

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

Region I

Report No. 50-219/78-19

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 22-25, 1978

Inspectors:

W. H. Baunack

W. H. Baunack, Acting Chief, Nuclear  
Support Section No. 2, RO&NS Branch

W. H. Baunack for

R. J. Conte, Reactor Inspector

9/12/78

date signed

9/12/78

date signed

Approved by:

H. B. Kister

H. B. Kister, Chief, Nuclear Support  
Section No. 2, RO&NS Branch

date signed

9/14/78

date signed

Inspection Summary:

Inspection on August 22-25, 1978 (Report No. 50-219/78-19)

Areas Inspected: Routine, unannounced inspection by regional based inspectors of licensee action on previous inspection findings; administrative controls for safety related maintenance; safety related maintenance activities; maintenance personnel qualifications; administrative controls for surveillance procedures; surveillance testing; witnessing of surveillance test; technician qualification; and facility tours. The inspection involved 66 inspector-hours onsite by two NRC regional based inspectors.

Results: Of the nine areas inspected, no items of noncompliance were found in seven areas; two apparent items of noncompliance were found in two areas (Infraction - failure to properly classify safety related maintenance activities, and failure to properly document a safety related maintenance activity - Paragraph 4.c; and Deficiency - failure to prepare implementing procedures for required surveillance tests - Paragraph 7.c(2)).

## DETAILS

### 1. Persons Contacted

- J. Behm, Quality Assurance (QA) Specialist
- \*J. Carroll, Station Superintendent
- \*J. Edelhauser, Assistant Staff Engineer
- S. Fuller, Assistant QA Supervisor
- \*R. Lang, Engineer II - Nuclear
- R. McNair, Assistant Staff Engineer
- \*J. Molnar, Maintenance Engineer
- T. Quintenz, Assistant Staff Engineer
- A. Rone, Technical Supervisor
- E. Roessler, Group Instrument and Control (I&C) Supervisor-Nuclear
- \*J. Sullivan, Chief Engineer

Other members of the operations, maintenance, I&C, clerical and QA staffs were also interviewed.

\*denotes those present at the exit interview.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved (219/77-24-06): Update Radwaste Treatment Drawing. Revision 12, dated October 19, 1977 revised Radwaste Treatment Plan No. 147F437 to reflect the installation of the Drywell Sump Level Transmitter which occurred on August 3, 1977.

(Open) Noncompliance (219/77-24-04): Failure to properly complete Job Orders associated with safety related maintenance activities. A training program was completed for all plant supervisors whose daily functions require the use of job orders. This training was documented in memoranda dated January 20, February 21, and March 3, 1978. Further, Administrative Procedure 105, Revision , was reviewed and evaluated and Revision 5, dated November 30, 1977 was issued with minor changes to Revision 4.

It appeared to the inspector that the measures addressed above were inadequate to prevent recurrence. Similar findings, as noted in paragraph 4.d, were observed in a sampling review of Job Orders issued this year.

The licensee representative acknowledged this and stated that there appears to be a misunderstanding of documentation requirements in this area and a need for better coordination between departments responsible for the completion of Job Order packages. Further, it was stated that the observation noted in paragraph 4.d would be reviewed with measures to prevent recurrence documented for each area.

The licensee representative further stated that interim measures to prevent recurrence, during the upcoming refueling outage, would be established prior to the start of the refueling.

This item remains open pending completion of licensee action as stated above and subsequent NRC:RI review.

(Open) Noncompliance (219/77-24-05): Failure to utilize the Quality Assurance System List (QASL) Traceability File for parts stored outside the QASL storeroom. Training on material identification and traceability was conducted as documented in memoranda of January 20, February 21, and March 3, 1978. Material, for fenced area storage of QASL components within the Reactor Building, is on order per Work Order 064785, dated January 26, 1978 and Work Order 064753, dated March 1, 1978. These fenced areas should be installed by the end of this year. The review of secondary storage is still being investigated with respect to material identification.

Observations with respect to parts stored outside the QASL storeroom were noted in paragraph 4.e. The licensee representative stated that these items would also be reviewed with measures to prevent recurrence documented for each area.

The licensee representative further stated that interim measures to prevent recurrence, during the upcoming refueling outage would be established prior to the start of the refueling.

This item remains open pending completion of licensee action as stated above, establishment of fenced storage areas in the Reactor Building, and subsequent review by NRC:RI.

### 3. Administrative Controls for Safety Related Maintenance

Administrative controls were reviewed to determine the licensee's program for implementing requirements associated with the conduct of safety related maintenance as specified in Technical Specification Section 6; Regulatory Guide 1.33; Quality Assurance Program Requirements; and ANSI 18.7, Administrative Controls for Nuclear Power Plants.

