

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

IE Inspection Report No: 50-219/75-26

Licensee: Jersey Central Power and Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Location: Forked River, New Jersey

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

Type of Inspection: Routine, Unannounced

Dates of Inspection: November 17-21, 1975

Dates of Previous Inspection: November 12-13, 1975

Reporting Inspector: Edward M. Greenman
E. G. Greenman, Reactor Inspector

Accompanying Inspectors: William J. Raymond
W. Raymond, Reactor Inspector

Other Accompanying Personnel: None

Reviewed By: R. C. Haynes
R. C. Haynes, Section Leader, Reactor Construction
and Engineering Support Branch

Docket No: 50-219

License No: DPR-16

Priority: -

Category: C

Safeguards Group: -

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SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

1. Infractions

- a. Contrary to 10 CFR 50.59, "Changes, Tests and Experiments," 10 CFR 50, Appendix B, Criterion V, the OQAP and reference Procedure 105, "Maintenance, Repair and Modification Control," and/or Procedure 2006, "Modification, Nonroutine Maintenance and Repair," two penetrations providing cable runs for computer banks were drilled adjacent to the reactor control room and into the cable spreading room, a vital area, without required design review and written safety evaluation or formal work authorization on or about November 1, 1975. (Details 6.c)
- b. Contrary to Technical Specification 6.2.A.1 and 6.2.C and Operating Procedure 304, Revision 0 issued January 22, 1975, SBLC valve V-19-24 was observed not locked as required and was additionally verified by the cognizant shift foreman to be in the open position whereas procedure 304 requires the referenced valve to be closed and locked.

We note that corrective action was taken in that the valve was restored to its proper position, locked, and a revised valve line up checklist was completed November 20, 1975. (Details 11)

- c. Contrary to 10 CFR 50, Appendix B, Criterion II, "Quality Assurance Program," the implementing provisions of the Oyster Creek Operational Quality Assurance Plan, Section II, (Reference JCP&L letter to Division of Reactor Licensing dated May 2, 1974) and ANSI N45.2.3-1973, Section 3.2.3, "Fire Protection and Prevention," fire watches had not been specified during and immediately following welding operations. Additionally, procedures do not specifically address the usage of combustible materials or special work controls to be effected during welding nor are provisions specified to provide portable or installed fire suppression equipment in work areas where welding or other ignition processes are conducted. (Details 4.b & 4.c)

2. Deficiencies

None

B. Deviations

None identified.

Licensee Action on Previously Identified Enforcement Items

Not inspected.

Design Changes

Cable Spreading Room Penetrations (Details 6.c)

Unusual Occurrences

The following Reportable Occurrences were reported by the licensee since the last inspection and were reviewed by the inspector.

- A. Three of four Reactor High Pressure sensors tripped in excess of the 1060 psig limit during surveillance.¹
- B. One High Drywell Pressure Switch associated with Core Spray actuation tripped in excess of the 2 psig limit during surveillance.²
- C. One isolation condenser steam line valve failed to close during surveillance.³
- D. Two of five Electromatic Relief Valve pressure switches tripped in excess of the 1070 psig limit during surveillance.⁴
- E. One Emergency Service Water Pump failed to automatically start during surveillance of Containment Spray System II.⁵
- F. Two of four Low Reactor Pressure Core Spray Valve permissive pressure switches tripped below the 285 psig limit during surveillance.⁶
- G. Alarm System II failed to annunciate when a torus to drywell vacuum breaker was opened during surveillance.⁷

- 1. JCP&L letter to Region I dated July 9, 1975, Subject 75-19.
- 2. JCP&L letter to Region I dated July 18, 1975, Subject 75-20.
- 3. JCP&L letter to Region I dated August 4, 1975, Subject 75-21.
- 4. JCP&L letter to Region I dated September 2, 1975, Subject 75-24.
- 5. JCP&L letter to Region I dated September 23, 1975, Subject 75-26.
- 6. JCP&L letter to Region I dated October 9, 1975, Subject 75-27.
- 7. JCP&L letter to Region I dated October 28, 1975, Subject 75-29.

