



**BOSTON EDISON**  
25 Braintree Hill Office Park  
Braintree, Massachusetts 02184

**E. J. Wagner**  
Vice President  
Nuclear Engineering

May 15, 1991  
BECO 5.91- 041

NPDES Program Operations Section (WCP)  
Environmental Protection Agency  
P. O. Box 8127  
Boston, MA 02114

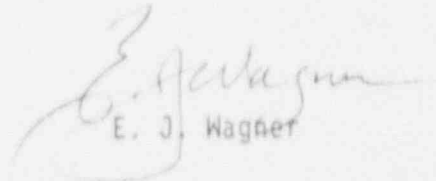
Massachusetts Division of Water Pollution Control  
Lakeville Hospital  
Lakeville, MA 02347

DISCHARGE MONITORING REPORT

Dear Sirs:

Enclosed is the Discharge Monitoring Report for Pilgrim Nuclear Power Station (PNPS), NPDES Permit Number MA0003557 (Federal) and Number 359 (State).

The period covered by this report is April 1991.

  
E. J. Wagner

RDA/rec/4233

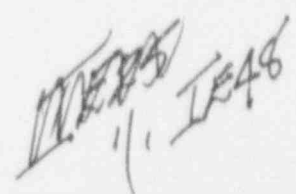
Attachments: 1. Summary  
2. Discharge Monitoring Report

cc: U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

U. S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406

Senior NRC Resident Inspector  
Pilgrim Nuclear Power Station

9105230266 910430  
PDR ADOCK 05000293  
R PDR

  
11. 1991

## SUMMARY

PILGRIM I DISCHARGE MONITORING REPORT

In accordance with the Federal Clean Water Act, as amended (33USC 1251 et seq: the "CWA"), 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 for the period April 1991.

I. Discharge Points Covered in this Report

<u>Discharge Point</u>	<u>Discharge Identification</u>
001	Condenser Cooling Water
002	Thermal Backwash for Biofouling Control
003	Intake Screen Wash
010	Service Cooling Water
011	Makeup Water and Demineralizer Waste Discharge

II. Summary and Notes of Discharge Report

- A. The flow at points 001 and 010 are calculated from system pump capacity and are equal to the total for all pumps in each system running at full capacity for a 24-hour period. The flow at point 011 is measured by noting sump levels before and after discharge. Flow at point 002 is a conservative figure obtained by calculating flow if backwashing took place for 24 hours. Flow at point 003 is calculated from system pump capacity and mean operating time.
- B. The temperatures at points 001 and 002 are measured by resistance temperature detectors (RTD's).
- C. Periodically, total residual chlorine (TRC) concentration in the service cooling water (010) exceeds Permit requirements (0.50 ppm daily average TRC and 1.00 ppm daily maximum TRC) prior to mixing with any other stream, primarily because of the number of service water pumps in operation. Chlorine injection levels are lowered as a corrective measure. The dilution provided by the PNPS circulating water flow keeps total residual chlorine concentrations discharged to Cape Cod Bay below the NPDES Permit limit of 0.1 ppm.

- D. Intake traveling water screens were operated with dechlorination pumps operating at all times.
- E. Sawdust was applied to seek and seal PNPS condenser leaks on 4/15, 320 pounds; 4/16, 160 pounds; 4/30, 160 pounds.
- F. The removal of approximately 100 cubic yards of sand from the concrete floor of the intake structure commenced on April 23, 1991. It was pumped into breakwater crevices above the high tide mark. The sand removal was necessary to alleviate concern over its effects on normal operation of mechanical components/traveling screens, and it was expected to have no adverse environmental impact.
- G. Pilgrim Station Marine Ecology Semi-Annual Report No. 37 was sent to the USEPA and Mass. Div. of Water Pollution Control on April 26, 1991 (BECO Letter 5.91.035).

