

# AVERAGE DAILY POWER LEVEL

DOCKET #..... 50-219  
 UNIT..... O. C. #1  
 REPORT DATE... June 12, 1979  
 COMPILED BY... C.M. MCCLAIN  
 TELEPHONE..... 201-455-8748

MONTH May 1979

DAY	MW	DAY	MW
1.	615.	17.	0.
2.	364.	18.	0.
3.	0.	19.	0.
4.	0.	20.	0.
5.	0.	21.	0.
6.	0.	22.	0.
7.	0.	23.	0.
8.	0.	24.	0.
9.	0.	25.	0.
10.	0.	26.	0.
11.	0.	27.	0.
12.	0.	28.	0.
13.	0.	29.	0.
14.	0.	30.	0.
15.	0.	31.	0.
16.	0.		

2238 503

7906210156

## OPERATING STATUS

UNIT NAME...OYSTER CREEK

DOCKET NUMBER...50-219

UTILITY DATA PREPARED BY...C.M. MCCLAIN 201-455-8748

REPORTING PERIOD... May 1979

LICENSED THERMAL POWER(MWT)...1930

NAMEPLATE RATING(GROSS MWE)...650

DESIGN ELECTRICAL RATING(NET MWE)...650

MAXIMUM DEPENDABLE CAPACITY(GROSS MWE)...650

MAXIMUM DEPENDABLE CAPACITY(NET MWE)...620

IF CHANGES OCCUR IN CAPACITY RATING SINCE LAST REPORT, GIVE REASON...  
NONE

POWER LEVEL TO WHICH RESTRICTED, IF ANY(NET MWE)... NO RESTRICTION

REASON FOR RESTRICTION, IF ANY...  
NO RESTRICTION

	MONTH	YEAR	CUMULATIVE
HOURS IN PERIOD	744.0	3623.0	82727.0
HOURS RX CRITICAL	49.7	2546.5	63567.6
RX RESERVE SHUTDOWN HRS.	0.0	0.0	468.2
HRS. GEN ON LINE	37.8	2498.2	62279.5
UT RESERVE SHUTDOWN HRS	0.0	0.0	0.0
GROSS THERMAL ENERGY	70611.9	4678960.9	104714955.9
GROSS ELEC ENERGY	24430.0	1624200.0	35764205.0
NET ELEC ENERGY	19515.0	1559927.0	34477717.0
UT SERVICE FACTOR	5.1	69.0	75.3
UT AVAILABILITY FACTOR	5.1	69.0	75.3
UT CAPACITY FACTOR MDC	4.2	69.4	69.0
UT CAPACITY FACTOR DER	4.0	66.2	64.1
FORCED OUTAGE FACTOR	94.9	31.0	6.8

THE NEXT SCHEDULED OUTAGE IS TO BEGIN ON SEPTEMBER 15, 1979

2238 304

POOR ORIGINAL

## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-219  
 UNIT NAME Oyster Creek #1  
 DATE June 12, 1979  
 COMPLETED BY C. M. McClain  
 TELEPHONE 201-455-8748

REPORT MONTH May 1979

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
4	790502	F	706.2	H	3	79-14-1T	CB	ZZZZZZ	A triple low water level point was reached after a reactor high pressure scram occurred. See attachments for a more detailed explanation of the event.

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

<sup>2</sup>  
 Reason:  
 A-Equipment Failure (Explain)  
 B-Maintenance or 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 (LIR) File (NUREG-  
 0161)

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

2238 505

(9/77)

OPERATIONS SUMMARY - MAY 1979

At the beginning of the month, the unit was operating at near full load, limited by average planar linear heat generation rate limits for four (4) recirculation pump operation.

On May 2, 1979, with one (1) startup transformer out of service, an inadvertant reactor high pressure scram occurred while performing surveillance testing on reactor high pressure isolation condenser initiation sensors. Following the trip, all recirculating pump discharge valves were closed (the 2 inch bypass valves remained open), resulting in a triple low water level above the reactor core for 36 minutes. The reactor was placed in the cold shutdown condition pending NRC approval for restart.

During the transient, reactor water level reduced to approximately 12-18 inches above the top of the active fuel, as determined by subsequent calculations. Adequate cooling remained available at all times.

In order to prevent recurrence, changes to the safety limits in the Technical Specifications were submitted and are now being complied with. Procedure changes were also incorporated into emergency and operating procedures.

On May 24, 1979, permission was granted by the NRC to place the reactor mode switch to "startup" and begin a testing program to verify that no core damage occurred. On May 30, following a presentation to the NRC commissioners on the May 2 transient, permission to start up was granted by the NRC.