Other Significant Findings

A. Current Findings

1. Plant Status

The reactor was operating at a nominal 1,868 MW(t) - 540 MW(e). Representative stackgas and offgas rates were 10,700 microcuries per second and 260,000 microcuries per second respectively. Licensee has scheduled a six to seven week outage commencing December 27, 1975 to replace condenser tubes and refuel 10 percent of the reactor core.

2. Acceptable Areas

- a. Organization and Administration (Details 2)
- b. Logs and Records (Details 3)
- c. Work Control Procedures for Ignition Sources (Details 4.a)
- d. Quality Assurance Surveillance (Details 5)
- e. Design Change Control (Details 6.a & 6.b)
- f. Fire Training, Procedures and Drills (Details 7)
- g. Emergency Shutdown Procedures (Details 8)
- h. Fire Inspection Report (Details 9)
- i. Facility Inspection (Fire Protection and Prevention) (Details 10)
- j. Review of Plant Operations (Details 11)
- k. Nonroutine Event Review (Details 12)
- l. Primary System (Details 13)
- m. Reactivity Control and Core Physics (Details 14)
- n. Auxiliary Systems (Details 15)
- o. Electrical Systems (Details 16)
- p. Containment (Details 17)
- q. Emergency Core Cooling Systems (Details 18)
- r. Miscellaneous (Details 19)

3. Unresolved Items

a. Current Items

None

b. Status of Previously Reported Items

Not inspected.

4. Follow-up Items

These are items of inspector's concern which require additional evaluation and will be reviewed during a subsequent inspection.

a. Current Items

- 75-26-1 - Procedural coverage to address control of ignition sources, the use and control of combustible materials or special work controls to be effected during welding including usage of portable or installed fire suppression equipment. (Details 4.b)
- 75-26-2 - Administrative controls for review of all replacement cable penetration seals to assure flammable materials are not utilized. (Details 6.a)
- 75-26-3 - Issuance of revised Emergency Shutdown Procedures. (Details 8)
- 75-26-4 - Storage of combustibles in reactor building. (Details 19)

b. Prior Reported Follow-up Items

- 75-21-2 - Isolation Condenser Steam Leaks - Verification during facility tour indicated leak had been repaired and area decontaminated. The inspector had no further questions concerning this item. (Details 11.b)

5. Infractions and Deficiencies Identified by Licensee

- a. Contrary to Technical Specifications 2.3.3, Reactor High Pressure Sensors RE03A, B and D tripped in excess of 1060 psig during surveillance. (JCP&L letter to Division of Reactor Licensing dated July 17, 1975, Subject 75-19)
- b. Contrary to Technical Specifications 2.3.4, Electromatic Relief Valve Pressure Switches 1A83C and 1A83D tripped in excess of 1070 psig during surveillance. (JCP&L letter to Division of Reactor Licensing dated September 8, 1975, Subject 75-24)

- c. Contrary to Technical Specifications 3.1.1.D.3, Low Reactor Pressure Core Spray Valve Permissive pressure switches RE17B and D tripped below 285 psig during surveillance. (JCP&L letter to Division of Reactor Licensing dated October 17, 1975, Subject 75-27)

Management Interview

An exit interview was conducted on November 21, 1975 with Mr. J. T. Carroll, Station Superintendent; Mr. D. Reeves, Chief Engineer; Mr. J. L. Sullivan, Operations Engineer - Nuclear; Mr. E. Growney, Technical Engineer - Nuclear; Mr. E. Skalsky, Supervisor Radiation Protection; and Mr. B. Lang, Engineer II - Nuclear. Inspection findings were further discussed with Mr. D. A. Ross, Manager, Nuclear Generating Stations by telephone on December 15, 1975. Items discussed are summarized below:

A. General

The inspector summarized the scope of the routine unannounced inspection as related to a review of fire protection/prevention, including the licensee's responses to IE Bulletins 75-04 and 75-04A, plant operations including logs and records, direct observations, facility tours and discussions with operating personnel, reportable occurrence and nonroutine event review, safety limits, limiting safety system settings and limiting conditions for operations and administration and organization.

