

BOSTON EDISON
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

K. L. Highfill
Station Director &
Vice President, Nuclear Operations

June 14, 1990
BECO Ltr. #90- 075

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

License No. DPR-35
Docket No. 50-293

Subject: May 1990 Monthly Report

Dear Sir:

In accordance with PNPS Technical Specification 6.9.A.2, a copy of the Operational Status Summary for Pilgrim Nuclear Power Station is attached for your information and planning. Should you have any questions concerning this report please contact me directly.

K. L. Highfill
K.L. Highfill

WJM:bal

Attachment

cc: Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Rd.
King of Prussia, PA 19406

Senior Resident Inspector

Cut No P082896099

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-293
 UNIT Pilgrim 1
 DATE June 14, 1990
 COMPLETED BY W. Munro
 TELEPHONE (508) 747-8474

MONTH May 1990

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>649</u>	17	<u>481</u>
2	<u>565</u>	18	<u>482</u>
3	<u>547</u>	19	<u>486</u>
4	<u>652</u>	20	<u>81</u>
5	<u>663</u>	21	<u>0</u>
6	<u>663</u>	22	<u>306</u>
7	<u>663</u>	23	<u>630</u>
8	<u>664</u>	24	<u>570</u>
9	<u>664</u>	25	<u>546</u>
10	<u>665</u>	26	<u>642</u>
11	<u>664</u>	27	<u>654</u>
12	<u>662</u>	28	<u>664</u>
13	<u>443</u>	29	<u>663</u>
14	<u>0</u>	30	<u>662</u>
15	<u>110</u>	31	<u>567</u>
16	<u>470</u>		

This format lists the average daily unit power level in MWe-Net for each day in the reporting month, computed to the nearest whole megawatt.

OPERATING DATA REPORT

DOCKET NO. 50-293
 DATE June 14, 1990
 COMPLETED BY W. Munro
 TELEPHONE (508) 747-8474

OPERATING STATUS

Notes

1. Unit Name Pilgrim 1
2. Reporting Period May 1990
3. Licensed Thermal Power (MWt) 1998
4. Nameplate Rating (Gross MWe) 678
5. Design Electrical Rating (Net MWe) 655
6. Maximum Dependable Capacity (Gross MWe) 696
7. Maximum Dependable Capacity (Net MWe) 670
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:
None
9. Power Level To Which Restricted, If Any (Net MWe) None
10. Reasons For Restrictions, If Any N/A

	<u>This Month</u>	<u>Yr-to-Date</u>	<u>Cumulative</u>
11. Hours In Reporting Period	<u>744.0</u>	<u>3623.0</u>	<u>153191.0</u>
12. Number Of Hours Reactor Was Critical	<u>709.2</u>	<u>2540.3</u>	<u>87945.5</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>657.6</u>	<u>2384.0</u>	<u>84513.3</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
16. Gross Thermal Energy Generated(MWH)	<u>1178256.0</u>	<u>4519512.0</u>	<u>145004424.0</u>
17. Gross Electrical Energy Generated(MWH)	<u>404040.0</u>	<u>1556970.0</u>	<u>48793794.0</u>
18. Net Electrical Energy Generated (MWH)	<u>388298.0</u>	<u>1497884.0</u>	<u>46881068.0</u>
19. Unit Service Factor	<u>88.4</u>	<u>65.8</u>	<u>55.2</u>
20. Unit Availability Factor	<u>88.4</u>	<u>65.8</u>	<u>55.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>77.9</u>	<u>61.7</u>	<u>45.7</u>
22. Unit Capacity Factor (Using DER Net)	<u>79.7</u>	<u>63.1</u>	<u>46.7</u>
23. Unit Forced Outage Rate	<u>11.6</u>	<u>3.5</u>	<u>12.7</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

None

25. If Shut Down At End Of Report Period, Estimated Date of Startup - _____
26. Units In Test Status (Prior to Commercial Operation): N/A

	<u>Forecast</u>	<u>Achieved</u>
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

BOSTON EDISON COMPANY
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

Operational Summary for May 1990

The unit started the month on line at approximately 99 percent core thermal power. Following a power reduction to 78 percent on 5/2/90 to perform a rod pattern change and a condenser backwash, power was increased to approximately 100 percent and was maintained until 5/13/90 when at 1602 hours a disturbance on the grid initiated a generator load reject which resulted in a full reactor scram. During the transient, increased reactor pressure caused three (3) of the safety relief valves to open momentarily and then reset. The load reject trip resulted from a faulty time delay coil in the KLF-1 loss of field relay (15 cycle delay). On 5/15/90 at 0250 hours the reactor was made critical and at 1030 hours the generator was synchronized to the grid. Power was increased to 75 percent and was held at that level due to a turbine control system problem. On 5/20/90 a power reduction to "hot standby" was initiated to enable troubleshooting the turbine control system; and at 0808 hours on 5/20/90 the main generator was tripped off line to perform maintenance on the intercept valve transmitter portion of the turbine control system. On 5/22/90 the Mode Switch was placed in "Run" and the generator was synchronized to the grid at 0400 hours. Following a power increase to 96 percent, a power reduction to 50 percent was made to enable a rod pattern change and to perform a condenser backwash. Power was increased to 100 percent on 5/27/90. Following a power reduction to 50 percent on 5/31/90 to perform a condenser backwash, power was then increased to 85 percent and remained there for the remainder of the reporting period.