A detailed report of this event is included in a letter to the NRC, dated May 12, 1979, from Mr. I. R. Finfrock, Jr.

A reactor startup commenced on May 31, 1979, and was terminated by a reactor high neutron flux scram in IRM Range 9. A second startup attempt was terminated by a reactor low level scram following a turbine trip while warming the turbine. At the end of this report period, the unit remained shut down.

Six (6) reportable occurrences were identified during the report period:

RO #79-14 occurred on May 2 when closure of all recirculating pump discharge valves resulted in water level below 4 ft. 8 in. above the active fuel.

RO #79-15 occurred on May 2 when two recirculation pumps were started with the idle loop temperatures more than 50°F. lower than reactor water temperature in order to terminate the triple low water level transient.

RO #79-16 occurred on May 6 when a "B" isolation condenser line break sensor tripped at 29 inches of water vs. a Technical Specification limit of 27 inches of water differential pressure.

RO #79-17 occurred on May 17 when core spray isolation valve V-20-21 failed to reclose during surveillance testing.

RO #79-18 was identified on May 18 when an inoperable hydraulic shock and sway arrestor was found on Core Spray System II.

RO #79-19 occurred on May 26 when one isolation condenser reactor high pressure initiation switch was found to trip at 1071 psi vs. the Technical Specification limit of 1068 psi.

2238 506

## OPERATIONS SUMMARY - MAY 1979

5/1/79 Performed notch friction testing on CRD 22-43.

Discovered salt water leaking into pipe tunnel.

"D" recirc flow transmitter out of service.

#1 air compressor out of service - returned.

5/2/79 Bank 6 out of service to check for replacement cable. While verifying that excess flow check valve V-130-1 was open at the completion of isolation condenser high reactor pressure initiation surveillance, a reactor high pressure scram occurred, caused by hydraulic disturbance in the high pressure sensing line. All four (4) operating recirc pumps tripped from the RPT circuit. With Bank 6 out of service, "B" and "C" feedwater pumps tripped. The "A" feedwater pump tripped, apparently from low suction pressure, and could not be restarted. (The "A" feedpump auxiliary oil pump breaker overloads were subsequently found tripped.) The main steam isolation valves were manually closed, with the Yarway level indicating approximately 30 inches. The "B" isolation condenser was manually placed in service and the "A" and "E" recirc discharge valves were manually closed by the operator per existing standing orders. Apparently, the "B" and "C" recirc discharge valves were also closed at this time, limiting natural circulation to the five (5) open 2 inch recirc bypass lines.

Reactor water level inside the shroud decreased, causing low low low water level alarms (verified by observation of the Barton indicators), while the anulus water level remained above the low low level setpoint. RO #79-14. Both isolation condensers were operated intermittently to control reactor cooldown.

At approximately 30 minutes following the scram, it was recognized that all five recirc discharge valves were closed (with bypasses open). The "C" recirc pump was started and then tripped when the Yarways indicated decreasing water level. When the "C" recirc pump was started, the loop temperature was 72°F. lower than the reactor coolant. RO #79-15.

The "A" feedwater pump was started approximately 37 minutes after the scram by manually starting the auxiliary oil pump.

The "A" recirc pump was started 39 minutes after the scram, terminating the transient.

A detailed report of this event is included in a letter to the NRC, dated May 12, 1979, from Mr. I. R. Finfrock, Jr.

The reactor was placed in cold shutdown at 10:28 p.m. pending evaluation of the event.

Bank 6 returned to service.

2238 307

Vented CRD 22-43.

- 5/3/79 Notified by NRC that NRC approval is required prior to moving mode switch out of shutdown.  
Investigating scram of 5/2/79.  
NRÇ open communication channels established from Control Room via telephone.
- 5/4/79 Pumped torus water to T.W.S.T. to reduce level.
- 5/5/79 #1 diesel generator out of service for louver modification.  
Sampled yard area for isolation condenser carryover.
- 5/6/79 Found turbine oil in #1 and #3 sumps (lost approximately 450 gallons of oil).  
While performing Isolation Condenser Isolation Test, IB11A1 tripped at 29 inches H<sub>2</sub>O vs. Technical Specification limit of  $\leq 27$  inches H<sub>2</sub>O - RO #79-16.
- 5/7/79 Purged drywell for entry.  
#1 diesel generator returned to service - louver modification completed.
- 5/8/79 #2 diesel generator out of service for louver control modification.  
#2 fire pump out of service to change oil filter.  
Reactor head vent opened.  
#2 diesel generator returned to service - louver modification completed.
- 5/9/79 Tested louver modification, diesel generator #2.
- 5/10/79 Reactor building supply fan 1-13 out of service for belt maintenance. SF 1-13 returned to service for use in emergency only.  
Tested louver modification #1 diesel generator.
- 5/11/79 -
- 5/12/79 -
- 5/13/79 -
- 5/14/79 Core Spray System II out of service to install 69 permissive alarm modification - returned to service.  
#2 air compressor out of service - returned.  
Core Spray System I out of service to install 69 permissive alarm modification.