B. Housekeeping

The inspector discussed results of facility tours and referenced his understanding based on prior discussion that resins and condenser compounds in storage would be moved to a new warehouse building and that the licensee would consider usage of fire retardant paint for combustible crates and boxes in storage for any length of time.

A licensee representative concurred with the inspector's understanding. (Details 19)

- C. The inspector reviewed the scope of the Fire Protection and Prevention areas of the inspection, and stated that procedures reviewed to date did not specifically address control of ignition sources, use and control of combustible materials or work controls, nor were provisions established to provide portable or installed fire protection system equipment in areas where welding is conducted, or administrative controls established to review all replacement seals. The inspector also stated that fire procedures were non-specific with respect to the Cable Spreading Room and Control Room.

A licensee representative acknowledged the inspector's statements, (Details 4.b, 5.b. & 6.a)

D. Status of Emergency Shutdown Procedures

The inspector stated that Emergency Shutdown Procedures had been reviewed in draft form and requested a date when the revised procedures would be completed.

A licensee representative stated that the target date for completion was December 31, 1975. (Details 8)

E. The inspector discussed aircraft overflights and personnel exposures.

A licensee representative stated that the magnitude of aircraft overflights had been identified to corporate personnel and further stated that no overexposures had occurred.

Enforcement Action

Items as listed under Enforcement Action were identified as apparent items of noncompliance. (Details 4.c, 6.c and 11)

DETAILS

1. Persons Contacted

J. T. Carroll, Station Superintendent
D. L. Reeves, Jr., Chief Engineer - Nuclear Generation
J. Sullivan, Operations Engineer - Nuclear
J. P. Maloney, Supervisor Station Operations - Nuclear
R. F. Swift, Maintenance Engineer - Nuclear
E. I. Riggle, Supervisor, Station Maintenance - Nuclear
K. O. E. Fickeissen, Technical Supervisor - Nuclear
R. Dube, Site QA Supervisor
S. Fuller, Site QA Engineer
R. Mays, Group Operating Supervisor - Nuclear
T. Johnson, Electrical Foreman
B. Lang, Engineer II - Nuclear
R. Baran, Engineering Associate III - Nuclear
J. Young, Group Shift Supervisor - Nuclear
G. Hicks, Group Shift Supervisor - Nuclear
N. Cole, Group Shift Supervisor - Nuclear
H. Callahan, Nuclear Plant Control Room Operator
C. Silvers, Nuclear Plant Control Room Operator
B. Ard, Nuclear Plant Control Room Operator
A. Saharie, Safety and Security Department

2. Organization and Administration

a. Personnel Changes

The licensee has developed the following assignment areas.

- (1) Senior Administrator - Generation Technical Training. This area is now staffed with three personnel.
- (2) Supervisor - Generation Stores - Nuclear. This area has been staffed with three additional personnel.
- (3) Supervisor - Document Control. This area has been increased by six clerical personnel. The supervisor's position remains to be filled. The licensee's major emphasis at the time of this inspection was in the area of procedural control, drawing control, and the document control center.
- (4) Group Shift Supervision. The licensee is contemplating assignment of a sixth operating shift.

As of November 20, 1975, plant total staffing not including temporary employees was 183 personnel. The inspector verified for name changes that the licensee's onsite organization structure is as described in the Technical Specifications/or application. The inspector determined that authority and responsibilities are as described and that shift composition and requirements for licensed personnel met Technical Specification requirements. The licensee additionally has submitted changes to be reflected in Section 6 of the Technical Specifications. No inadequacies were identified.

