

## MONTHLY OPERATIONS REPORT

October 1984

Throughout most of the report period, preparations continued for initial startup which occurred on October 29, 1984. Major events and tasks completed leading up to and including plant startup are as follows:

System valve lineup, system checks and surveillance testing continued throughout the report period up to plant initial criticality. Completion of surveillance testing was the last major item completed before startup. Procedural problems caused the major delays on completing surveillance testing. Resolution of equipment problems identified during post maintenance testing and system checkouts also presented major obstacles for plant startup.

The flush of the feedwater system was completed on October 13, 1984. During the flush, a failed seal was identified on "A" condensate pump which was subsequently replaced. A successful feedwater system hydro was completed prior to the feedwater flush.

The last reactor leak test was completed on October 8, 1984. No major deficiencies were identified during the tests. This final leak test was required after repairs to the "A" reactor recirculation pump flange and "D" reactor recirculation pump mechanical seal were completed. Various valve packing glands were also inspected.

A number of different reactor recirculation pump problems were resolved prior to plant startup. The problems ranged from start and trip problems to monitoring support equipment associated with the pumps. The start/trip problems have all been resolved. However, various monitoring support equipment problems still exist. The temperature monitoring resistance temperature detectors (RTDs) are inoperable on C&D reactor recirculation pumps. However, alternate means were provided by Engineering to monitor these parameters. In addition, a problem exists with the reactor recirculation pump seal flow switches. All of the low seal flow alarms are constantly annunciated (along with some of the high seal flow alarms at pressure). Initially, it was believed that the alarms would clear when the plant was brought up to operating pressure and temperature but this was not the case. Engineering is investigating. This remained an outstanding item at the end of the report period.

The oil in all reactor recirculation pumps was changed and a reactor recirculation pump trip circuitry test was satisfactorily performed before startup.

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Numerous trip problems were experienced with both Reactor Protection System (RPS) motor generator set output breakers. Adjustment of the undervoltage trip devices on the breakers has resolved the problem.

There have been numerous problems associated with the intake circulating water pumps. The major item is the degradation of the pumps' motor collecting rings and brushes. These items were replaced on all the pumps in October. Subsequent to this monthly report period (early November), an inspection revealed a pitting problem again on the rings and brushes. Plant Engineering is involved in resolving the problem.

The electrical/mechanical modifications for both Standby Gas Treatment Systems were completed.

The inspections and required repairs for the Environmental Qualification program were completed. Also, all motor-operated valve limiter testing (MOVATS) was completed.

On October 16, 1984, an insulator for "B" phase of the Substation J69361 transmitter line failed. The power surge caused various vital power panels to transfer to their alternate power supplies. The Cleanup System tripped and normal reactor ventilation tripped. At the time, SGTS No. 1 was the selected system and the exhaust fan for SGTS No. 1 (EF 1-8) tripped. Systems logic transferred to SGTS No. 2 which operated properly. The trip of SGTS No. 1 was traced to a faulty relay which was replaced. The system was tested and declared operable on October 17, 1984. SGTS No. 2 had to be taken out of standby readiness for approximately one half hour on October 18, 1984 to purge out the newly installed air line. The system was retested and declared operable the morning of October 18, 1984.

On October 17, 1984, three (3) of the scram discharge volume (SDV) valves failed to close within the time limit specified in the technical specifications (30 seconds). Immediate maintenance was initiated to identify and correct the problem. An administrative control rod block was put in place until the system was tagged out for maintenance at which time the reactor mode switch was placed in shutdown. Repairs were completed on October 21, 1984.

Installation of the emergency D.C. powered Control Room lights was completed and tested.

Labeling of the disconnected wires in the Control Room was completed during the report period. A walkdown/verification of the labeling was also completed.

Plant Engineering has issued a preliminary report on the D.C. grounds experienced during the outage. The incidents taken as a whole indicate wire dress and workmanship as the key contributors. A followup report is pending.

During surveillance testing, it was noted that some of the torus to drywell vacuum breakers position switches were loosely mounted. Repairs were made and the vacuum breakers were satisfactorily tested prior to startup.