ATTACHMENT 2 TO BECO LETTER 5.91- 041

DISCHARGE MONITORING REPORT

NAME- AGOSTON EL #1 PILGRIM PLANT  
ADDRESS- ROCKY HILL ROAD  
SEC #1  
FACILITY- PLYMOUTH  
LOCATION- MA

MAJOR (SU-3)  
F - FINAL  
COOLING WATERS  
Form Approved  
OMB No. 2040-0004  
Approval expires 6-30-91

[illegible]

**NOTE:** Read instructions before completing this form.

MONITORING PERIOD								
FROM		YEAR	MO	DAY	TO	YEAR	MO	DAY
75057	75553	76792	04	11		91	06	26

PARAMETER (22-27)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (34-35)				UNIT	(4 Card Only) QUALITY OR CONCENTRATION (36-39)				UNIT	FID. EX	FREQUENCY OF ANALYSIS (64-65)	SAMPLE TYPE (66-70)
		AVERAGE	MAXIMUM	MINIMUM	AVERAGE		MAXIMUM	MINIMUM	AVERAGE					
TEMPERATURE, WATER														
PH, WATER														
EFFLUENT GROSS VALUE														
MAINTENANCE TOTAL														
DESIGNAL														
EFFLUENT GROSS VALUE														
FLOW IN CONDUIT OF														
TWO TREATMENT PLANT														
EFFLUENT GROSS VALUE														

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

**E.S. KRAFT**

**PLANT MANAGER**

TELEPHONE

**508 746-7920**

DATE

**91 05 13**

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

*E.S. Kraft*

OFFICER OR AUTHORIZED AGENT

23  
 22  
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PERMITTEE NAME/ADDRESS (Include  
Facility Name/Location if different)

NAME BOSTON ED #1 PILGRIM PLANT

ADDRESS ROCKY HILL ROAD

RED #1

PLYMOUTH MA 02360

FACILITY

LOCATION

ATTN: E.S. KRAFT, PLANT MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-19)

(17-19)

MA0005557

002 1

PERMIT NUMBER

DISCHARGE NUMBER

MAJOR

(SUMR 3)

P - FINAL

CONDENSER BACKWASH

Form Approved

OMB No. 2040-0004

Approval expires 6-30-91.

MONITORING PERIOD

FROM YEAR 91 MO 04 DAY 01 TO YEAR 91 MO 04 DAY 30  
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

\*\*\* NO DISCHARGE \*\*\*

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				N/A EX (52-53)	FREQUENCY OF ANALYSIS (54-58)	SAMPLE TYPE (59-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
TEMPERATURE WATER DEG. FAHRENHEIT 0001 1 0 0	SAMPLE MEASUREMENT	*****	*****	( )	*****	*****	*****	( 15 )		0 99/99	RC
EFFLUENT GROSS VALUE FLOW IN CONDUIT OR THRU TREATMENT PLANT 00050 1 0 0	PERMIT REQUIREMENT	*****	*****	***	*****	*****	120	DEG.F		CONTINUOUS	RECORD
EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	9.3	( 0.1 ) MBD	*****	*****	*****	( )		0 04/05	ES
	PERMIT REQUIREMENT	*****	255.0	DAILY MX HGU	*****	*****	*****	***		WHEN ESTIMA	DISCH
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

E.S. KRAFT  
PLANT MANAGER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. Penalties under these statutes may include fines up to \$200,000 and/or maximum imprisonment of between 6 months and 5 years.