3. Logs and Records

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

- a. Design Changes 1974 - 1975
- b. Jumper Installation & Removal Log - Current 1/75 - 11/75
- c. Feedwater Log Sheets 10/25 - 11/18/75
- d. Reactor Auxiliary Log Sheets 10/25 - 11/18/75
- e. Area Temperature Log Sheets 10/25 - 11/18/75
- f. Reactor Log Sheets 10/25 - 11/18/75
- g. Radwaste Logbook 10/18 - 11/18/75
- h. Job Orders 8/2 - 9/15/75
- i. Lifted Lead Log - Completed Entries Aug - 11/1/75
- j. Jumper Log - Completed Entries 4/75 - 11/1/75
- k. Caution Tags - Sampling Audit
- l. RPS Surveillance Sheets 1/75 - 11/75
- m. RCS Chemistry Sheets 1/75 - 11/75
- n. Emergency Diesel Generator Surveillance Sheets 1/75 - 11/75
- o. MSIV Daily Exercise Tests 8/75 - 11/75
- p. Station Log Book 8/15 - 11/4/75
- q. Shift Foreman's Log 8/15 - 11/18/75

4. Work Control Procedures for Ignition Sources

- a. The inspectors verified that there are work control procedures which define the requirements for operations personnel approval and control of modification and maintenance activities performed within proximity of safety related equipment. The subject procedures, No. 105 titled, "Maintenance, Repair and Modification Control" and No. 2006 titled, "Modification, Non-Routine Maintenance and Repair," are contained in the Oyster Creek Operational Quality Assurance Manual.

b. The inspectors verified that there were work control procedures that required special authorizations for activities involving welding, brazing and other special maintenance processes. The procedures include:

- (1) Procedure No. 105, titled, "Maintenance, Repair and Modification Control," which identifies Manager - Generation Maintenance is responsible for special welding, brazing etc. procedures.
- (2) Procedure No. 7006, titled, "Generation Maintenance Control of Special Processes."

The inspector noted that the procedures referenced above do not specifically address control of ignition sources, the use and control of combustible materials or special work controls to be effected during welding, nor are there provisions specified to provide portable or installed fire suppression equipment in work areas where welding or other ignition processes are conducted. Additionally, no specific precautions are given to ensure workers are cognizant of any nearby flammable materials, cable trays or other critical process equipment, as applicable. The failure to specifically address control requirements taken in conjunction with item 4.c below and as listed under Enforcement Action constitutes an apparent Infraction level Item of Noncompliance.

c. The inspectors also verified that there is no work control procedure that required the assignment of personnel whose sole temporary responsibility was to monitor construction, maintenance, or modifications other than Quality Assurance Surveillance requirements or which required that equipment be provided for communication with the control room, if an activity involving an ignition source is performed in the proximity of flammable material or safety related equipment. Maintenance, construction or modification procedures do not require designation of any individual to perform solely as a fire watch. Failure to specify fire watches during and immediately following welding operations is contrary to 10 CFR 50, Appendix B, Criterion II, "Quality Assurance Program," and Criterion V, Instructions, Procedures and Drawings," the implementing provisions of the Oyster Creek Operational Quality Assurance Plan, Section II, (Reference JCP&L letter to Division of Reactor Licensing dated May 2, 1974) and ANSI N45.2.3-1973, Section 3.2.3 "Fire Protection and Prevention." This item as listed under Enforcement Action with item 4.b above constitutes an apparent Infraction level Item of Noncompliance.

5. Quality Assurance Surveillance

a. Procedures

The inspector verified that quality assurance procedures have been established which require periodic audit of work authorizations for construction, modification, and maintenance activities to verify that operating personnel are controlling these activities.

The specific procedures included:

- (1) The Operational Quality Assurance Plan (OQAP) Section I, "Organization," Section II, "Quality Assurance Program," Section III, "Design Modification, Maintenance and Repair Control," Section X, "Inspection," and Section XVIII, "Audits."
- (2) Plant Procedure No. 105, Maintenance, Repair and Modification Control, Generation Department Procedure No. 2003, Modification Non-Routine Maintenance and Repair, QA Procedure 3007, Site Quality Assurance Review of Maintenance, Repair and Modification Procedures, Site Quality Assurance Preparation of Check Lists and Site Quality Assurance Product Verification Inspection SQAI-74-6-004.

b. Audits

The inspector verified that quality assurance surveillance is periodically performed during modification and maintenance activities to assure that they are authorized and that they conform with established plant controls. QA surveillance procedures were non-specific concerning ignition source control and fire watch adequacy. Procedures addressed conformance with established controls.

