor to perform the dig safe scanning survey is the preferred method."
- Added Note after §4.3.4, step 2, as follows: Notify Plant Engineering to perform a visual inspection when underground piping is exposed.

Rev. 07:

In §2.0, step 4, added CR numbers.

Changed "Health Physics" to "Radiation Protection Personnel" to reflect new department name.

Changed Figure 5.3, Limitations of Electronic Equipment. Removed Metrotech section and enhanced GPR section.

Added Figure 5.4, Pre-Job Briefing Considerations. Renumbered subsequent Figure.

On form SH 6.4A removed Metro Tech 9860 and changed Equivalent to Survey.