



Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

David E. Noyes, Director
Regulatory & Performance Improvement

ENV 1.15-001

January 20, 2015

U.S. Environmental Protection Agency
Water Enforcement, OES4-SMR
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Massachusetts Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

Subject: Discharge Monitoring Report — December 2014
NPDES Permit Number MA0003557

Dear Sir or Madam:

Enclosed is the December 2014 Discharge Monitoring Report (DMR) for Pilgrim Nuclear Power Station, NPDES Permit Number MA0003557 (Federal) and Number 359 (State). Also included is a summary of the discharge data for the month along with notes and additional information (Attachment 1).

Should you have any questions about this report please direct them to Mr. Joseph Egan, Chemistry Department (Environmental), Pilgrim Nuclear Power Station, (508) 830-8915.

Sincerely,

A handwritten signature in black ink that reads "D E Noyes".

David E. Noyes

JWE/

Attachments: 1. Summary – Additional Information for December 2014 DMR
2. Discharge Monitoring Report (completed DMR forms)

ENV 1.15-001



ATTACHMENT 1 to Letter ENV 1.15-001

Summary — Additional Information for December 2014 D.M.R.

Pilgrim Nuclear Power Station – Discharge Monitoring Report

In accordance with the Federal Clean Water Act, as amended (33 USC 1251 et seq.), and the Massachusetts Clean Water Act, as amended (M.G.L.; Chap. 21, 26-53), regarding effluent limitations, monitoring requirements and other conditions set forth in the Pilgrim NPDES permit (Federal Permit Number MA0003557 and State Permit Number 359), Parts I and II, the following information is submitted.

I. Discharge Points Covered in this Report

<u>Outfall No.</u>	<u>Discharge Identification</u>
001-1	Condenser Cooling Water (or Circ. Water System)
002-1	Thermal Backwash for Biofouling Control
003-A	Intake Screen Wash
004, 005, 006, and 007	Yard (Storm) Drains – Spring and Fall only
008-A	Sea Foam Suppression
010-A	Service Cooling Water (or Salt Service Water System)
011-A	Makeup Water and Demineralizer Waste Discharge (Neutralizing Sump and others)

II. Summary and Notes of Discharge Report

- A. The flows from discharge points 001, 002, 003, 008 and 010 are calculated from estimated pump capacity and cumulative hours of pump operation. The flow from point 001 is estimated assuming a Circulating Water pump capacity of 155,000 GPM (as described in Pilgrim's "§308 Response" letter dated July 1, 2008 from Goodwin Procter to U.S. EPA). The flow from point 011 is estimated from the volume discharged.
- B. The temperatures at discharge points 001 and 002 are measured by resistance temperature detectors (RTDs) and compiled as one minute values.
- C. Grab samples for the four storm water outfalls are to be collected and analyzed twice per year in accordance with 40 CFR 136. Semi-annual NPDES storm drain sampling was not performed during this month.
- D. Chlorination of the condenser cooling water (discharge point #001) was performed on 10 days this month, for no more than 2 hours per day.
- E. Thermal backwashing for macroinvertebrate control was performed on December 26, 2014. The pH of the water from discharge point #002 did not vary more than 0.5 standard units from that of ambient sea water. The average temperature of the water discharged during the thermal backwashing was 108.8°F and the maximum temperature was 110.0°F.

II. Summary and Notes of Discharge Report (continued)

F. There were two brief fish impingement incidents at Pilgrim Station this month, which were previously reported to U.S. EPA and MDEP.

- On December 3, the maximum impingement rate of 33 fish/hour was observed during a routine screenwash. The details of this incident were reported in an e-mail message dated December 5, 2014.
- On December 10 the maximum impingement rate of 223 fish/hour was observed during a routine screenwash. The details of this incident were reported in an e-mail message dated December 11, 2014.

It appears that these impingements were not caused by any change in conditions related to Pilgrim Station but were due to natural circumstances. Based on the number of fish involved, it is expected that these incidents did not have a lasting effect on these species.

ATTACHMENT 2
to Letter ENV 1.15-001

COMPLETED
DISCHARGE MONITORING REPORT
FORMS

(6 pages of DMR Forms enclosed)

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: ENERGY - PILGRIM NUCLEAR POWER STATION
 ADDRESS: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
 FACILITY: ENERGY - PILGRIM NUCLEAR POWER STATION
 LOCATION: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360

ATTN: John Macdonald, Oper. Mang.