2238 308



- 5/15/79 Began covering all shifts with Health Physics supervision.  
Core Spray System I returned to service.  
"A" emergency S.W. pump out of service.
- 5/16/79 #2 diesel generator out of service for louver control modification.  
Bypassed auxiliary oil pump overloads on reactor feedwater pumps.  
"A" ESW pump returned to service.  
"B" ESW pump out of service - returned.  
Containment Spray System II out of service to change taps on USS 1B2.  
Core spray pumps "B" and "C" and core spray booster pumps out of service to change tap setting on USS 1B2.  
"B" CRD pump out of service for USS 1A2, 1B2 tap change.  
Closed breakers EC and ED. Closed US2T breaker and removed transformer 1B2 from service for tap change. Changed taps on 1B2. Closed 1B2P and 1B2M breakers, then removed transformer 1A2 from service. Changed taps 1A2 transformer. Returned 1A2 transformer to service. Opened US2T and ED breaker.  
"B" CRD pump returned to service.  
Returned "B" and "C" core spray pumps and booster pumps to service.  
Returned "C" and "D" containment spray pumps to service.  
#2 diesel generator returned to service.  
1B32 motor control center tripped - remained out of service to replace undervoltage device.
- 5/17/79 1B32 motor control center returned to service.  
While performing core spray motor operated valve operability surveillance testing, V-20-21 opened but failed to close - RO #79-17 - replaced breaker.
- 5/18/79 Replaced inoperable HSSA on Core Spray System II - RO #79-18.  
Emergency service water pumps 52C and 52D returned to service.
- 5/19/79 Lifted leads from high drywell pressure switches RV46 A and C to allow installation of protective covering over RK03 in preparation for installation of new reactor level sensors - replaced leads.
- 5/20/79 Lifted leads on high drywell pressure switches RV46 B and D to allow installation of protective covers over RK03 - replaced leads.

5/21/79 #2 diesel generator out of service for monthly inspection.  
V-20-21 out of service to check breaker - returned.

5/22/79 -

5/23/79 #2 diesel generator returned to service - annunciator modification completed.  
#1 diesel generator out of service for annunciator modification.  
"A" cleanup recirc pump returned to service.

5/24/79 #1 diesel generator returned to service.  
Received permission from NRC to transfer from shutdown to refuel mode in order to perform startup preparation.  
Investigated possible high filter  $\Delta P$  SBGTS System II - calibrated instruments and retested - performed normally.  
Reactor mode switch in refuel - commenced CRD interference testing.

5/25/79 #1 fire diesel ran noisy during capacity test - out of service.  
#1 fire diesel returned to service and tested.

5/26/79 Continued CRD interference checks.  
Reset isolation condenser auto initiation time delay to  $1.5 \pm 1$  second to be consistent with Tech. Spec. change request.  
Performed friction testing CRD 22-43.  
Isolation condenser reactor high pressure switch RE15A tripped at 1071 psi vs. limit of 1068 psi during surveillance testing - RO #79-19.

5/27/79 Performed additional friction testing on CRD 22-43.

5/28/79 -

5/29/79 Replaced filters on HCV for CRD 22-43 - repeated friction testing.  
Both service water pumps out of service to inspect discharge line below seal well - returned.

5/30/79 Preparing for startup.  
5:05 p.m. received permission from NRC to start up.

5/31/79 2:50 p.m. reactor mode switch in startup.  
2:54 p.m. commenced rod withdrawal (note: following startup test program described in report to NRC).  
4:04 p.m. reactor critical.

2238 310



SRM 22 would not withdraw from core - out of service.

CRD 18-03 drifted in from 48 to 47 - increased drive pressure to 300 psid and withdrew.

CRD 18-03 drifted in from 48 to 47 - increased drive pressure to 400 psid and withdrew.

1:02 p.m. reactor scram from high neutron flux in IRM Range 9, caused by rapid addition of cold feedwater.

2:41 p.m. reactor mode switch in startup - commenced rod withdrawal.

3:38 p.m. reactor critical.

