

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-219/82-22

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: September 8 - October 6, 1982

Inspectors: *C. Cowgill III*
C. Cowgill, Senior Resident Inspector

10/7/82
date signed

J. Thomas
J. Thomas, Resident Inspector

10/7/82
date signed

Approved by: *L. E. Tripp*
L. E. Tripp, Chief, Reactor Projects
Section 2A

date signed
10/22/82
date signed

Inspection Summary: September 8 - October 6, 1982 (Report No. 50-219/82-22)
Routine regular and backshift resident inspection (212 hours) including review of plant operations, log and record review, facility tours, committee activities, radiation protection, physical security, surveillance testing, onsite event followup, inoffice and onsite review of licensee event reports, periodic and special report review.

Results: Violations: One (violation of Technical Specification 3.1.A and table 3.1.1.H, Detail 7.2).

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DETAILS

1. Persons Contacted

M. Budaj, Manager, Programs and Controls
J. Carroll, Director, Plant Operations
P. Fiedler, Vice President and Director, Oyster Creek
K. Fickeissen, Plant Engineering Director
D. Gaines, Manager, Training
W. Garvey, Manager, Administration
E. Growney, Safety Review Manager
M. Laggart, Manager, Oyster Creek Licensing
J. Maloney, Acting Manager, Rad-Waste Operations
R. Mc Keon, Manager, Plant Operations
J. Riggart, Security Supervisor
P. Scallion, Radiological Field Operations Manager
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. Licensee Action on Previous Inspection Findings

(Closed) Violation (219/81-18-04) Failure to implement battery surveillance procedures which incorporate the acceptance limits of technical specifications. The inspector reviewed the following surveillance procedures:

- 634.2.001, revision 13, March 31, 1982, "Main Station Battery Discharge and Low Voltage Relay Annunciator Test".
- 634.2.002, revision 7, October 28, 1981, "Main Station Weekly Battery Surveillance".
- 634.2.003, revision 5, October 28, 1981, "Main Station Battery Monthly Surveillance".
- 636.2.005, revision 6, March 5, 1982, "Diesel Generator Weekly Battery Surveillance".
- 636.2.006, revision 4, October 28, 1982, "Diesel Generator Monthly Battery Surveillance".

The surveillance acceptance criteria regarding overall battery voltage, temperature correction of specific gravities, and testing of low voltage annunciators are in conformance with technical specifications limits.

(Closed) Violation (219/81-18-03) Failure to conduct and document proper shift turnover in the control room. The inspector verified through interviews that licensee management had discussed the violation with all operations department personnel and stressed the need for proper shift turnovers and the need for strict adherence to written procedures. By frequent review of shift logs and direct observation of shift turnovers, the inspector verified that shift turnovers are properly conducted and documented.

3. Plant Operations Review

3.1 Shift Logs and Operating Records

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. The logs and records were compared to the requirements of Procedure 106, "Conduct of Operations", and Procedure 108, "Equipment Control". The following were reviewed:

- 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.

No unacceptable conditions were noted.

3.2 Facility Tours

The inspectors frequently toured the following areas:

- Control Room (daily)
- Reactor Building (all levels)

- Turbine Building (all normally accessible areas)
- Augmented Off-Gas Building
- New Rad-Waste Building
- Cooling Water Intake and Dilution Plant Structure
- Monitoring Change Area
- 4160 Volt Switchgear, 460 Volt Switchgear, and Cable Spreading Rooms
- Diesel Generator Building
- Battery Rooms
- Maintenance Work Areas
- Yard Areas (including Protected Area Perimeter)

The following were observed:

- 3.2.1 Control Room Manning was checked against the requirements of 10 CFR 50.54(k) and Technical Specifications. Presence of a senior licensed operator in the control room complex was verified frequently. No unacceptable conditions were identified.
- 3.2.2 The inspector frequently confirmed that selected Control Room instruments were operating and indicated values were within Technical Specification requirements. Daily, when the inspector was on site, ECCS switch positioning and valve lineups, based on control room indicators and plant observations were verified. Observations included switch positioning, breaker positioning, primary containment status, radiation monitoring instruments, control rod density, and neutron monitors. No violations were identified.
- 3.2.3 Selected alarmed annunciators were discussed with control room operators and supervision to assure they were knowledgeable of plant conditions and that corrective action, if required, was being taken. The operators were knowledgeable of alarm status and plant conditions.
- 3.2.4 The inspector observed visible portions of the plant stack radiation recorders and periodically reviewed traces from backshift periods to verify that radioactive gas release rates were within limits and that unplanned releases had not occurred. No unacceptable conditions were identified.

