

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

Region I

Report No. 50-219/80-28

Docket No. 50-219

License No. DPR-16 Priority -- Category C

Licensee: Jersey Central Power and Light Company

Madison Avenue at Punch Bowl Road

Morristown, New Jersey 07960

Facility Name: Oyster Creek Nuclear Generating Station

Inspection at: Forked River, New Jersey

Inspection conducted: August 4-29, 1980

Inspectors: Larry & Briggs 9/19/80  
L. Briggs, Senior Resident Reactor Inspector date signed

Larry & Briggs for 9/19/80  
J. Thomas, Resident Reactor Inspector date signed

S. Chaudhary 9/19/80  
S. Chaudhary, Reactor Inspector RC&ES date signed

Approved by: Edward A. Keimig / jr 9/19/80  
R. R. Keimig, Chief, Reactor Projects date signed  
Section No. 1, RO&NS Branch

Inspection Summary:

Inspection on August 4-29, 1980 (Report No. 50-219/80-28)

Areas Inspected: Routine inspection by the resident inspectors (58 hours) and one regional based construction branch inspector (12 hours) of: licensee action on previous inspection findings; followup of operational events that occurred during the inspection; tours of the facility; log and record review; and followup of IE Bulletin 80-11.

Results: Three items of noncompliance were identified. (Infraction - Failure to follow Procedure 915.4, "Contamination Control" (details paragraph 4.d.(1)); Infraction - Failure to follow Procedure 915.4, "Contamination Control" (details paragraph 4.d.(2)); and Infraction - Inadequate process controls on temporary chemical waste demineralizer (details paragraph 3)).

## DETAILS

### 1. Persons Contacted

- \*J. Carroll, Station Manager
- K. Fickeissen, Support Superintendent
- I. Finfrock, Jr., Vice President, Generation
- \*V. Foglia, Engineer, Generation Engineering
- W. Garvey, Director, Station Administration
- \*D. Gasbarro, Engineer, Generation Engineering
- T. Johnson, Supervisor, Station I&E Maintenance
- J. Maloney, Operations Supervisor
- D. Ross, Manager, Generation, Nuclear
- J. Sullivan, Plant Superintendent
- D. Turner, Supervisor, Health Physics

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

- \*Attended exit meeting (IEB 80-11, Masonry Wall Design) on August 7, 1980.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (219/80-19-03): Incorporate existing policy in Procedure 108. The inspector verified that Procedure 108, "Equipment Control", Revision 22, dated July 24, 1980, includes the requirement for placing tags on valves, switches, and breakers in anomalous lineups when the lineup is not specified by an approved procedure.

The inspector had no further questions on this item.

(Closed) Violation (219/79-10-13) and Unresolved Item (219/79-11-26): Procedures not appropriate for plant conditions. The inspector reviewed the corrective action stated in the licensee's response dated October 24, 1979 to verify that actions stated had been fully implemented. A thorough procedure review was conducted during Inspection 50-219/79-11 (May 7 through 14) prior to plant restart following the May 2, 1979 triple low reactor water level event. During that review all procedures were found to be acceptable; however, a pending Technical Specification Amendment which might have required further procedural revision was not at that time issued. Technical Specification (TS) Amendment No. 36 was subsequently issued on May 30, 1979. The TS Amendment was approved as submitted by the licensee and no further revisions relative to the triple low reactor water level event were required.

The inspector had no further questions concerning this item.

The following commitments, made in the licensee's letter of March 17, 1980, in response to the Performance Appraisal Branch (PAB) Inspection (50-219/79-18) and not discussed elsewhere in this report, were reviewed:

- Establish formal turnover procedures to address items, such as instrument calibration, for placing a new system into operation. A member of the licensee management has been assigned to this task. Development of the procedure is in progress but the procedure is not yet ready for issue. This commitment is open.
- Review Technical Specification changes to insure that surveillance requirements have been added to the master schedule. This item was reviewed in Inspection 80-19. No further progress has been made since that time. The licensee is attempting to hire an additional engineer who will be given this task as one of his first assignments. This commitment is open.
- Review/Modify procedures to assure that new surveillance requirements incorporated in Technical Specifications are included on the master schedule. The PORC has been directed by memo dated April 1, 1980, to review Technical Specification changes as they are issued, and to issue a PORC Action Item to develop any necessary surveillance procedures and update the master surveillance schedule. This commitment is closed.
- Implement a new procedure for controlling/updating of Non Conformance/Corrective Action Required (NC/CAR) reports. All operations related NC/CAR's are now routed through the Management Control Supervisor to assure that a responsible individual will track the item and followup on corrective action. This commitment is closed.
- Review/Revise all radwaste operating procedures to assure that current system status is reflected. Procedures 351.1, "The Chemical Waste/Floor Drain System Operating Procedure"; 351.2, "High Purity Waste System"; and 351.4, "Solid Radwaste Operating Procedure" have been reviewed and verified to reflect the current status of the affected systems with respect to process flows, and valve lineups and nomenclature. This commitment is closed.

### 3. Operational Events

- a. On August 27, 1980, at 11:37 p.m., a Hitman spent resin cask liner being used temporarily as a waste water demineralizer vessel overflowed approximately 20 gallons of radioactively contaminated water onto the floor of the old radwaste building. Approximately two gallons of the spilled water flowed under a door and onto the pavement outside the building. The demineralizer consisted of a cask liner filled with ion exchange resin with a charcoal bed on top of the resin. It functioned as an open top gravity flow

demineralizer by receiving waste water pumped through a fire hose from the "Chem Waste Distillate Sample Tanks". Effluent from the system was pumped to the "High Purity Waste Sample Tank" for continued processing. Demineralizer water level was controlled by an operator stationed at the demineralizer who visually monitored the level and adjusted a manual valve on the demineralizer inlet. The system was equipped with no automatic controls or alarms. When the spill occurred, the operator had observed water level increasing in the demineralizer but turned the inlet valve the wrong direction resulting in an overflow. The gross gamma activity of the water spilled was  $9.28 \text{ E-5}$  microcuries per milliliter. Samples of wetted soil swept up from the pavement were analyzed and found to have a gross gamma activity of  $1.63 \text{ E-4}$  microcuries per gram.

Following the spill, the temporary system was taken out of service and modified by closing the open top, installing a level indication system, and installing an overflow collection system. In addition, the access door to that section of the old radwaste building was cofferdammed to insure that any spillage would be diverted to a floor drain.

The initial installation of the system was performed under Special Procedure 80-119, "Temporary Chemical Waste Demineralizer Cleanup System". The system had received an engineering review and a safety evaluation was conducted in accordance with 10 CFR 50.59. However, the engineering review failed to recognize the potential for operator error associated with the temporary system and to require installation of suitable controls and indications.

This constitutes apparent noncompliance with 10 CFR 50, Appendix "B" Criterion II, in that, the licensee failed to consider the use of appropriate equipment and special controls to safeguard against the release of radioactive materials to the environment. (219/80-28-01)

- b. On August 21, 1980, access to the reactor building 23 and 51 foot elevations was restricted due to high airborne activity. Maximum activity levels were  $6.44 \text{ E-9}$  microcuries per milliliter (less than MPC) on the 23 foot elevation and  $3.36 \text{ E-8}$  microcuries per milliliter (approximately three times MPC) on the 51 foot elevation as determined by air samples taken at 1:00 p.m. on August 21, 1980. Previous air samples taken at 11:27 a.m. and 10:45 a.m. (on August 21, 1980) on the 23 and 51 foot elevations indicated less than 0.1 MPC. Principle isotopes of the activity were (51 foot sample) Cobalt-60 at  $1.5 \text{ E-8}$  microcuries per milliliter and Iodine-134 at  $3.2 \text{ E-8}$  microcuries per milliliter.

Investigation by the licensee indicated that a possible source of the activity was the TIP machines since an increase in airborne activity had been observed on previous occasions when the TIP machines were in operation. Further isotopic analysis showed that the activity was due to Cobalt-60, Cobalt-58, and Manganese-54. Accumulations of a black powder like material resembling graphite

was found by the TIP shield housings and was determined to be leaking around the in-shield limit switches. The material is believed to be from the TIP tube lubricant - a baked on ceramic material known by the trade name of "Sermetal". The accumulation gave a radiation level of 300 millirem per hour on contact. An air flow path was found from the TIP room to the 51 foot elevation through an open pipe chase. The pipe chase has been sealed and the TIP shield housings have been encapsulated in plastic. TIP's were run on August 23 and 24 and no airborne activity was observed. The licensee investigation is continuing in an effort to determine why this problem has only recently occurred.

