

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-219/82-20

Docket No. 50-219

License No. DPR-16 Priority -- Category C

Licensee: GPU Nuclear Corporation

100 Interpace Parkway

Parsippany, New Jersey 07054

Facility Name: Oyster Creek Nuclear Generating Station

Inspection at: Forked River, New Jersey

Inspection conducted: August 3 - September 7, 1982

Inspectors: [Signature]  
C. Cowgill, Senior Resident Inspector

9/10/82  
date signed

[Signature]  
J. Thomas, Resident Inspector

9/10/82  
date signed

Approved by: [Signature]  
L. E. Tripp, Chief, Reactor Projects  
Section 2A

date signed  
9/11/82  
date signed

Inspection Summary: Inspection on August 3 - September 7, 1982 (Report No. 50-219/82-20). Routine inspection by the resident inspectors (131 Hours) including review of plant operations, plant tours, log and record review, surveillance observation, review of events that occurred during the inspection, and licensee event report review.

Results: Two Violations (Failure to follow equipment control procedures, detail 5.1; Failure to prepare procedures consistent with 10 CFR 20 for work involving personnel radiation exposure, detail 5.2).

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## DETAILS

### 1. Persons Contacted

J. Carroll, Director, Plant Operations  
B. Cooper, Outage Manager  
P. Fiedler, Vice President and Director, Oyster Creek  
K. Fickeissen, Plant Engineering Director  
M. Laggart, Supervisor Oyster Creek Licensing  
R. Mc Keon, Manager, Plant Operations  
J. Riggart, Security Supervisor  
J. Sullivan, Plant Operations Director  
D. Turner, Radiological Controls Manager

The inspector also interviewed other licensee personnel during the inspection including management, clerical, maintenance, and operations personnel.

### 2. Review of Plant Operations

2.1 The inspector routinely toured the following plant areas:

- Control Room
- Turbine Building and Reactor Building
- Augmented Off-Gas Building and Rad-Waste Building
- Cooling Water Intake and Dilution Plant Structure
- 4160 Volt Switchgear, 460 Volt Switchgear, and Cable Spreading Rooms
- Diesel Generator Building
- Battery Rooms
- Maintenance Work Areas
- Yard Areas

2.2 The inspector observed the following:

- 2.2.1 Daily inspection tours of the Control Room included examination of instrumentation, recorder traces, annunciator panels, switch positions, and logs and records to verify adherence to applicable

Limiting Conditions for Operation (LCO). The inspector verified availability and proper alignment of emergency cooling systems and onsite and offsite electrical power sources. Recorder traces were examined for indications of unexplained or unplanned plant transients. Stack Gas Monitor recorders were examined for indications of abnormal releases. Panels were examined to verify operability and proper alignment of containment systems, proper containment inerting, and proper containment temperature and pressure. Control rod density and nuclear instrumentation limits were verified. From August 14 - 29, 1982, the plant was in cold shutdown and those LCO's applicable to the cold shutdown condition were verified. Status of alarmed annunciators was discussed with operators to verify that corrective action was being taken if required. The inspector observed evolutions in progress to verify that approved procedures were in use. Shift turnovers were frequently observed for adequacy. The inspector verified proper Control Room manning and access control.

- 2.2.2 The inspector examined local plant instrumentation necessary to support safe plant operation. The instruments were verified to be in service with proper on-scale indication and channel correlations where applicable. Root valve alignment and cable connections were checked when possible. The inspector verified that activities in the area did not impair instrument operability.

On September 7, 1982, the inspector noted a disparity between reactor building to suppression pool differential pressure indicating switches DPS-56-A and DPS-56-B. DPS-56-B indicated a differential pressure of 2 inches of water which correlated to the torus pressure indicated in the Control Room. DPS-56-A indicated zero. These switches are redundant and either will cause automatic actuation of the reactor building to suppression chamber vacuum breakers. The inspector notified the licensee of the disparity and an operability test of the vacuum breakers was satisfactorily performed following a full range calibration of the differential pressure indicating switches.

The inspector had no further questions on this item.

- 2.2.3 During entry to and exit from radiation controlled areas (RCA), the inspector verified that proper warning signs were posted, personnel entering were wearing proper

dosimetry, that personnel and materials leaving were properly monitored for radioactive contamination and that monitoring instruments were functional and in calibration. Posted extended Radiation Work Permits (RWP's) and survey status boards were reviewed to verify that they were current and accurate. The inspector observed activities in the RCA to verify that personnel complied with the requirements of applicable RWP's and that workers were aware of the radiological conditions in the area.

- 2.2.4 Systems and components were examined for evidence of abnormal vibration and fluid leaks. Selected pipe hangers and seismic restraints were visually examined for indications of mechanical interference or fluid leaks.

