

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

IE Inspection Report No: 50-219/75-18 Docket No: 50-219

Licensee: Jersey Central Power and Light Company License No: DPR-16
Madison Avenue at Punch Bowl Road Priority: _____
Morristown, New Jersey 07960 Category: C

Location: Oyster Creek, Forked River, New Jersey Safeguards Group: _____

Type of Licensee: BWR (G.E.) 1930 MW(t)

Type of Inspection: Routine, Unannounced

Dates of Inspection: June 17-19, 1975

Dates of Previous Inspection: June 9-12, 1975

Reporting Inspector: *E. G. Greenman* 7/21/75
E. G. Greenman, Reactor Inspector DATE

Accompanying Inspectors: NONE _____ DATE
_____ DATE
_____ DATE

Other Accompanying Personnel: NONE _____ DATE

Reviewed By: *D. L. Caphton* 7/22/75
D. L. Caphton, Senior Reactor Inspector DATE
Reactor Operations Branch, OIE:I

B/882

SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

Infractions

1. Contrary to 10 CFR 50, Appendix B, Criterion XI, "Test Control" which requires a test program including documentation and evaluation of test results to assure that test requirements are satisfied and reference Technical Specification 3.3.B which requires that the reactor vessel head bolting studs shall not be under tension unless the temperature of the vessel head flange and the head are greater than or equal to 100°F, head torquing was performed during the interval May 12 - May 15, 1975 following an annual refueling outage without benefit of head flange temperature measurement and documentation of head temperature measurements. (Details, Paragraph 6.a)
2. Contrary to Technical Specification 3.5.A.5 which requires primary containment atmosphere to be reduced to less than five (5) percent within 24 hours after the reactor mode switch is placed in the run mode, on June 15, 1975; the O₂ analyzer indicated the drywell content was five and one half (5.5) percent at 11:30 p.m., which was 24 hours after the mode switch had been placed in run, and indicated values remained in excess of five (5) percent until 11:51 p.m. June 15, 1975. (Details, Paragraph 8)

Deficiencies

1. Contrary to 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings", and Administrative Procedure No. 101, Revision 2, dated February 10, 1975 related to initialing of log book entries and shift turnover responsibility, the following examples of failure to follow procedures were identified:
 - a. Shift Foreman's Log entries on April 25 and June 1, 1975.
 - b. Control Operator's log entries on April 9 and April 12, 1975.

(Details, Paragraph 4.c)

B. Deviations

None Identified

Licensee Action on Previously Identified Enforcement Items

1. Technical Specification 6.1.C.1.g and Administrative Procedure 102.8 - PORC review of status and applicability of standing orders quarterly (IE Inspection 50-219/75-04 dated February 27, 1975) - PORC minutes reviewed indicated current quarterly review is being performed. Corrective action was verified as described in the licensee's letter to IE:I dated March 24, 1975. (Details, Paragraph 2.a)

Design Changes

Not Inspected

Unusual Occurrences

The following Abnormal Occurrences were reported by the licensee since the last inspection and were reviewed by the inspector. Comments concerning specific areas are noted within this report.

- A. Containment Spray Pump 51A failed to start in automatic mode during surveillance.¹
- B. Unplanned insertion of control rod due to malfunction in Reactor Manual Control System caused APLGHR limit for fuel types III E and III F to be exceeded for about 14 minutes.²
- C. Containment Spray Pump 51A failed to start in automatic mode during surveillance.³
- D. Stack gas sample pump inoperability and failure to continuously monitor stack releases for about one minute.⁴
- E. Power operation with four (4) Type II fuel assemblies in excess of maximum allowable average linear heat generation rate.⁵
- F. Electrical fault on 1C bus and trip of 1C breaker.⁶

¹ JCP&L letter to IE:I dated February 11, 1975, Subject AO 75-3

² JCP&L letter to IE:I dated March 3, 1975, Subject AG 75-4

³ JCP&L letter to IE:I dated March 6, 1975, Subject AO 75-5

⁴ JCP&L letter to IE:I dated March 11, 1975, Subject AO 75-6

⁵ JCP&L letter to IE:I dated March 26, 1975, Subject AO 75-8

⁶ JCP&L letter to IE:I dated March 31, 1975, Subject AO 75-9, and

Details 9

- G. Excessive leakage rate through reactor building to torus vacuum breaker valves V-26-16 and V-26-18.⁷
- H. Leakage of the main steam line drain and bypass line in excess of the 5 percent lto allowable for any one penetration or isolation valve.⁸
- I. Two of four low reactor pressure core spray valve permissive pressure switches tripped below minimum required values.⁹
- J. One of four time delay relays associated with reactor high pressure isolation condenser initiation sensors failed to de-energize.¹⁰
- K. Emergency Service Water Pump 1-2 failed to develop adequate discharge pressure.¹¹
- L. Peaking factors in one core location and APRM scram and rod block settings not in accordance with required values.¹²

Other Significant Findings

A. Current Findings

1. Acceptable Areas

These are areas which were inspected on a sampling basis and findings did not involve an Item of Noncompliance, Deviation, or an Unresolved Item.