On October 25, 1984, the diesel generator fast start test (loss of power test) was completed. Both diesel generators fast-started and loaded properly. However, after the test, diesel generator No. 2 would not start and idle when given a manual start signal. Investigation revealed one of the start-batteries for the diesel generator was weak.

IRM 13 (detector) was replaced during the report period. All SRMs, IRMs and LPRMs were tested and calibrated before startup. The drive systems for SRM 22 and IRM 11/18 were also repaired.

The Core Spray System fill pump modification was completed. Repairs to core spray minimum flow valve V-20-93 and main block valve V-20-18 were also completed.

All leaks on the main generator hydrogen cooling system were repaired. The cooling system was purged with hydrogen and placed in service.

The replacement of all condensate demineralizer resin and the Cleanup System resin was completed.

Replacement of the "A" station batteries was completed, tested and placed back in service.

During the containment isolation test, it was discovered that the drywell vent and purge valves V-27-1, 2, 3 and 4 would not close upon a loss of air (i.e., valve operators are air to open, air to close). (The valves were gagged in the closed position for startup). New air accumulators are being installed. This task continued at the end of the report period.

A radiator hose in fire diesel pump No. 2 had to be replaced. The fire diesel pump was inoperable from October 23 to October 27, 1984.

Air compressor No. 1 was out of service from October 1, 1984 to October 3, 1984 for breaker maintenance/inspection. Air compressor No. 2 was inoperable from October 12, 1984 to October 18, 1984 due to inner stage relief valve repairs. Air compressor No. 3 was out of service for preventive maintenance for a one-day period on October 7, 1984.

Repairs to the fuel zone level instrumentation, Channel "B", were completed before startup.



Mechanical vacuum pump problems were encountered throughout the startup activities. The vacuum pump trip problems were resolved the first week in November.

At 2:00 a.m. on October 29, 1984, during the calibration of reactor low low water level trip circuit, sensor RE02B instead of sensor RE02D was accidentally activated initiating Core Spray System I and injected torus water into the reactor. In the 18 to 20 seconds the system operated, reactor water level increased from 158" to 180" TAF. All the required notifications were made and a critique was held. Afterwards, Plant Chemistry sampled the reactor water and verified that it remained within specifications. Subsequently, the remaining Core Spray System surveillances were satisfactorily completed.

The same morning, all precritical checks were completed, and at 0710 hours, the reactor mode switch was placed in the "Start-Up" position. Reactor startup commenced. The reactor was critical at 1315 hours the same day. During the next 24-hour period, the reactor was used for Control Room operator proficiency operations. Licensed personnel practiced or observed bringing the reactor critical along with taking local manual control of the reactor recirculation pumps.

On October 30, 1984, after three shifts participated in pulling reactor criticals, power was increased to the point of adding heat, and reactor pressure was increased in stages while inspections were made to identify steam leaks. Various minor leaks were repaired as they were identified.

While power and reactor pressure were being increased, some difficulty was experienced establishing initial vacuum in the main condensers. The mechanical vacuum pump was tripping after approximately 10 to 15 minutes of run time. A vacuum of 29 inches (Hg) was eventually reached with a combination of the mechanical vacuum pump and the steam jet air ejectors (SJAE).

At 1810 hours on October 30, 1984, "C" reactor feed pump (RFP) was started but immediately tripped due to incorrect wiring on a current transformer for phase differential protection. Reactor pressure was approximately 200 psig and reactor water level was controlled by the condensate pumps and CRD flow to the vessel. The inlet valve to "A" feedwater string tripped as it was being opened. Subsequently, pressure was held constant until the limit switch was replaced. The GSS was advised not to run "B" RFP unless it was an emergency because the Plant Engineering Group suspected it may have the same problem as "C" RFP. After repairs to V-2-7 ("A" feedwater string inlet valve) were completed the plant recommenced raising reactor power (pressure) and started to warm up the turbine steam chest.