Valves and components in safety related systems were observed to verify proper system alignment. Accessible major flow path valves in the Core Spray, Containment Spray, Control Rod Drive Hydraulic, and Isolation Condenser systems were examined for proper alignment by direct observation and by observation of remote position indicators. All breakers in the 4160 Volt and selected breakers in the 460 Volt and 125 Vdc electrical systems were examined for proper alignment.

Equipment Control procedures were examined for proper implementation by verifying that tags were properly filled out, posted, and removed as required, that jumpers were properly installed and removed, and that equipment control logs and records were complete.

During the conduct of inspection tours, the interiors of cabinets and control panels were examined for the presence of uncontrolled jumpers, lifted leads, or tags. Tags found on systems and components were examined to verify that the component was in the condition specified on the tags and that tags were properly filled out and authorized.

Equipment control logs were examined to verify that jumpering or tagging of system components did not remove redundant safety systems from service or violate technical specification limiting conditions for operation.



- 2.2.6 The inspectors examined plant housekeeping conditions including general cleanliness, control of material to prevent fire hazards, maintenance of fire barriers, storage and maintenance of fire fighting equipment, and radiological housekeeping.

The inspectors noted a deterioration in the general housekeeping conditions of the plant. Much of the degraded conditions were due to outage related work since the plant was shutdown from August 14-29, 1982, for maintenance. However, this is indicative of poor post maintenance cleanup practices. This was discussed with licensee management who concurred with the inspector's assessment of housekeeping conditions and stated that increased emphasis would be placed in this area.

The inspectors noted that six fire extinguishers in various areas of the plant did not have inspection tags attached or had not received their monthly inspection during the month of August. This was discussed with operations management. The personnel performing the inspections were transferred from the control of the fire protection engineer to the preventive maintenance department in March, 1982. The inspector expressed concern that these deficiencies could indicate a degraded equipment inspection program resulting from the transfer of responsibility. The licensee stated that these deficiencies would be corrected and the importance of fire protection inspections emphasized. The inspector noted that no deficiencies were found with fire protection equipment required by technical specifications. The inspectors will continue to monitor this area in future inspections.

- 2.2.7 During daily entry and egress from the protected area, the inspector verified that access controls were in accordance with the security plan and that security posts were properly manned. During facility tours, the inspector verified that protected area gates were locked or guarded and that isolation zones were free of obstructions. The inspector examined vital area access points to verify that they were properly locked or guarded and that access control was in accordance with the security plan.

## 2.3 Acceptance criteria for the above areas included Technical

Specifications, applicable Federal Regulations, Oyster Creek Physical Security Plan, current revisions of appropriate licensee administrative and operating procedures, and inspector judgment.

### 3. Shift Logs and Operating Records

3.1 The inspector reviewed the current revisions of the following plant procedures to determine the licensee established requirements in this area in preparation for review of selected logs and records:

- Procedure 106, Conduct of Operations;
- Procedure 118, Equipment Control; and,
- Procedure 115, Standing Order Control.

The inspector had no questions in this area.

3.2 Shift logs and operating records were reviewed to verify that they were properly filled out and signed and had received proper supervisory reviews. The inspector verified that entries involving abnormal conditions provided sufficient details to communicate equipment status and followup actions. Logs were compared to equipment control records to verify that equipment removed from or returned to service was properly noted in operating logs when required. Operating memos and orders were reviewed to insure that they did not conflict with Technical Specification requirements.

3.3 The review included the following plant shift logs and operating records as indicated, and discussions with licensee personnel. Reviews were conducted on an intermittent selective basis:

- Control Room and Group Shift Supervisor's Logs, all entries;
- Technical Specification Log;
- Control Room, and Shift Supervisor's Turnover Check Lists;
- Reactor Building and Turbine Building Tour Sheets;
- Equipment Control Logs;

- Standing Orders;
- Operational Memos and Directives.

#### 4. Surveillance Testing

Selected completed surveillance tests were reviewed to verify that the tests were completed as scheduled, test results were reviewed by supervisory staff and forwarded for management review, and that appropriate corrective actions were initiated as required for identified deficiencies. Portions of selected ongoing surveillance activities were observed to verify that approved procedures were used, the work was performed by qualified personnel, that test instrumentation was calibrated, and that redundant systems for components were available for service if required. Activities reviewed included the following:

- Procedure 619.3.013, revision 7, January 1, 1982, Reactor Low Level Test and Calibration, completed August 3, 1982.
- Procedure 602.3.008, revision 2, October 27, 1981, Main Steam Safety Valve and Main Steam Relief Valve - Valve Monitoring System Checkout, completed August 4, 1982.
- Procedure 619.3.016, revision 5, September 23, 1981, High Drywell Pressure Scram Test and Calibration, completed August 17, 1982.