MA0003557	001-1
PERMIT NUMBER	DISCHARGE NUMBER
MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 02360-5508
 MAJOR (SUBR S)
 CONDENSER COOLING WATER
 External Outfall

No Discharge

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE			
Temperature, water deg. fahrenheit	*****	*****	*****	80.4	°F	0	99/99	RC	
00011 0 Effluent Gross Oxidants, total residual	*****	*****	*****	102 DAILY MX	deg F	0	Continuous	RCORDR	
34044 1 0 Effluent Gross Flow, in conduit or thru treatment plant	*****	*****	*****	0.06	mg/L	0	Wh/Ds	GR	
PERMIT REQUIREMENT	*****	*****	*****	.1 MO AVG	mg/L		When Discharging	GRAB	
50050 1 0 Effluent Gross Temp. diff. between intake and discharge	444.7	446.4 MGD	*****	*****	*****	0	99/99	ES	
PERMIT REQUIREMENT	447 MO AVG	510 DAILY MX	*****	*****	*****		Continuous	ESTIMA	
61576 1 0 Effluent Gross	*****	*****	*****	30.8	°F	0	99/99	CA	
PERMIT REQUIREMENT	*****	*****	*****	32 DAILY MX	deg F		Continuous	CALCTD	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
John Macdonald Oper. Mgr.	508-830-8117	01/20/2018
TYPED OR PRINTED	AREA Code	NUMBER
	508	830-8117
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		MM/DD/YYYY
<i>John Macdonald</i>		01/20/2018

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
 PH SHALL NOT VARY MORE THAN 0.5 PHSTANDARD UNITS FROM INTAKE WATER. SEE PERMIT PAGE 5 PARAGRAPHS M&N FOR BORON AND SODIUM NITRATE REPORTING REQUIREMENTS. ATTACH ALL RELATED REPORTS TO THIS FORM. A BARRIER NET SHALL BE MAINTAINED AT THE THERMAL END OF DISCHARGE CANAL AT ALL TIMES.

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: ENTergy - PILGRIM NUCLEAR POWER STATION
 ADDRESS: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
 FACILITY: ENTergy - PILGRIM NUCLEAR POWER STATION
 LOCATION: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360

ATTN: John Macdonald, Oper. Mang.

MA0003557	002-1
PERMIT NUMBER	DISCHARGE NUMBER
MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 02360-5508
 MAJOR (SUBR S)
 THERMAL BACKWASH
 External Outfall

No Discharge

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE			
Temperature, water deg. Fahrenheit	*****	*****	*****	110.0	deg F	*****	0	99/99	RC
00011 1 0 Effluent Gross	*****	*****	*****	120 DAILY MX	*****	*****		Continuous	RCORDR
Flow, in conduit or thru treatment plant	*****	16.3 MGD	*****	*****	*****	*****	0	Wk/Ds	ES
50050 1 0 Effluent Gross	*****	255 DAILY MX	*****	*****	*****	*****		When Discharging	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
John Macdonald Oper. Mgr.	508-830-8117	01/20/2015
TYPED OR PRINTED	AREA Code NUMBER	MM/DD/YYYY
	508-830-8117	01/20/2015
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
<i>John Macdonald</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.

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
 THE PH SHALL NOT VARY MORE THAN 0.5 STANDARD UNITS FROM THAT OF THE INTAKE WATER. FLOW RATE IS TO BE ESTIMATED AS IF BACKFLUSHING TOOK PLACE FOR 24 CONTINUOUS HOURS. SEE PERMIT PAGE 8 FOR CONDITIONS REGARDING THE FREQUENCY OF DISCHARGE.

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: ENERGY - PILGRIM NUCLEAR POWER STATION
 ADDRESS: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
 FACILITY: ENERGY - PILGRIM NUCLEAR POWER STATION
 LOCATION: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360

ATTN: John Macdonald, Oper. Mang.

DMR Mailing ZIP CODE:
 MAJOR (SUBR S)
 INTAKE SCREEN WASH
 External Outfall

02360-5508

No Discharge

MA0003557	003-A
PERMIT NUMBER	DISCHARGE NUMBER
MM/DD/YYYY	MM/DD/YYYY
12/01/2014	12/31/2014
MONITORING PERIOD	

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION		NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	UNITS	VALUE	UNITS			
Flow, in conduit or thru treatment plant	1.9	MGD	*****	*****	0	01/01	ES
50050 1 0 Effluent Gross	4.1 MO AVG	MGD	*****	*****		Daily	ESTIMA
		4.1 DAILY MX	*****	*****			

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
John Macdonald Oper. Mgr.	508-830-8117	01/01/2015
TYPED OR PRINTED	AREA Code	NUMBER
	508	8117
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		MM/DD/YYYY
<i>John B. Macdonald</i>		01/01/2015

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.