The following documents were reviewed:

- 105, Revision 5, November 30, 1977, Maintenance, Repair and Modification Control;
- 106.1, Revision 0, June 26, 1978, Reportable Occurrence;
- 108, Revision 9, January 26, 1978, Control of Tagging, Electrical Jumper, Lifted Electrical Leads, Key and Locked Valves;
- 110, Revision 2, November 18, 1976, Handling and Storage of Materials, Parts and Components;
- 117, Revision 0, June 8, 1976, Material Identification and Control;
- 118, Revision 1, January 20, 1978, Preventative Maintenance Administrative Procedure;
- 119, Revision 1, December 10, 1976, Housekeeping;
- 120, Revision 3, June 13, 1978, Fire Hazards;
- 120.1, Revision 0, May 23, 1978, Welding, Burning and Grinding Administrative Procedure; and,
- 121, Revision 1, May 23, 1978, Storeroom Inspections.

No items of noncompliance were identified.

4. Review of Safety Related Maintenance Activities

- a. The inspector reviewed safety related maintenance conducted by the licensee on a sampling basis to verify that:
  - Technical Specification Requirements were met while equipment was out of service, and a Licensee Event Report was submitted for maintenance associated with a reportable occurrence;
  - Required administrative approvals were obtained to perform the work;
  - An approved procedure was used where appropriate;
  - Required inspections were performed; and,
  - Records to substantiate quality of work and parts used were available (this includes documentation associated with procurement, inspections and test results).
- b. Documentation of the following maintenance activities were reviewed:
  - Job Order (JO) 0420M, completed January 14, 1978, Hydraulic Control Unit (HCU) No. 46-19 - Accumulator replaced;
  - JO 0982M, May 4, 1978, HCU 06-43 - replaced Nitrogen Charge Isolation Valve (V-III);
  - JO 0487I, March 15, 1978, Wind Speed Recorder - replaced processor;
  - JO 0455I, April 3, 1978, Offgas Sample Flow Transmitter - replaced;
  - JO 499I, June 15, 1978, "E" Recirculation Pump Controller - replaced filter capacitor in amplifier;
  - JO 367I, January 29, 1978, 1-8 Drywell Sump Integrator - replaced resistor in square root converter;

- JO 0967, May 2, 1978, Standby Gas Treatment System II - replaced roughing and absolute filter (F-1-10);
- JO 189E, January 13, 1978, No. 2 Diesel Generator - replaced batteries;
- JO 1266M, June 29, 1978, No. 2 Diesel Fire Pump - repair of leaks in cooling water manifold;
- JO 0809M, March 29, 1978, Augmented Offgas Building Radiation Monitoring System - replaced vacuum pumps;
- JO 0757M, Liquid Poison System Test Tank Suction Check Valve (V-19-10) - disassembled, cleaned and checked free swing, reassembled;
- JO 0522I, June 14, 1978, Local Power Range Monitor (LPRM) Front Panel - repaired mechanical portion of bypass switch;
- JO 0396E, June 7, 1978, Reactor Building 51 foot Airlock - installed new interlock solenoid and switch;
- JO 0337E, May 5, 1978, Containment Spray Valve Pump Suction (V-21-9) - replaced circuit breaker in breaker for valve motor;
- JO 0496M, January 9, 1978, No. 1-1 Condensate Transfer Pump - replaced mechanical seal and bearings;
- JO 0517M, January 13, 1978, No. 1-1 Condensate Transfer Pump - replaced bearing;
- JO 0430M, February 2, 1978, No. 1-2 Fire Diesel Pump - repaired expansion joint;
- JO 1114M, June 17, 1978, "D" Core Spray Booster Pump - pump seal inspection;

- JO 0519I, March 29, 1978, Torus Level Recorder - investigation of erratic indication;
  - JO 0522M, January 20, 1978, Fuel Pool Pump "A" - replaced internals, seals and bearings; and,
  - JO 0558M, January 27, 1978, No. 1-2 Condensate Transfer Pump - replaced seals and bearings.
- c. Five of these maintenance activities were documented on Job Orders which were not classified as safety related. The Components/Job Orders involved are: Condensate Transfer Pumps Nos. 1-1 and 1-2 (JO's 0496M, 0517M, 0558M); Fuel Pool Pump "A" (JO 0522M); and Torus Level Recorder (JO 0519I). These components have been identified by the licensee as safety related through the Quality Assurance System List (Appendix A to the Jersey Central Power and Light QA Plan).

As a result of the improper classification of these job orders, several procedural requirements of ANSI 18.7-1972, Administrative Controls for Nuclear Power Plants, were not implemented. Specifically these requirements are in the following areas: operations personnel documenting the formal release of safety related equipment for maintenance and the formal return of the equipment following post-maintenance checkout; appropriate procedures, instructions/documents being specified or referenced especially in the area of post-maintenance testing.