No unacceptable conditions were identified.

#### 5. Followup of Events That Occurred During the Inspection

- 5.1 On August 14, 1982, at about 10:00 a.m., number 1 emergency diesel generator started automatically and idled. The auto start was caused by a low lube oil temperature which was the result of the lube oil heater and recirculation pump control switch being in the "off" position. Investigation of the mispositioned switch determined that it had been manually tripped by electrical maintenance personnel while performing monthly surveillance on the diesel batteries and it had not been repositioned following the surveillance. Further review of this event found that it had been a routine practice for the electricians to turn off the heater and recirculation pump when testing the batteries. There is no procedural step in the surveillance procedure that allows shutting off the pump and heaters, but it was being done to reduce the noise

level in the area during the surveillance. No tagout was being issued to control the position of the switch and to assure that it was properly realigned. Procedure 108, revision 29, April 26, 1982, "Equipment Control", requires that any component in a position other than specified by a procedure, be controlled by a tag. Failure to properly control the position of the diesel lube oil heater and recirculation pump is a violation of procedure 108 (219/82-20-01).

The inspector noted that the operability of the diesel was not impaired by this violation. The system performed as intended when the engine automatically started and idled to warm up the oil system before cooling off to the point that engine operability could be affected.

- 5.2 On August 16, 1982, the drywell airlock door was locked at about 10:15 p.m. while two individuals were still inside, leaving them with no means of unassisted escape. The drywell had been opened for access and a control point watch established. The control point consisted of a health physics technician who monitored the radiological aspects of drywell entry and a site protection officer who monitored the security aspects. The drywell is a high radiation area, a high contamination area, an airborne activity area, and a vital area. The sliding shield door had not been opened so access to the airlock was through the "labyrinth" passageway. Thus, the control point watches could not see the airlock door. At 10:05 p.m. on August 16, two instrument technicians entered the drywell to perform safety valve acoustic monitor maintenance. Their entry was properly recorded in the control point and security logs, their ID badges were left with the security guard, and their exposure record cards were left with the health physics technician. At 10:15 p.m., a health physics technician who had been in the drywell exited along with a group of maintenance personnel. He assumed that all personnel had exited, closed the airlock door, and locked it without the authorization of the control point watch and without notifying the control room. About 10:35 p.m., the two instrument technicians attempted to leave the drywell, they found the door locked and called the control room on the paging phone. The control room operator notified the drywell control point watch who obtained the drywell key and unlocked the door at 10:39 p.m.



The licensee's procedure 902.6, revision 12, June 8, 1982, "General Drywell Clearance", contained no requirements to verify that all personnel had exited the drywell before locking it. Technical Specification 6.11 requires that procedures be prepared consistent with 10 CFR 20 which requires that the controls established over high radiation area access in no way prevent free exit from the high radiation area. Failure to establish appropriate procedures is a violation of Technical Specification 6.11 (219/82-20-02).

The inspector noted that during this event, no entries were made in the control point log indicating that people had been inadvertently locked in the drywell. Also, no members of the facility management were informed of the event until about 10:00 a.m. the following morning, and the control room operator who received the telephone call from the drywell failed to notify the Group Shift Supervisor. The inspector expressed concern for this lack of communication of this event to facility management. The licensee acknowledged the inspectors concern and stated that he would address the concern to his staff.

The licensee conducted a critique of this event with all personnel involved. A revision to the drywell clearance procedure was issued requiring that a public address announcement be made of the intent to lock the drywell and that the control point verify that all personnel have been logged out of the drywell and picked up their ID cards and exposure record cards. The health physics technician who actually locked the door has resigned.

#### 6. Review of Licensee Event Reports (LER's)

The inspector reviewed LER's received in the NRC:R1 and Resident Office to verify that details of the event were clearly reported including the accuracy of the description of cause and adequacy of corrective action. The inspector also determined whether further information was required from the licensee, whether generic implications were involved, and whether the event warranted further on-site followup. The following LER's were reviewed:

<u>LER</u>	<u>EVENT</u>
82-38	Monthly Channel Check of Safety and Relief Valve Backup Monitoring System Was Not Performed.

- 82-39            Thermocouple for Safety Valve NR 28J Was Inoperable
- 82-42            Failed Relays Prevented Automatic Start of Containment Spray and Emergency Service Water System II Pumps During Surveillance.

7. Exit Interview

At periodic intervals during the course of this inspection, meetings were held with senior facility management to discuss inspection scope and findings. A summary of findings was presented at the conclusion of the inspection.