SIGNATURE OF PRINCIPAL EXECUTIVE  
OFFICER OR AUTHORIZED AGENT

TELEPHONE

DATE

508 746-7969 91 05 12  
AREA CODE NUMBER YEAR MO DAY

COMMENT 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 7 FOR CONDITIONS REGARDING THE

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

NAME BOSTON ED #1 PILGRIM PLANT

ADDRESS ROCKY HILL ROAD

ED #1

PLYMOUTH MA 02360

FACILITY

LOCATION

ATTN: E.S. KRAFT, PLANT MANAGER

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

(2-18)

(17-19)

MA0003557

PERMIT NUMBER

003 A

DISCHARGE NUMBER

MAJOR

(SUBS S)

F - FINAL

INTAKE SCREEN WASH

Form Approved

OMB No 2040-0004

Approval expires 6-30-91

MONITORING PERIOD

FROM YEAR 91 MO 04 DAY 01 TO YEAR 91 MO 04 DAY 30  
(12-21) (12-23) (12-25) (12-27) (12-29) (12-31)

\*\*\* NO DISCHARGE \*\*\*

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (18-43)			F.O. INDEX (61-50)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
FLOW IN CONDUIT OR THRU TREATMENT PLANT (0000 1 0 0) EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	0.298	1.008	(03) MGD	*****	*****	*****	( )	0	0/01 ES
	PERMIT REQUIREMENT	0.336 30DA AVG	2.02 DAILY MX	MGD	*****	*****	*****	****		DAILY ESTIMA
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
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	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  E.S. KRAFT PLANT MANAGER  TYPED OR PRINTED	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC § 1001 AND 18 USC § 1379. Penalties under these statutes may include fines up to \$20,000 and/or maximum imprisonment of between 6 months and 5 years.	TELEPHONE  508 746-7700	DATE			
			91	05	12	
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT  E.S. Kraft		AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT 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 INTAKE SCREEN SHOULD BE RETURNED TO WATER  
OR DESTROYED TO PREVENT FURTHER GISTAN FROM INTAKE STRUCTURES TO PREVENT REIMPINGEMENT.







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

NAME: BOSSON ED #1 PILGRIM PLANT

ADDRESS: ROCKY HILL ROAD

RED #1

PLYMOUTH

FACILITY

LOCATION

MA 02360

ATTN: E.S. KRAFT, PLANT MANAGER

PARAMETER (32-37)

OH

EFFLUENT GROSS VALUE

SOLIDS, TOTAL

SUSPENDED

EFFLUENT GROSS VALUE

FLOW, IN CONDUIT OF

THRU TREATMENT PLANT

EFFLUENT GROSS VALUE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMA)

(12-18)

MA0003257

PERMIT NUMBER

011 A

DISCHARGE NUMBER

MONITORING PERIOD

FROM YEAR 91 MO 04 DAY 01 TO YEAR 91 MO 06 DAY 30

\*\*\* NO DISCHARGE \*\*\*

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUANTITY OR CONCENTRATION (54-61)			QUALITY OR CONCENTRATION (62-70)			FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)	
	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE			MAXIMUM
OH												
EFFLUENT GROSS VALUE												
SOLIDS, TOTAL												
SUSPENDED												
EFFLUENT GROSS VALUE												
FLOW, IN CONDUIT OF												
THRU TREATMENT PLANT												
EFFLUENT GROSS VALUE												

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING VIOLATION OF THE FEDERAL WATER POLLUTION CONTROL ACT (33 U.S.C. 1315) AND VIOLATION OF THE CLEAN WATER ACT (33 U.S.C. 1315). Penalties under these statutes may include fines up to \$250,000 and/or 30 years imprisonment or both.

NAME/TITLE: PRINCIPAL EXECUTIVE OFFICER

E.S. KRAFT  
PLANT MANAGER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

TELEPHONE

AREA CODE

NUMBER

YEAR

MO

DAY

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

SAMPLES TAKEN IN COMPLIANCE WITH THE MONITORING REQUIREMENTS SPECIFIC TO THE DISCHARGE POINT. SAMPLES TAKEN PRIOR TO MIXING WITH ANY OTHER STREAM.

DISCHARGE SHALL BE TAKEN AT A POINT PRIOR TO MIXING WITH ANY OTHER STREAM.

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used.

(REPLACES EPA FORM 1-65 WHICH MAY NOT BE USED.)

001961210325-1057

PAGE 1 OF 1