In addition, it was observed that the PORC Meeting Minutes recorded the completion of repacking NG080 Recirculation Pump Discharge Bypass Valve during the June 13-16, 1978 outage. However, no Job Order was initiated to document the conduct of this maintenance activity.

The failure to properly classify safety related maintenance activities and to document a safety related maintenance activity on a Job Order form represents noncompliance with TS 6.8.1 and Administrative Procedure 105, paragraph 4.1 and paragraph 2 to Appendix B of this procedure (219/78-19-01).

- d. The below listed observations were made in the area of procedural and post-maintenance check out requirements of ANSI 18.7-1972, paragraph 5.3.5 and 10 CFR 50 Appendix B, Criterion XVII.
- Several Job Orders did not reference vendor manuals, plant procedures, drawings, and other sources, as applicable, for the performance of maintenance. This was noted for the following Job Orders: 420M, 982M, 367I, 1266M, and 757M.
  - Many Job Orders did not include or reference instructions for returning the equipment to its normal operating status, such as, post-maintenance testing or applicable surveillance/operability checks. This was noted for the following Job Orders: 420M, 982M, 367I, 1266M, 757M, 189E, 522I, 337E. Of these, test results were not documented for Job Orders 420M, 982M, and 522I. However, it appeared to the inspector adequate testing was indeed accomplished for all cases despite the documentation problems noted above.
  - Several Job Orders were delayed in the routing process from the time operating personnel placed equipment into operation to the time operating personnel documented the functional acceptability of the equipment. The delays ranged from one day to two weeks and were attributed to Quality Assurance (QA) Department review time. This was noted for Job Orders: 420M, 367I, 1266M, 522I, 337E, and 1114M. Three other completed safety related Job Orders were in the QA Department at the time of the inspection pending review without Shift Foreman signature to document equipment functional acceptability.

Measures to prevent recurrence of these types of findings will continue to be reviewed by NRC:RI along with Noncompliance 219/77-24-04 (see paragraph 2).

- e. The below listed observations were made in the area of identification and control of materials, parts, and components (ANSI 18.7-1972, paragraph 5.3.9 and 10 CFR 50 Appendix B, Criterion VIII).



- None of the Job Orders reviewed, which involved the replacement of safety related parts, documented a part number, serial number or internal identification number which could be traced to records assuring the quality of the part installed into the plant. A review of the Licensee Inspection Release Log and QASL Traceability File indicated the existence of such records. In all cases, a correlation of job completion date versus issue date was needed yet uncertainty remained with respect to a specific part being used in a specific maintenance activity.
- A few Job Orders involved the use of spare parts<sup>7.</sup> which were under the custody of the individual maintenance shops. The Job Orders were: 420M, 982M, 367I, and 189E. These spare parts were either generated from the plant as refurbished parts or were issued by the site warehouse well in advance (up to 6 months) of the job order initiation date. In general this type of spare part is not identified as "ready for use" while in shop storage.

Measures to prevent recurrence of these types of findings continues to be reviewed by NRC:RI along with Noncompliance 219/77-24-05 (see paragraph 2).

#### 5. Maintenance Personnel Qualifications

The inspector reviewed the qualification records of selected technicians and craft personnel who performed maintenance on safety related systems, and components to verify that the individual's experience level and training were in accordance with the guidelines of ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel, Section 4.

#### 6. Administrative Controls for Surveillance Procedures

The inspector performed an audit of the licensee's administrative controls by conducting a sampling review of the below listed administrative procedures with respect to the requirements of the Technical Specifications, Section 6, "Administrative Controls," ANSI N18.7 "Administrative Controls for Nuclear Power Plants" and Regulatory Guide 1.33 "Quality Assurance Program Requirements."

- Procedure No. 107, Procedure Control, Revision 10, June 26, 1978.
- Procedure No. 116, Surveillance Test Program Schedule and Review of Test Results, Revision 2, November 8, 1976.
- Procedure No. 106, Conduct of Operations, Revision 0, December 22, 1977.
- Procedure No. 2005, Generation Department Document Retention System, Revision 0, July 15, 1974.

No items of noncompliance were identified.

7. Surveillance Testing

- a. The inspector reviewed surveillance tests on a sampling basis to verify the following.
  - Tests required by Technical Specifications are available and covered by properly approved procedures.
  - Test format and technical content are adequate and provide satisfactory testing of related systems or components.
  - Test results of selected tests are in conformance with Technical Specifications and procedure requirements have been reviewed by someone other than the tester or individual directing the test.
- b. The following surveillance tests were reviewed to verify the items identified above:
  - Procedure No. 609.4.001, Isolation Condenser Valve Operability Test, Revision 0, September 7, 1977. Data were reviewed for tests performed August 3, 1978, July 6, 1978, June 8, 1978, May 11, 1978, and April 13, 1978.
  - Procedure No. 619.3.015, Condenser Low Vacuum Surveillance Test, Revision 0, September 23, 1977. Data were reviewed for test performed July 25, 1977.