When reactor pressure approached the point where condensate pump header pressure would be insufficient to allow flow into the reactor (pressure approximately 330 to 350 psig) the "A" RFP was started (0325 hours). Personnel in the plant reported extreme vibration on "A" RFP. The "A" RFP was secured at 0328 hours. Control Room personnel started inserting rods to reduce reactor pressure so that condensate header pressure could start controlling level again. As level continued to decrease, a decision was made to start "B" RFP. Just as "B" RFP was started, the reactor scrambled on low water level. The "B" RFP remained operating until reactor water level was re-established and under control and then the pump was secured. The Post Trip Review Group held a full critique of the event. The cause was determined to be failure to establish feedwater flow due to failure of the feedwater pumps during warmup. (NOTE: "B" RFP is not normally used on reactor startup because the "B" feedwater string does not have a low flow feedwater control valve).

Repairs were initiated on all three feedwater pumps. Problems with the RFPs were as follows:

1. "A" RFP had a bad seal and was out of alignment.
2. "B" RFP had a leaky check valve flange.
3. "C" RFP current transformer was wired incorrectly.

Also, while reactor pressure was being increased (early on October 30, 1984) problems were encountered while placing the gland seal system in service. Gland exhaust blower 1-1 tripped on overload. The discharge valve on gland exhaust blower 1-2 (V-7-39) was discovered to have its flapper (butterfly valve) installed backwards. The gland seal system was placed in service using gland exhaust blower 1-2. The operator compensated for the fact that the position of V-7-39 was reversed.

Repairs were completed on B and C reactor feedpumps early on November 1, 1984. Gland exhaust blower 1-1 was also repaired. Inspection of the mechanical vacuum pump by the pump's vendor uncovered no problems.

With "A" RFP still out of service, the decision was made to start up. Reactor startup was commenced at 0945 hours on November 1, 1984. The reactor was critical at 1208 hours.

The following Licensee Event Reports (LERs) were submitted during the month of October:

Licensee Event Report 50-219/84-020 - While transferring from parallel to single unit substation operation (480 VAC), power was lost to 1A2 and 1B2 buses, resulting in a full scram, reactor primary containment and secondary containment isolation, and loss of both SGTS trains.

Licensee Event Report 50-219/84-009 - Both doors of a reactor building personnel access airlock were opened simultaneously by contractor personnel in order to bring a length of pipe into the building. The interlock was purposefully defeated to accomplish this. As a result, secondary containment integrity was degraded for a short while.

Licensee Event Report 50-219/84-021 - While testing 1-2 Emergency Service Water Pump during maintenance activities, personnel safety grounds were left on 3 phases of the 4160 volt switchgear. Tags were released to allow a jog of the motor to check for rotation. A bolted fault occurred when the control switch was closed causing a trip of the pump and a flash which caused sufficient ground current flow to trip the main 4160 volt bus "1C" breaker.

AVERAGE DAILY POWER LEVEL  
NET MWe

DOCKET #. . . . . 50-219  
UNIT. . . . . Oyster Creek #1  
REPORT DATE . . . . . NOVEMBER 05, 1984  
COMPILED BY . . . . . DONALD V. NOTIGAN  
TELEPHONE # . . . . . 609-971-4695

MONTH OCTOBER, 1984

<u>DAY</u>	<u>MW</u>	<u>DAY</u>	<u>MW</u>
1.	0	16.	0
2.	0	17.	0
3.	0	18.	0
4.	0	19.	0
5.	0	20.	0
6.	0	21.	0
7.	0	22.	0
8.	0	23.	0
9.	0	24.	0
10.	0	25.	0
11.	0	26.	0
12.	0	27.	0
13.	0	28.	0
14.	0	29.	0
15.	0	30.	0
		31.	0

OPERATING DATA REPORT  
OPERATING STATUS

1. DOCKET: 50-219
2. REPORTING PERIOD: October, 1984
3. UTILITY CONTACT: JOSEPH R. MOLNAR 609-971-4699
4. LICENSED THERMAL POWER (MWt): 1930
5. NAMEPLATE RATING (GROSS MWe):  $687.5 \times 0.8 = 550$
6. DESIGN ELECTRICAL RATING (NET MWe): 650
7. MAXIMUM DEPENDABLE CAPACITY (GROSS MWe): 650
8. MAXIMUM DEPENDABLE CAPACITY (NET MWe): 620
9. IF CHANGES OCCUR ABOVE SINCE LAST REPORT, GIVE REASONS: NONE
10. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWe): N/A
11. REASON FOR RESTRICTION, IF ANY: NONE