Conducted fire drill with participation of Lacey Township Fire Department.

6:26 p.m. reactor scram from low water level - when turbine warmup was commenced, the turbine tripped from reactor high water level. The turbine control configuration used for warmup caused the bypass valves to open to 75% when the turbine tripped. The main steam valves were closed manually at 6:29 p.m. A reactor scram from low water level occurred. The operator attempted to add feedwater through "C" feedpump by opening the "C" H.P. heater outlet valve and manually opening the "C" feedwater control valve. The "C" feedwater pump tripped once on low suction pressure and again on motor overcurrent. The overcurrent trip was attributed to normal relay action in response to an immediate start signal following a trip. The "C" feedwater pump was successfully started at 6:31 p.m. and reactor level recovered.

The high level turbine trip was attributed to a combination of sticking Yarway level indication in the Control Room and an initial high reactor water level when #2 stop valve bypass was opened.

The unit remained shut down to calibrate and repair the Control Room Yarway level indicators.

During the shutdown beginning on May 2, the following maintenance and modifications were performed:

Maintenance:

1. Cleaned "A" feedwater pump motor.
2. Repaired leak, "C" feedwater pump seal water line.
3. Replaced broken belt 1-6 recirc fan and replaced belt 1-7 recirc fan.
4. Repacked V-1-12.
5. Rebuilt NS04B air operator.
6. Replaced MSIV control solenoid valves with environmentally proven design.

7. Repaired SRM 23 drive.
8. Repaired service water discharge line under seal well.

Modifications:

1. Diesel generator 1 and 2 louver controls were modified to reduce the probability of overheating.
2. Diesel generator 1 and 2 alarm circuits were modified to provide more detailed annunciation of problems in the Station Control Room.
3. Installed a pressure transmitter at RK03 to be used for verifying that the excess flow check valve on the reactor pressure sensing line remains open during maintenance or testing.
4. Bypassed the auxiliary oil pump overload trips, "A", "B", "C" reactor feed pumps.
5. Installed plastic covers over the recirc pump suction and discharge valve control switches to prevent inadvertant valve closure.

2238 312

CORRECTIVE ELECTRICAL MAINTENANCE ON QASL ITEMS FOR THE MONTH OF MAY 1979

Item #	Equipment	Malfunction	Corrective Action
1	V-20-21	Breaker Trip During Surv. Test	Installed new breaker
2	V-24-37 (1-7 sump iso. valve)	Double light indication	Adjusted limit switch

2238 313

## CORRECTIVE INSTRUMENT MAINTENANCE ON QASL ITEMS FOR THE MONTH OF MAY 1979

Item #	Equipment	Malfunction	Corrective Action
1	MSL Rad. Monitor	The A/B selecting switch on 10F for the recorder is faulty & loose	Disassembled switch selector, found selector cam loose. Tightened and reassembled
2	Recirc Loop Temp Recorder on 3F	Erratic indications	Repaired loose clutch assembly
3	CRD 42-35	No red scram light on 4F exercised microswitch - no light	Replaced microswitch on valve 127
4	SFM 23	No retracted light	Replaced limit switch

2238 314

CORRECTIVE MECHANICAL MAINTENANCE ON QASL ITEMS FOR THE MONTH OF MAY 1979

Item #	Equipment	Malfunction	Corrective Action
1	CRD Accumulator 30-11	Scram inlet valve leaking	Replaced valve seat
2	"A" CRD Filter	Requires cleaning	Replaced filter with clean spares
3	CRD Accumulator 10-23	Defective V-111 valve	Replaced with a rebuilt spare
4	CRD Accumulator 22-11	Scram inlet valve leaking	Replaced valve seat
5	MSIV NS04B	Control air leaking across actuator piston in both the open and closed direction	Rebuilt air actuator
6	1-2 Fire Pump	Oil pressure too high	Changed oil and oil filters
7	CRD Accumulator 38-19	Scram inlet valve leaking	Replaced valve seat
8	CRD Accumulator 46-39	Scram inlet valve leaking	Replaced valve seat

2238 315

REFUELING INFORMATION - MAY 1979

Name of facility: Oyster Creek Station #1

Scheduled date for next refueling shutdown: September 15, 1979

Scheduled date for restart following refueling: November 10, 1979

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

No Technical Specification change relative to the refueling is anticipated.

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

1. October 1979 - Cycle independent General Electric fuel design information and safety analysis for future use.
2. No submittal is scheduled for the use of Exxon fuel.

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 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 - 620

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:

1,800

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

The Fall 1986 Outage.

2238 316