This item is unresolved pending the licensee's evaluation and subsequent NRC review (219/80-28-05).

#### 4. Plant Tour

- a. During the course of the inspection, the inspector made observations and conducted multiple tours of:
  - Control Room;
  - Reactor Building;
  - Cable Spreading Room;
  - Turbine Building;
  - Cooling Water Intake Structure;
  - Maintenance Shop Areas;
  - Monitoring Change Areas; and,
  - Yard Areas.
- b. The following determinations were made:
  - Monitoring instrumentation. The inspector verified that selected instruments were functional and demonstrated parameters within Technical Specification limits.
  - Radiation controls. The inspector made observations to verify that control point procedures and posting requirements were being followed. (Paragraphs 4.d.(1) and 4.d.(2))
  - Fluid leaks. No fluid leaks of significance were noted.
  - Plant housekeeping conditions. Observations of plant housekeeping relative to fire hazards identified no notable conditions.

- Piping vibration. No excessive piping vibration was noted during the plant tours.
  - Control room annunciators. Selected lit annunciators were discussed with control room operators to verify that the reasons for them were understood.
  - By frequent observations through the inspection, the inspector verified that control room manning requirements of 10 CFR 50.54(k) and the Technical Specifications were being met. In addition, the inspector observed shift turnovers to verify that continuity of system status was maintained.
  - Equipment tagging. The inspector selected plant components for which valid tagging requests were in effect to verify that the tags were in place and that equipment was in the condition specified. (Paragraph 4.d.(3))
- c. The following acceptance criteria were used for the above items:
- Technical Specifications;
  - 10 CFR 50.54(k); and,
  - Inspector judgment.
- d. The following specific observations were made by the inspector and identified promptly to station management.
- (1) On August 6, 1980, four individuals were observed conducting decontamination activities in posted contaminated areas around the core spray booster pumps and reactor building closed cooling water heat exchangers on the 51 foot elevation of the reactor building. Decontamination was being performed by washing the equipment with soap and water. The radiation work permit (RWP) for the job specified that anti-contamination clothing consisting of one set of coveralls, surgeon's cap, cotton glove liners, plastic gloves, disposable shoe covers, and rubber shoes would be worn. The individuals were wearing only cotton glove liners, plastic gloves, surgeon's cap, and disposable shoe covers. None were wearing coveralls and one individual was bare chested. This created the potential for personnel contamination.
- The above situation constitutes noncompliance with Procedure 915.4, "Contamination Control" (219/80-28-02).
- (2) On August 6, 1980, one individual was observed removing anti-contamination clothing on the 75 foot elevation of the

reactor building near the fuel pool cooling pumps. The individual had just left a contamination controlled area and was removing his potentially contaminated clothing about 30 feet away from the step off pad in a clean area. This created a potential for the spread of radioactive contamination into a clean area.

The above situation constitutes noncompliance with Procedure 915.4, "Contamination Control" (219/80-28-03).

- (3) The following discrepancies were noted during review of selected tagging requests:
- Tagging request numbers 77-833 and 77-895 tagged Local Power Range Monitors (LPRM) numbers 20-41C and 36-49D out of service in July and August of 1977 respectively. It was subsequently verified that both LPRM's were in fact in service with no active tags in place. The licensee immediately cleared the tagging request sheet and cleared the item from the tagging request summary sheet.
  - Tagging request numbers 80-949 and 80-950 tagged "open" two service air valves on the refueling floor to insure an air supply to air line respirators in use at that time. The valves were found in the "shut" position with the tags in place. No air line respirators were in use at the time. The licensee took immediate corrective action by verifying that the tag-out was no longer required and cleared the tagging request.
  - Tagging request number 79-539 tagged "shut" a valve designated as "new fire valve outside CRD room" during construction of the plant fire suppression system. The valve was found with no tags in place and in the locked open position, as required by the operating valve lineup. The licensee took action to clear the active tagging request.

The above discrepancies involved non-safety related systems. The inspector also selected several safety related active tagging requests and found no discrepancies. There appears to be a problem in the area of administrative controls in assuring proper follow-up on non-safety related tagging requests.