- a. Organization and Administration. (Details, Paragraph 2)
- b. Logs and Records. (Details, Paragraph 3)
- c. Operations. (Details, Paragraphs 4.a and 4.b)
- d. Procedures. (Details, Paragraph 5)
- e. Miscellaneous. (Details, Paragraphs 11.a, b and d)

⁷ JCP&L letter to IE:I dated April 7, 1975, Subject AO 75-10
⁸ JCP&L letter to IE:I dated April 11, 1975, Subject AO 75-11
⁹ JCP&L letter to IE:I dated April 28, 1975, Subject AO 75-12
¹⁰ JCP&L letter to IE:I dated May 7, 1975, Subject AO 75-13
¹¹ JCP&L letter to IE:I dated May 30, 1975, Subject AO 75-14
¹² JCP&L letter to IE:I dated June 2, 1975, Subject AO 75-15

2. Unresolved Items

(These are items for which more information is required in order to determine whether the items are acceptable or Items of Noncompliance).

- a. Setpoint repeatability. (Details, Paragraph 7.a)
- b. Followup testing - Isolation Condenser time delay. (Details, Paragraph 7.b)
- c. Electrical fault on 1C bus and Diesel Generator No. 1 Breaker - laboratory analysis and licensee investigation. (Details, Paragraph 9)
- d. Stack Gas Sample System Modification. (Details, Paragraph 10)

3. Infractions and Deficiencies Identified by Licensee

Contrary to Technical Specifications Paragraph 3.10 Average Planar Linear Heat Generation Rate Limits for fuel types III-E and III-F were exceeded for approximately 14 minutes (JCP&L letter to Division of Reactor Licensing dated March 20, 1974, Subject AO 75-4).

Contrary to Technical Specifications, Paragraph 3.6.A.3 stack releases were not continuously monitored for approximately one minute (JCP&L letter to Division of Reactor Licensing dated March 19, 1975, Subject AO 75-6).

Contrary to Technical Specifications, Paragraph 3.10.A Average Linear Heat Generation rate of four fuel bundles was exceeded. (JCP&L letter to Division of Reactor Licensing dated April 3, 1975, Subject AO 75-8).

Contrary to Technical Specifications, Paragraph 3.5.A.1 Reactor Building to torus vacuum breaker valves V-26-16 and V-26-18 had leakage rates in excess of specified values. (JCP&L letter to Division of Reactor Licensing dated April 14, 1975, Subject AO 75-10).

Contrary to Technical Specifications, Paragraph 4.5.F.1.d leakage of the main steam line drain and bypass line was in excess of allowable for any one penetration or isolation valve. (JCP&L letter to Division of Reactor Licensing dated April 18, 1975, Subject AO 75-11).

Contrary to Technical Specifications, Paragraph 3.1.1.D.3 two of four low reactor pressure core spray valve permissive pressure switches tripped at less than required values. (JCP&L letter to Division of Reactor Licensing dated May 6, 1975, Subject AO 75-12, Details, Paragraph 7.a).

Contrary to Technical Specifications, Paragraph 2.3.5 and Table 3.1.1.C.2 one of four time delays associated with reactor high pressure isolation condenser initiation sensors, failed to deenergize. (JCP&L letter to Division of Reactor Licensing dated May 14, 1975, Subject AO 75-13, Details, Paragraph 7.b).

Contrary to Technical Specifications, Paragraphs 2.1.A.1, 2.3.1.a and 2.3.2.a the total peaking factor in core location 27-18 (including performance of three additional symmetrical bundles) exceeded limits and APRM Scram and rod block settings were in excess of required values. (JCP&L letter to Division of Reactor Licensing dated June 6, 1975, Subject AO 75-15).

B. Status of Previous Unresolved Items

The following items are considered resolved.

1. RWP distribution requirements - procedural incorporation (Reference IE Inspection Report 50-219/75-04 dated February 27, 1975, and Details, Paragraph 5).
2. FW pump trip February 4, 1975 (Reference IE Inspection Report 50-219/75-05 dated February 21, 1975 and Details, Paragraph 4.b)

Other unresolved items which remain unresolved are as described in the management interview and Details 2, 5, and 11.c of this report.