- Procedure No. 702.1.005, Reactor Safety Valve Installation, Revision 4, December 9, 1977. Data were reviewed for surveillances performed July 12, 1977 and February 26, 1976.
- Procedure No. 607.4.001, Containment Spray and Emergency Service Water Pump Operability Test, Revision 4, May 11, 1978. Data were reviewed for tests performed August 17, 1978, July 20, 1978, June 22, 1978, May 25, 1978, and April 27, 1978.
- Procedure No. 1001.12, Power Distribution, Revision 4, November 21, 1977. Data were reviewed for surveillances performed August 17, 1978, July 25, 1978, July 6, 1978, June 16, 1978, June 1, 1978.
- Procedure No. 617.4.002, CRD Exercise and Stall Flow Test, Revision 1, November 14, 1977. Data were reviewed for ten tests performed June 19, 1978 through August 21, 1978.
- Procedure No. 604.4.006, Torus to Drywell Vacuum Breaker Operability Test, Revision 1, January 20, 1978. Data were reviewed for eleven tests performed October 22, 1978 through July 4, 1978.
- Records of Diesel Generators Starting Batteries Weekly Surveillance Requirements performed July 7, 1978 through August 18, 1978.
- Records of Diesel Generators Starting Batteries Monthly Surveillance Requirements performed July 1978, June 16, 1978, May 16, 1978, April 12, 1978, and March 15, 1978.
- Records of Diesel Generators Starting Batteries Six Months Load Tests performed March, 1978, August, 1977 and September 1976.

c. As a result of the above review, the following items were identified.

- (1) The data sheet for surveillance procedure 607.4.001, Containment Spray and Emergency Service Water Pump Operability Test, provides for recording of the delta pressure across the heat exchanger between the service water and the containment spray water. The FSAR states the service water will be maintained at a higher pressure than the containment spray water. Delta pressure data for the tests reviewed do not indicate the proper delta pressure is being maintained. Pump discharge pressures, however, indicate the service water is being maintained higher than the containment spray water. In addition, no acceptance criteria has been included in the procedure for delta pressure. This item is unresolved pending the licensee's evaluation of this matter. (219/78-19-02)
- (2) Technical Specification 4.7.A.5 specifies the surveillance testing required for the Diesel Generator Starting Batteries. A review of uncontrolled data shows the required surveillances are being performed. However, implementing procedures for the performance of the surveillance tests had not been prepared. This is contrary to the requirements of Technical Specification 6.8 and is considered to be an item of noncompliance at the deficiency level. (219/78-19-03)

Note: Implementing procedures were prepared, reviewed and approved prior to the completion of the inspection.

- (3) Other matters discussed which are not items of noncompliance nor unresolved items, but which relate to surveillance testing, and do not appear to fully meet the intent of the surveillance program defined in administrative procedure 116 included the following.

-- Not all procedures used to satisfy surveillance test requirements are included in the master test schedule.

- Not all procedures used to satisfy surveillance requirements have surveillance backsheets attached.
- Backsheets for procedure 617.4.002 are routinely checked completed satisfactorily when in fact the acceptance criteria (which appears to be outdated) is not met.

These matters will be reviewed during a future inspection.

8. Inspector Witnessing of Surveillance Test

- a. The inspector witnessed the performance of surveillance testing of selected components to verify the following.
  - Surveillance test procedure was available and in use.
  - Special test equipment required by procedure was calibrated and in use.
  - Test prerequisites were met.
  - The procedure was adequately detailed to assure performance of a satisfactory surveillance.
- b. The inspector witnessed the performance of Procedure No. 651.4.001, Standby Gas Treatment System performed August 22, 1978.

No items of noncompliance were identified.

9. Technician Qualifications

The inspector discussed the qualification records of one person having responsibility for surveillance testing of safety related components and equipment to verify that the individual's experience level and training were in accordance with the guidelines of ANSI N18.1-1971, Section and Training of Nuclear Power Plant Personnel.

No unacceptable items were identified.

10. Facility Tours

On several occasions during the inspection, tours of the facility were conducted of the reactor building, auxiliary building, and the diesel generator building. During the tours, the inspectors discussed plant operations and observed housekeeping, radiation control measures, monitoring instrumentation, and controls for Technical Specification compliance. In addition, the inspector observed control room operations for control room manning, and facility operation in accordance with administrative and Technical Specification requirements.

No items of noncompliance were identified.

11. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, an item of noncompliance, or a deviation. An unresolved item discussed during the inspection is discussed in Paragraph 7.c(1).

12. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 25, 1978. The purpose, scope and findings of the inspection were summarized.