Safety Relief Valve Challenges
Month of May 1990

Requirement: NUREG-0737 T.A.P. II.K.3.3

Date: May 13, 1990

Valve # 203-3A, 3B, and 3C

Reason: Generator load reject - Reactor Scram

An SRV challenge is defined as anytime an SRV has received a signal to operate via reactor pressure, auto signal (ADS) or control switch (manual). Ref. BECo Ltr. #81-01 dated 01/05/81.

REFUELING INFORMATION

The following refueling information is included in the Monthly Report as requested in an NRC letter to BECo, dated January 18, 1978:

For your convenience, the information supplied has been enumerated so that, each number corresponds to equivalent notation utilized in the request.

1. The name of this facility is Pilgrim Nuclear Power Station, Docket Number 50-293.
2. Scheduled date for next Refueling Shutdown: Second Quarter 1991
3. Scheduled date for restart following refueling: Second Quarter 1991
4. Due to their similarity, requests 4, 5, & 6 are responded to collectively under #6.
5. See #6.
6. The new fuel loaded during the 1986/87 refueling outage was of the same design as loaded in the previous outage, and consisted of 192 assemblies.
7. (a) There are 580 fuel assemblies in the core.
(b) There are 1320 fuel assemblies in the spent fuel pool.
8. (a) The station is presently licensed to store 2320 spent fuel assemblies. The actual usable spent fuel storage capacity is 2320 fuel assemblies.
(b) The planned spent fuel storage capacity is 2320 fuel assemblies.
9. With present spent fuel in storage, the spent fuel pool now has the capacity to accommodate an additional 1000 fuel assemblies.

Month May 1990

PILGRIM NUCLEAR POWER STATION
 MAJOR SAFETY RELATED MAINTENANCE

<u>SYSTEM</u>	<u>COMPONENT</u>	<u>MALFUNCTION</u>	<u>CAUSE</u>	<u>MAINTENANCE</u>	<u>CORRECTIVE ACTION TO PREVENT RECURRENCE</u>	<u>ASSOCIATED LER</u>
Electric Power System	Loss Of Field Relay KLF-1 (Westinghouse)	Faulty "x" coil in KLF-1 relay. Cause of unit trip and scram on 5/13/90. (F&MR 90-161)	Normal aging	Loss Of Field Relay KLF-1 removed and replaced with another KLF-1 relay, containing an adjustable delay 'x' coil.	Procedure 3.M.3-39 to be revised to include calibration of the time delay for the "x" coil of the KLF-1 relay. Refer to Associated LER.	LER 90-008-00
Salt Service Water (SSW) System	SSW Pump P208B	High vibration and low discharge head. (F&MR 90-21)	Analysis in progress.	Replaced seven (7) spider bearings, and one (1) line shaft. Replaced pump motor bearings. Rebuilt pump bowl assembly. Implemented Plant Design Change 90-12 Phase 3; Removed tie rods, replaced upper and intermediate column sections with new material design, and replaced lower column section with existing material design.	Inspection of columns for degradation after six (6) years of service.	N/A
Control Rod Drive (CRD) System	CRD 42-07	CRD 42-07 failed to withdraw from 00 position.	Partially blocked collette finger filters, and faulty directional flow control valves in the hydraulic control unit.	Replaced collett finger filters. Replaced all four (4) Directional Flow Control Valves FCV-120, 121, 122 and 123. Performed Procedure 3.M.1-30 (Postwork Testing) successfully.	N/A	N/A

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-293

NAME Pilgrim 1DATE June 14, 1990COMPLETED BY H. MunroTELEPHONE (508) 747-8474REPORT MONTH May 1990

NO.	DATE	TYPE ¹	DURATION (HOURS)	REASON ²	METHOD OF SHUTTING DOWN REACTOR ³	LICENSE EVENT REPORT #	SYSTEM CODE ⁴	COMPONENT CODE ⁵	CAUSE & CORRECTIVE ACTION TO PREVENTIVE RECURRENCE
03	05/13/90	F	42.5	A	3	90-008-00	EL	92	Generator load reject resulting in automatic reactor scram.
04	05/20/90	F	43.9	B	N/A	N/A	N/A	N/A	Turbine offline for control system repairs.

1

2

2

3

4&5

F-Forced
S-SchedA-Equip Failure
B-Maint or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training
& License ExaminationF-Admin
G-Oper Error
H-Other1-Manual
2-Manual Scram
3-Auto Scram
4-Continued
5-Reduced Load
9-OtherExhibit F & H
Instructions for
Preparation of
Data Entry Sheet
Licensee Event Report
(LER) File (NUREG-1022)