Management Interview

A management interview was conducted on June 19, 1975, with Mr. J. T. Carroll, Station Superintendent and Mr. D. Reeves, Chief Engineer. Mr. D. A. Ross, Manager Nuclear Generating Stations participated via telephone intercom. Inspection results were further discussed with Mr. Carroll via telephone on July 14, 1975. Items discussed are summarized below:

A. General

The inspector summarized the scope of the routine unannounced inspection relative to a review of plant operations, organization and administration, facility logs and records including PORC minutes, abnormal occurrence review, observation of spent fuel shipment operations, facility tour, status of chromate water storage on site, a review of janitorial contract services in use at the facility and review of licensee's corrective action with respect to previously identified items of noncompliance.

B. Status of Previously Identified Enforcement and Unresolved Items

1. RWP Distribution Requirements (IE Inspections 50-219/74-16 dated November 22, 1974 and 50-219/75-04 dated February 27, 1975)

The inspector stated that he had reviewed Procedure No. 903, Revision dated January 29, 1975, with respect to incorporation of RWP posting requirements and that there were no further questions concerning this matter. (Details, Paragraph 5)

2. PORC Review of Standing Orders on a Quarterly Basis (IE Inspection 50-219/75-04)

The inspector stated that a review of PORC minutes No. 28-75 indicate that the reviews were now being conducted and that there were no further questions concerning this matter. (Details, Paragraph 2.a)

3. Cooldown Limits (IE Inspection 50-219/74-18 dated December 26, 1974)

The inspector stated that pending incorporation of instructions into applicable operating procedures, this item remains unresolved.

C. Document Control

The inspector discussed the status of Procedure No. 103 "Document Control".

A licensee representative stated that this procedure had not yet been issued and that the licensee was currently involved in utilization of the Generation Department procedure with respect to this area. The licensee representative also referenced status of the Information Retrieval System which will involve work at the staff level first and then implementation at the site.

D. Enforcement Action

The items listed under enforcement action above were identified as apparent items of noncompliance. (Details, Paragraphs 4.c, 6.a and 8)

DETAILS

1. Persons Contacted

Mr. D. A. Ross, Manager, Nuclear Generating Stations
Mr. J. T. Carroll, Station Superintendent
Mr. D. L. Reeves, Chief Engineer
Mr. J. L. Sullivan, Jr., Operations Engineer
Mr. R. F. Swift, Maintenance Engineer
Mr. E. I. Riggle, Maintenance Supervisor
Mr. E. J. Gowney, Technical Engineer
Mr. J. Maloney, Operations Supervisor
Mr. E. D. Skalsky, Radiation Protection Supervisor
Mr. J. E. Menning, Staff Engineer
Mr. K. O. E. Fickeissen, Technical Supervisor
Mr. T. L. Johnson, Instrument and Electrical Foreman - Nuclear

2. Organization and Administration

a. Plant Operations Review Committee Meetings

The PORC met on the following dates and the minutes were reviewed by the inspector. No inadequacies were identified.

<u>Meeting No.</u>	<u>Date</u>
13-75	March 4, 1975
14-75	March 5, 1975
15-75	March 6, 1975
16-75	March 11, 1975
17-75	March 13, 1975
18-75	March 21, 1975
19-75	March 26, 1975
20-75	March 27, 1975
21-75	March 28, 1975
22-75	April 1, 1975
23-75	April 3, 1975
24-75	April 5, 1975
25-75	April 7, 1975
26-75	April 8, 1975
27-75	April 10, 1975
28-75	April 11, 1975
29-75	April 15, 1975

The inspector verified that for the 17 meetings reviewed, meeting frequency, meeting membership and quorum requirements and violations of Technical Specifications or rules and regulations were reviewed as required. The inspector also verified documentation that PORC had reviewed the status and applicability of Standing Orders during the 28-75 meeting held April 11, 1975. (IE Inspection 50-219/75-04 dated February 27, 1975). The inspector had no further questions concerning this item.

3. Logs and Records

The following logs and records were reviewed without comment except as noted elsewhere within this report.

- a. Shift Supervisor's Log Book - March 14 - June 15, 1975.
- b. Station Log Book - March 14 - June 15, 1975.
- c. Station Standing Orders Book Nos. 1-17.
- d. Shutdown Log Sheets - March 29 - June 14, 1975.
- e. Jumper and Tagging Procedures - March 1 - June 15, 1975.
- f. Facility Tour Check Off Sheets - March - May, 1975.
- g. Technical Specification Log Sheets - June 1 - June 15, 1975.
- h. PORC Meeting Minutes - March 4 - April 15, 1975.
- i. GORB Meeting Minutes - March 18, 1975.
- j. Oxygen Analyzer Charts - June 14-16, 1975.