The records included:

- (1) Audit Nos. QAIR 74-402 and 74-403 on Fuel Pool Modifications.
- (2) Audit No. QAIR 74-37 and associated QA inspection reports on Job No. 50.
- (3) Audit No. QAIR 74-55 and associated QA inspection reports on Job No. 52.
- (4) Audit No. QAIR 74-336 and associated QA inspection reports on Job No. 48.

- (5) Audit No. QAR 74-84 and associated QA inspection reports on Job No. 8.
- (6) Audit No. QAR 74-345 and associated QA inspection reports on Job No. 9.

c. Replacement Seal Material and Testing

The inspectors verified that the licensee had confirmed that all safety related cable penetration seals are not flammable except as noted. GPU System Laboratory results dated July 1 and July 14, 1975 documented testing performed on KAOWOOL Glass Fibers and ISO foam which was consumed. This latter material is utilized on the outside of Reactor Building Cable Tray penetrations.

The tests were performed on the sealant material utilizing a modification of ASTM Standard D 635.

The inspector reviewed the general specification for replacement seal materials BISCO Specification SF-20. This material had been fire tested per ASTM E-119 and as confirmed by the licensee constitutes the replacement seal material to be utilized at Oyster Creek. The scope of replacement work to be completed was undefined as of the date of this inspection. This item will be reviewed during a subsequent inspection.

The inspector reviewed test results for KAOWOOL (Sample No. 17198) dated April 16, 1975. Testing was performed utilizing a modified version of ASTM D 635. Results indicated the insulation was not touched by flame.

6. Design Change Controls

a. Administrative Controls

The licensee had not, as of the date of this inspection, imposed administrative controls requiring review of all replacement cable penetration seals to assure flammable materials are not used. Pre-engineering evaluation for available sealing materials for penetrating seals has been completed and addresses foamed in place Silicon Rubber as sealant. Additional documentation included NELPIA file No. N-132 and Engineering Evaluation No. 112-75-1, Sealing Materials for penetration seals.

b. Design Change Requests

The inspectors reviewed the design changes to safety related systems approved during the preceding 12 months. Replacement cable penetrations were not addressed in design changes reviewed, except as noted in Details 6.c. A cognizant licensee representative stated that no penetrations had been sealed. Prior penetration sealants were reported by the licensee to be completed utilizing KAOWOOL.*

c. Cable Spreading Room Penetrations

During conduct of facility tours, the inspectors observed two new cable penetrations in the Cable Spreading room above and adjacent to cable trays which included rodworth minimizer-cables. The penetrations were observed to be sealed with KAOWOOL and were completed according to a licensee representative on or about November 1, 1975, to house computer cables. The penetrations terminated at the observation room adjacent to the reactor Control Room. No documentation was available to indicate that records of changes including a written safety evaluation had been completed as required by 10 CFR 50.59. Additionally, requirements of 10 CFR 50, Appendix B, Criterion V were not satisfied, reference Procedures 105, "Maintenance Repair and Modification Control" and/or Procedure 2006, "Modification, Non-Routine Maintenance and Repair." This item as listed under Enforcement Action constitutes an apparent Infraction level Item of Non-compliance.

7. Fire Training Procedures and Drills

a. Procedures

The inspector verified that fire drills are conducted periodically as required by Plant Procedure No. 905.32, "Fire Drill," dated May 9, 1975. The procedure requires that fire drills be conducted at least once every six months and that each operating shift and normal day time complement perform in the drill at least once every year.