The licensee's periodic review of the tagging system normally consists of verification that tagging requests listed as being active in the summary sheets have properly completed tagging request forms in the file. The licensee has committed to conduct a complete audit of all active tagging requests to

verify that the tags are in place and the equipment is in the condition specified. This audit is to be completed by September 30, 1980.

This item is unresolved (219/80-28-04).

#### 5. Shift Logs and Operating Records

- a. The inspector reviewed 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, Revision 8, July 3, 1980;
  - Procedure 108, Equipment Control, Revision 22, July 24, 1980; and,
  - Procedure 115, Standing Order Control, Revision 7, September 15, 1979.

The inspector had no questions in this area.

- b. Shift logs and operating records were reviewed to verify that:
- Control room logs were filled out and signed;
  - Equipment logs were filled out and signed;
  - Log entries involving abnormal conditions provided sufficient detail to communicate equipment status;
  - Shift turnover sheets were filled out, signed, and reviewed;
  - Operating orders did not conflict with Technical Specification requirements;
  - Tagging of equipment did not violate Technical Specification Limiting Conditions for Operations; and,
  - Logs and records were maintained in accordance with the procedures in a. above.
- c. 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 Log, August 4 through 29;
  - Group Shift Supervisor Log, August 4 through 29;
  - Turbine Building Tour and Turnover Check List;

- Reactor Building Tour and Turnover Check List;
- Control Room Alarm Sheets;
- Control Rod Status Sheets;
- Technical Specification Log;
- Reactor Auxiliary Log;
- Reactor Log;
- Control Room Turnover Check List;
- Standing Orders, all active;
- Operational Memos and Directives, all active;
- Lifted Lead and Jumper Log, all active; and,
- Equipment Tagging Log, all active entries.

No items of noncompliance were identified.

#### 6. IE Bulletin

Licensee action concerning the following IE Bulletin was reviewed by the inspector to verify that: the Bulletin was forwarded to appropriate onsite management; a review for applicability was performed; information discussed in the licensee's reply was accurate; corrective action taken was as described in the reply; and the reply was within the time period described in the Bulletin.

- IEB 80-11, Masonry Wall Design

The inspector conducted an inspection to verify that the licensee has taken the actions required by IE Bulletin 80-11 as to the design of masonry (block) walls in proximity to safety-related systems or having attachments from safety-related systems.

The inspector reviewed pertinent documents and conducted visual inspections of identified walls to determine the adequacy of the licensee's response and the general arrangements of safety-related equipments affected by such walls. The following documents were reviewed:

- Licensee's response to IEB 80-11; and,
- Burns and Roe Drawing Numbers 2050-3, 4510-3, 2051-3, 4511-7, 2052-3, 2060-4, 3161-11, and 2061-4.

Also, a visual inspection of the following walls was conducted by the inspector:

Wall Numbers: 1 through 15, 17, 18, 21, 22, 23 and 24

Based on the review of the above documents, visual inspections, and discussions with licensee engineers, the inspector determined the following:

- The licensee has, in accordance with IEB 80-11 requirements, surveyed the plant masonry walls and has identified walls which affect safety-related systems.
- The licensee has also started a program of prioritization for the repair and/or reanalysis of these walls.
- There was an error in the licensee's response to NRC regarding the revision number of drawing number 4511-7. The response listed it as 4511-6.
- The licensee, since the submittal of the initial 60 day response, has identified several additional walls which could possibly affect safety-related systems. These walls are currently being evaluated to determine their safety significance.
- The licensee was not able to present to the inspector for review any formal written criteria used for prioritization of the repair/reevaluation of masonry walls.

In view of the above findings, the licensee informed the inspector that the criteria used for prioritization will be formally documented, and a correction to the response submitted to the NRC by September 30, 1980.

No unacceptable conditions were identified in this area, however, licensee's actions required by the bulletin will be further reviewed subsequent to the licensee's final submittal to IEB 80-11 on November 4, 1980.

#### 7. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. The unresolved items identified during this inspection are discussed in paragraphs 3.b. and 4.d. (3).

#### 8. Exit Interview

At periodic intervals during the course of this inspection, meetings were held with senior facility management to discuss inspection scope and findings.