4. Operations

The inspector reviewed operating logs and records and held discussions with various operations personnel. A facility tour was conducted and the inspector additionally observed spent fuel shipment operations in progress.

a. Facility Status

The reactor was operating at a nominal 531 MWe during this inspection. Representative stack gas and offgas release rates were 9,300 $\mu\text{Ci}/\text{second}$ and 243,000 $\mu\text{Ci}/\text{second}$ respectively. Discussion with licensee representatives indicated that more restrictive operating limits with respect to the Cycle V Core would constitute approximately a 15-20 percent derate based on current operating experience. No scheduled shutdowns had been planned at the conclusion of this inspection.

b. Unscheduled Shutdown February 4, 1975*

The licensee's investigation as documented in General Office Review Board (GORB) meeting Minutes No. 57, dated March 18, 1975, indicated that the cause of the reactor scram on loss of all feedwater pumps was due to a backwashing operation of a radwaste floor drain filter through radwaste accompanied by air intake back into the plant via feedwater pump suction. Backwashing apparently resulted in a vent path to the floor drain which permitted air to be drawn into the feed pumps, which resulted in a trip upon low suction pressure.

The licensee has changed the operating procedures to provide assurance that simultaneous operations of backwashing and cycling of water from radwaste to the plant will not occur. This item is considered resolved.

c. Log Book Review

Station and Shift Foreman Logs were reviewed for the period March 14 - June 15, 1975. Log requirements are delineated in Administrative Procedure No. 101, Revision 2 dated February 10, 1975. Procedure No. 101 requires the following:

- (1) The Shift Foreman shall initial the Shift Foreman's Log noting the date and time of turnover, when assuming shift responsibilities. (Section 6.2)
- (2) All oncoming licensed Control Room Operators shall initial a statement at the beginning of their shift log to the effect that they have assumed responsibilities of the shift. The inspector's review indicated the following examples of inadequate entries with respect to turnover and initialing:
 - (a) Shift Foreman's Log - April 25 and June 1, 1975.
 - (b) Station Log - April 9 and April 12, 1975.

These examples as listed under Enforcement Action constitute an apparent Deficiency level Item of Noncompliance.

* IE Inspection Report 50-219/75-05 dated February 21, 1975, Details 3.

5. Procedures

Personnel Protection and Control*

The inspector reviewed Procedure No. 903, Revision 6 dated January 29, 1975, which clarifies distribution of Radioactive Work Permits. Procedural requirements state that when it is unreasonable to post the RWP in the vicinity of the job site (Example: Outside the Radwaste Building) it shall be posted at an alternate location: (Example: Inside Radwaste Building Control Room), and that upon completion of the job the copy from the job site shall be returned to the Radiation Protection Department for deposition. The inspector had no further questions concerning this item at this time.

6. Reactor Coolant System

a. Reactor Vessel Head Boltdown

Review of Shutdown Logs related to refueling and operating logs indicated vessel head torquing commenced May 12, 1975, and was completed May 15, 1975. Vessel temperature on May 12 was recorded between 100° - 140°F and according to licensee representatives, torquing of the head commenced on the 4-12 p.m. shift, which indicated vessel temperatures in excess of 100°F as measured from the "B" shutdown cooling loop. No documentation was available to demonstrate that required temperature measurements had been completed. A cognizant licensee representative apprised the inspector that measurements were made to verify head temperature, however, flange verification had not been completed. 10 CFR 50 Appendix B, Criterion XI, requires a test program, including documentation and evaluation of test results to assure that test requirements are satisfied and reference Technical Specification 3.3.B which requires that the vessel head bolting studs shall not be under tension unless the temperature of the vessel head flange and the head are greater than or equal to 100°F. This item as listed under Enforcement Action constitutes an apparent Infraction level Item of Noncompliance.

* IE Inspection Report 50-219/75-04 dated February 27, 1975.

7. Reactor Protection System

- a. Low Reactor Pressure Core Spray Valve Permissive
(AO 75-12 dated May 6, 1975)

The licensee has increased the required quarterly surveillance to a monthly test frequency. Corrective action is incomplete with respect to elimination of setpoint repeatability difficulty. This item is considered unresolved.

- b. Isolation Condenser Initiation (Time Delay)
(AO 75-13 dated May 14, 1975)

Records of satisfactory followup testing were not available for inspector review. This item is considered unresolved.