	<u>MONTH</u>	<u>YEAR</u>	<u>CUMULATIVE</u>
12. REPORT PERIOD HRS	744.0	7320.0	130248.0
13. HOURS RX CRITICAL	18.8	18.8	34642.7
14. RX RESERVE SHUTDOWN HRS	0.0	0.0	468.2
15. HRS GENERATOR ON-LINE	0.0	0.0	82693.8
16. UT RESERVE SHUTDOWN HRS	0.0	0.0	0.0
17. GROSS THERM ENER (MWH)	0	0	136224729
18. GROSS ELEC ENER (MWH)	0	0	46056905
19. NET ELEC ENER (MWH)	-5628	-28306	44257377
20. UT SERVICE FACTOR	0.0	0.0	63.5
21. UT AVAIL FACTOR	0.0	0.0	63.5
22. UT CAP FACTOR (MDC NET)	0.0	-0.6	54.8
23. UT CAP FACTOR (DER NET)	0.0	-0.6	52.3
24. UT FORCED OUTAGE RATE	0.0	0.0	9.7
25. FORCED OUTAGE HRS	20.3	20.3	8937.1
26. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, DURATION):	NA		
27. IF CURRENTLY SHUTDOWN ESTIMATED STARTUP TIME:	11/8/84		



REFUELING INFORMATION - October, 1984

Name of Facility: Oyster Creek Station #1

Scheduled date for next refueling shutdown: November 30, 1985

Scheduled date for restart following refueling: June 1, 1986

Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment?

Yes

Scheduled date(s) for submitting proposed licensing action and supporting information:

June, 1985

Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

1. General Electric Fuel Assemblies - fuel design and performance analysis methods have been approved by the NRC. New operating procedures, if necessary, will be submitted at a later date.
2. Exxon Fuel Assemblies - no major changes have been made nor are there any anticipated.

The number of fuel assemblies (a) in the core = 560  
(b) in the spent fuel storage pool = 980

The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies:

Present licensed capacity: 2,600

The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

Reracking of the fuel pool is in progress. Three out of ten (10) racks have been installed to date.

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH October 1984

DOCKET NO. 50-219  
 UNIT NAME Oyster Creek  
 DATE 11/8/84  
 COMPLETED BY R. Baran  
 TELEPHONE 971-4640

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
31	2-11-83	S	15072	C	1	N/A	ZZ	ZZZZZZ	Start of the 1983 Refueling and Maintenance Outage.

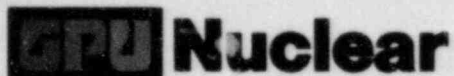
<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 Reason:  
 A-Equipment Failure (Explain)  
 B-Maintenance of Test  
 C-Refueling  
 D-Regulatory Restriction  
 E-Operator Training & License Examination  
 F-Administrative  
 G-Operational Error (Explain)  
 H-Other (Explain)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

<sup>4</sup>  
 Exhibit G - Instructions  
 for Preparation of Data  
 Entry Sheets for Licensee  
 Event Report (LER) File (NUREG-  
 0161)

<sup>5</sup>  
 Exhibit I - Same Source



**GPU Nuclear Corporation**

Post Office Box 388  
Route 9 South  
Forked River, New Jersey 08731-0388  
609 971-4000  
Writer's Direct Dial Number:

November 15, 1984

Director  
Office of Management Information  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Monthly Operating Report

In accordance with the Oyster Creek Nuclear Generating Station Operating License No. DPR-16, Appendix A, Section 6.9.1.C, enclosed are two (2) copies of the Monthly Operating Data (gray book information) for the Oyster Creek Nuclear Generating Station.

If you should have any questions, please contact Mr. Drew Holland at (609) 971-4643.

Very truly yours,

Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:dam  
Enclosures

cc: Director (10)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dr. Thomas E. Murley, Administrator  
Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

NRC Resident Inspector  
Oyster Creek Nuclear Generating Station  
Forked River, NJ 08731

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