- 3.2.5 Systems and components were examined for evidence of abnormal vibration. Selected pipe hangers and seismic restraints were visually examined for indications of mechanical interference or fluid leaks. No unacceptable conditions were identified.
- 3.2.6 The inspector examined equipment for evidence of fluid leaks. Calculated identified and unidentified leak rates into primary containment were reviewed. No unacceptable conditions were identified.
- 3.2.7 The inspector verified operability of selected safety equipment by in-plant checks of valve positioning, control of locked valves, power supply availability and breaker positioning. Selected major components were visually inspected for leakage, proper lubrication, operating air supply, and general conditions. Systems checked included the 4160 and 460 volt electrical distribution system, Core Spray System, Containment Spray System, Control Rod Drive Hydraulic System, and Standby Liquid Control System.

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.

No unacceptable conditions were identified.

- 3.2.8 The inspector 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. No unacceptable conditions were identified.
- 3.2.9 Off-Shift inspections during this inspection period and the areas examined were as follows:

<u>Date</u>	<u>Area Examined</u>
September 25	Control Room, Reactor Building, Waste Surge Tank Decontamination Operations
September 26	Control Room, Reactor Building, Waste Surge Tank Decontamination Operations.
September 29	Control Room
October 2	Control Room, Reactor Building, Refueling Floor activities.

3.3 Plant Operations Review Committee Activities

On September 16, 1982, the inspector attended a plant operations review committee meeting. During the meeting, the committee reviewed and approved temporary and permanent changes to procedures. The inspector verified that technical specification requirements regarding membership, review process, and qualification, were satisfied. No unacceptable conditions were identified.

4. Radiation Protection

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. The inspector periodically performed independent surveys to confirm the accuracy of the licensee's postings.

On September 24, 1982, the inspector noted that the door leading to 'C' water removal system in the Augmented Off Gas Building was posted as a "High Radiation" area but was not secured with a lock controlled for high radiation areas. The inspector informed the licensee who immediately performed a survey of the area, verified that radiation levels were less than 100 millirem per hour, and removed the high radiation area sign.

No unacceptable conditions were noted.

5. Physical Security

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. Vehicles onsite were periodically observed to verify proper controls.

No unacceptable conditions were identified.

6. Surveillance Testing

The inspector observed surveillance to verify that testing had been properly approved by shift supervision, control room operators were knowledgeable of testing in progress, approved procedures were being used, redundant systems

or components were available for service as required, test instrumentation was calibrated, work was performed by qualified personnel, and test acceptance criteria were met. Completed documentation was also reviewed. Parts of the following tests were observed:

- Procedure 620.3.003, revision 7, July 27, 1982, "APRM Surveillance Test and Calibration", completed September 13, 1982.
- Procedure 619.3.016, revision 5, September 23, 1981, "High Drywell Pressure Scram Test and Calibration", completed September 14, 1982.
- Procedure 617.4.001, revision 5, June 9, 1982, "CRD Pump Operability Test", completed September 23, 1982.
- Procedure 612.4.001, revision 7, August 10, 1982, "Liquid Poison Pump Operability Test" completed September 30, 1982.

No unacceptable conditions were identified.

7. Followup of Events Occurring on Site

- 7.1 On September 22, 1982, while preparing to decontaminate the radwaste system waste surge tank (WST), routine radiation survey identified soil contamination at two locations near the tank. Soil samples contained activities as high as $2E-3$ microcuries per gram (predominately Cobalt-60 and Cesium-137). By September 24, to identify the source of the leak, the licensee had excavated to a depth of 4.5 feet, where wet soil was found. Contact radiation levels on soil samples extracted at this level were about 1 mrem/hr above background.

The licensee suspected a leak in the tank or the connected underground piping and drained the tank to level of about 1 foot (2500 gallons). Further drainage was not immediately possible because the sludge in the bottom of the tank had contact radiation levels of four to five Rem per hour. Complete draining of the tank would have caused calculated radiation levels of up to 500 millirem per hour outside of the tank. The licensee began cleanup of the tank and by September 28 it was decontaminated to the point that general area radiation levels inside the empty tank were 10 to 20 millirem per hour. An internal inspection of the WST showed extensive pitting corrosion on the bottom and sides, and a circumferential crack in the tank's bottom drain line weld connection.

The licensee sampled all site monitoring wells and found no detectable aquifer contamination. Nine soil corings were made near the tank. One core sample on the northeast side of the tank showed low level contamination to a depth of 30 inches. Additional soil sampling is in progress. The licensee is evaluating the need for soil decontamination

and the feasibility of tank repair.

The inspectors will continue to follow the licensee's actions.