8. Containment

Drywell Oxygen Concentration

An unscheduled shutdown occurred on June 12, 1975, to locate the source and effect repairs for increasing unidentified leakage which was subsequently determined to be leakage from the North, F.W. loop check valve. The inspector reviewed the Shift Foremans and Station Log Book. Findings indicated that the reactor mode switch had been placed in Run at 11:30 p.m., June 14, 1975. The licensee commenced inerting on June 15, 1975, with a nitrogen delivery scheduled to arrive at 3:00 p.m. June 15, 1975. Due to delays in truck arrival; additional nitrogen was not on site until 8:50 p.m., June 15, 1975. Records reviewed indicated that inerting was immediately resumed. The licensee also performed Oxygen Analyzer surveillance at 10:20 p.m., June 15, 1975, to verify reading accuracy. At 11:30 p.m. June 15, 1975, indicated torus oxygen concentration was below 5 percent as determined from a review of the analyzer chart for the involved interval. Indicated drywell concentration was 5.5 percent and in excess of values specified in Technical Specification 3.5.A.5. The indicated readings demonstrated compliance with Technical Specification 3.5.A.5 at 11:51 p.m., June 15, 1975, 21 minutes after oxygen concentration was required to be less than 5 percent.

The licensee had performed prior testing related to the torus in 1974, and concluded that with the system under a vacuum, air

leakage is present which dilutes the sample stream sufficiently to increase indicated oxygen concentration. The inspector was also informed that vacuum pump seals were not replaced during the 1975 outage. Subsequent testing conducted June 16, 1975, with the sample pump on resulted in a concentration reading of 3.7 percent versus a concentration reading of 2.1 percent obtained with the pump secured. This failure to maintain oxygen concentration at less than five percent for the referenced interval as indicated by plant instrumentation and supported by instrument surveillance as listed under Enforcement Action constitutes an apparent Infraction level Item of Noncompliance.

9. Emergency Power

Electrical Fault on 1C Bus and Trip of 1C Breaker (AO 75-9 dated April 18, 1975)

The inspector reviewed test data with a cognizant licensee representative. The breaker trip was due to a fault disclosed in the cable tie between the 1C bus and the Diesel Generator No. 1 breaker. The inspector also examined sections of the failed cable. High potential testing was performed on April 11 and April 14, 1975. The inspector was apprised that some moisture was found in the cable conduit. The licensee's corrective action was not completed and the failed section of the cable had not been sent to a laboratory for analysis at the conclusion of this inspection. This item is considered unresolved.

10. Radioactive Waste Systems

Stack Gas Sample System (AO 75-6 dated March 10, 1975)

The licensee has initiated a engineering request to modify the electrical circuit for the stack gas sample pumps. Corrective action was incomplete and separate breakers had not yet been installed. This item is considered unresolved.

11. Miscellaneous

a. Contract Custodial Service

The inspector reviewed the responsibilities and status of the janitorial service utilized at the Oyster Creek site.

Documentation reviewed indicated that a contract has been in effect since June 1, 1973, which provides for cleaning of selected facility areas by outside personnel, and which normally involves two to three custodians on a five day work week schedule. The inspector also reviewed the contractor provided screening process as described by letter to the licensee dated April 24, 1973, JCP&L Security Screening, HP orientation provided for two custodians, February 13, 1975, badging requirements, designation of work area responsibility, and disposal of clean waste. No inadequacies were identified in the scope of the sampling audit performed.

b. Settlement of Class I Structures

The inspector apprised a licensee representative concerning reports of differential settlement of certain facilities. A licensee representative stated that initial elevation readings were made during the construction phase and that targets were in place. According to the licensee, elevations have not been monitored and compared with initial data, subsequent to operation. No excessive settling had been identified by the licensee.

c. Chromate Water Storage Status*

Discussion with licensee representatives indicated that one additional trailer tank has been released and removed from the site. 12 tank trucks remain empty, and one tank contains sludge material. Two additional tanks utilized for temporary storage will remain on site. Processing of permanently stored chromate water including 24,000 gallons located in fiber glass tanks and 50,000 gallons in bladder torus storage remains outstanding. The chromate processing system has been relocated and new resin and charcoal were on hand. The licensee projected system processing would be resumed by July 1, 1975. This item remains unresolved pending completion of the licensee's processing and removal of temporary storage tanks.

d. Bank Stabilization Program

The inspector verified that the licensee's bank stabilization program had been completed.**

* IE Inspection Report 50-219/75-01, dated February 28, 1975, Details 8.c.

** IE Inspection Report 50-219/75-08, dated April 8, 1975, Details 10.