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

THE TEMPERATURE OF THIS DISCHARGE SHALL AT NO TIME EXCEED THE TEMPERATURE OF THE INTAKE WATER-ALL FISH SHELLFISH AND OTHER ORGANISMS COLLECTED OR TRAPPED ON INTAKESCREEN SHOULD BE RETURNED TO WATEROF AMBIENT TEMP. SUFFICIENTLY DISTAN FORM INTAKE STRUCTURES TO PREVENT REIMPINGEMENT.

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: ENERGY - PILGRIM NUCLEAR POWER STATION
 ADDRESS: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
 FACILITY: ENERGY - PILGRIM NUCLEAR POWER STATION
 LOCATION: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
 ATTN: John Macdonald, Oper. Mang.

MA0003557 PERMIT NUMBER	008-A DISCHARGE NUMBER
MM/DD/YYYY 12/01/2014	MM/DD/YYYY 12/31/2014

DMR Mailing ZIP CODE: 02360-5508
 MAJOR (SUBR S)
 SEA FOAM SUPPRESSION DISCHARGE
 External Outfall

No Discharge C

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING		QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	UNITS	VALUE	VALUE	UNITS			
Flow, in conduit or thru treatment plant							0	01/01	ES
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	.73 MO AVG		.73 DAILY MX				Daily	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER John Macdonald Oper. Mgr.	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
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>John Macdonald</i>	508-830-8117 AREA Code NUMBER

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

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: ENERGY - PILGRIM NUCLEAR POWER STATION
ADDRESS: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
FACILITY: ENERGY - PILGRIM NUCLEAR POWER STATION
LOCATION: 600 ROCKY HILL ROAD
 PLYMOUTH, MA 02360
ATTN: John Macdonald, Oper. Mang.

MA0003557	010-A
PERMIT NUMBER	DISCHARGE NUMBER
MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 02360-5508
 MAJOR (SUBR S)
 PLANT SERVICE COOLING WATER
 External Outfall

No Discharge

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS			
Oxidants, total residual	*****	*****	0.26	0.60	mg/L	0	02/01	GR
34044 1 0 Effluent Gross	*****	*****	.5 MO AVG	1 DAILY MX	mg/L		Continuous	RCORDR
Flow, in conduit or thru treatment plant	8.7	MGD	*****	*****	*****	0	99/99	ES
50050 1 0 Effluent Gross	19.4 MO AVG	MGD	*****	*****	*****		Continuous	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
John Macdonald Oper. Mgr.	508-830-8117	01/20/08
TYPED OR PRINTED	AREA Code	NUMBER
	508	8117
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		

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.

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
 CONTINUOUS CHLORINATION OF SERVICE WATER SYSTEM MAY BE USED FOR MACROINVERTEBRATE CONTROL. FLOW RATE SHALL BE ESTIMATED FROM PUMP CAPACITY CURVES AND OPERATIONAL HOURS.

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

PERMITTEE NAME/ADDRESS (include Facility Name/Location, if Different)

NAME: ENERGY - PILGRIM NUCLEAR POWER STATION
ADDRESS: 600 ROCKY HILL ROAD
PLYMOUTH, MA 02360
FACILITY: ENERGY - PILGRIM NUCLEAR POWER STATION
LOCATION: 600 ROCKY HILL ROAD
PLYMOUTH, MA 02360
ATTN: John Macdonald, Oper. Mang.

MA0003557	011-A
PERMIT NUMBER	DISCHARGE NUMBER
MM/DD/YYYY	MM/DD/YYYY
12/01/2014	12/31/2014
MONITORING PERIOD	

DMR Mailing ZIP CODE: 02360-5508
MAJOR (SUBR S)
MAKE UP WATER AND DEMINERALIZE
External Outfall

No Discharge C

PARAMETER	SAMPLE MEASUREMENT	QUANTITY OR LOADING		QUALITY OR CONCENTRATION			NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	UNITS	VALUE	VALUE	UNITS			
Solids, total suspended	*****	*****	*****	*****	*****	0	01/Ba	GR	
00530 1 0 Effluent Gross	*****	*****	*****	30 MO AVG	100 DAILY MX		Once Per Batch	GRAB	
Flow, in conduit or thru treatment plant	*****	MGD	*****	*****	*****	0	Wh/Ds	ES	
50050 1 0 Effluent Gross	*****	.015 MO AVG	MGD	*****	*****		When Discharging	ESTIMA	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	TELEPHONE	DATE
John Macdonald Oper. Mgr.	508-830-8117	01/20/2015
TYPED OR PRINTED	AREA Code	NUMBER
	508	8117
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
<i>John B Macdonald</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.		

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SEE PAGE 5 OF PERMIT PARAGRAPH N FOR SODIUM NITRATE REPORTING REQUIREMENTS. ATTACH ALL RELATED REPORTS TO THIS FORM