- 7.2 On September 27 and 29, 1982, the licensee added packing to two Isolation Condenser (IC) valves while the valves were electrically defeated in the open position.

The 16 inch steam lines to the IC's have two motor operated isolation valves outside the primary containment. One valve in each line is AC powered, the other is DC powered. Each of the 10 inch condensate lines also have one DC powered and one AC powered motor operated isolation valve. All of the valves except the DC powered condensate valves are normally open when the IC's are aligned for normal automatic operations. Safety circuits will automatically isolate an IC by closing both steam and both condensate valves in the affected IC if a high steam line or condensate line flow rate is detected.

On September 27, 1982, packing was added to valve V-14-32, the AC powered steam line valve for 'B' IC. The valve was opened against its back seat and secured by opening its power supply breaker. Prior to making valve V-14-32 inoperable, the shift personnel determined that making it inoperable would impair the operability of the 'B' IC and performed an operability test of the 'A' IC, the redundant IC. They did not test the redundant isolation valves on the 'B' IC. After completing the maintenance on V-14-32, which took about six hours, it was tested satisfactorily and a packing adjustment was made on the redundant valve, V-14-33. Valve V-14-33 was satisfactorily tested after the packing adjustment.

On September 29, 1982, the licensee added packing to valve V-14-31, the DC powered steam line valve for the 'A' IC. The valve was opened against its backseat and secured by opening its power supply breaker. Prior to defeating V-14-31, the licensee tested the redundant isolation valves on the 'A' IC to demonstrate that isolation capability was not lost. Following the maintenance, which took about eight hours, V-14-31 was satisfactorily tested.

The maintenance on valves V-14-31 and V-14-32 was performed in accordance with procedure 709.1.005, revision 1, March 18, 1980, "Isolation Condenser Valve Repacking". Inspector review noted that prerequisites for the procedure contain no system testing prior to making the valve inoperable.

Technical Specification 3.1.A and table 3.1.1.H require that two operable or operating trip systems be available to cause an isolation of the isolation condenser if high flow in the steam or condensate lines is detected. If this specification is not met, the affected isolation condenser shall be isolated. To consider the isolation

circuit operable it must be capable of closing all four isolation valves on the affected IC. A facility staff member said that the IC's were not isolated during the maintenance because the valves had been made inoperable by a planned maintenance action. However, if the valves had been found to be inoperable during testing, he would have isolated the affected IC. The inspector said that this interpretation does not meet the intent of the Technical Specifications and that Limiting Conditions for Operation Action Statements must be met whether components are inoperable due to failures or are intentionally made inoperable. Failure to isolate the isolation condensers when one of their isolation valves was inoperable is a violation (219/82-22-01).

The isolation condenser is provided to depressurize the reactor and remove decay heat in the event that the turbine generator and main condenser are unavailable. During the valve packing evolution, both condensers remained operable for their intended function. Redundant isolation valves in the affected steam line were satisfactorily tested, once before and once just after maintenance. The isolation systems were less than fully operable for a short time. Additionally, discussions with licensee staff showed that the valve that was secured in the open position could have been shut within about 5 minutes, if needed. The evolution was controlled in that testing was done and valve packing was covered by a procedure approved by the Plant Operations Review Committee.

- 7.3 On October 4, 1982, while performing surveillance on Standby Gas Treatment System (SGTS) II, the licensee noted abnormal system flows while system II was paralleled with system I through the crosstie valve. A walkdown of the system found an inspection cover removed on ducting between the high efficiency particulate air (HEPA) filter and the charcoal filter of SGTS I. Removal of this cover would have rendered SGTS I inoperable because the system would be unable to draw the required air flow from the reactor building ventilation system. The inspection cover had been removed on September 22 and 23, 1982 while replacing and testing HEPA filters. Discussions with the licensee indicated that maintenance personnel had replaced the cover after filter testing, however, this is still under review by the licensee and the inspectors. This item is unresolved pending further NRC review (219/82-22-02).

8. Review of Licensee Event Reports (LER's)

- 8.1 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:

Specifications were reviewed by the inspector. This review included the following considerations: the report includes the information required to be reported to the NRC; planned corrective actions are adequate for resolution of identified problems; and that the reported information is valid. Within the scope of the above, the following reports were reviewed:

- June 1982 Monthly Operating Report
- July 1982 Monthly Operating Report
- August 1982 Monthly Operating Report
- Special Report dated September 28, 1982: Reactor Startup with Inoperable Rod Worth Minimizer.

No unacceptable conditions were identified.

10. Unresolved Items

Unresolved items are matters about which more information is required in order to determine whether they are acceptable items, items of noncompliance, or deviations. The unresolved item identified during this inspection is discussed in paragraph 7.3.

11. 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.