Additionally, the inspector verified that general procedures exist for responding to a fire as given in Emergency Procedure 526, "Fire Plan," dated January 17, 1969 and Procedure No. 905.7, "Fires" dated May 30, 1975. These procedures address the automatic equipment action that will occur and the immediate and

* IE Inspection Report 50-219/75-13, Details 3.b.

follow-up actions required by plant personnel in response to a fire. The procedures describe the duties and responsibilities assigned to the Control Room operator, the shift foreman, the fire brigade and the radiation protection personnel.

At the time of the inspection, no procedures were available to the inspector which would address fire fighting for specific vital areas in the plant, such as the Control Room and the Cable Spreading room.

b. Drills and Training

The inspector verified that fire drills and fire fighting training were conducted periodically. The verifying records included:

- (1) Three Fire Drill Reports dated 10/8, 10/15 and 11/6/75 which documented the sequence of events along with an evaluation of the fire drills held at the facility. The fire drill reports documented the responses of the facility fire brigade and the normal operating shift personnel to simulated fires at several plant locations, including the cable spreading room. The licensee stated that all operating shifts will have performed in a fire drill by the end of December, 1975.
- (2) Memos and training schedules supplied by the licensee's training specialist for fire fighting training courses conducted at the Monmouth County Fire and Police Academy, U.S. Military Sealift command in Howell, New Jersey. The courses scheduled during the months of October and November, 1975 provided training for the plant fire brigade as well as operations personnel.
- (3) During the inspection the inspector observed a portion of a training class held at the facility on November 18, 1975. The class covered instructions on the use of Scott Air Pacs for nine members of the plant personnel prior to their use of the air pacs in an actual fire fighting training session.

8. Emergency Shutdown Procedures

- a. The inspector verified that there were plant emergency procedures that provided alternate methods for accomplishing an orderly plant shutdown and cooldown in case of loss of normal coolant supply systems. Decision criteria for the mode of shutdown are contained in the procedures. The procedures for Emergency Shutdown do not specify the sequence of alternate cooling mechanisms to be used.*

* Licensee's response to IE Bulletins 75-04 and 75-04A dated April 24, 1975.

The procedures included

- (1) Emergency Shutdown from Power, Procedure No. 206
- (2) Isolation Scram, Procedure No. 206
- (3) Pipe Rupture, Procedure No. 516
- (4) Loss of electrical power, No. 502

Revised procedures are in draft form and are currently undergoing review and revision by the licensee, as documented in the licensee's letter to Region I dated April 24, 1975. The inspector reviewed a draft emergency procedure being prepared by the licensee which will specify the sequence of alternate cooling mechanisms to be used in the event of a loss of normal and preferred alternate cooling systems.

9. Fire Inspection Report

The inspectors examined the most recent plant fire inspection report, No. N-132 (74-3) dated March 18, 1975. This report was prepared by the Nuclear Energy Liability/Property Insurance Association. Subsequent inspections have been conducted by the GPU Fire Task Force on May 1-2, 1975, report dated May 13, 1975 and by Factory Mutual Insurance on September 9, 1975. The inspectors were apprised that the test report was not yet issued. Additionally, the Frank B. Hall Company performed an inspection June 30, 1975, consisting of Cable Room, Switchgear Room, Battery and Control Room areas. The following areas of concern in the reports, related to storage of combustibles, cable spreading room seals 460-V, switchgear room seals, and Control Room, Cable Spreading Room and Battery Room fixed system of fire protection were reviewed in detail. Additional areas related to fire protection status were resolved by the licensee, or in progress at the time of this inspection.

The inspector determined that corrective action had been scheduled for each area as documented by review of the Oyster Creek Status Report - Fire Protection dated November 15, 1975:

- a. Storage of sealing compounds, fifty percent complete and in progress.
- b. Cable Spreading Room fixed fire protection system. A proposal for installation of a system utilizing Halon 1301 or equivalent was submitted to PORC on September 12, 1975 and to GORB on September 17, 1975.

- c. Control Room fixed fire protection system. A proposal for installation of a system utilizing Halon 1301 or equivalent was submitted to PORC on September 12, 1975 and to GORB on September 17, 1975.
- d. Battery Room fixed fire protection system. An engineering request for installation of a system utilizing Halon 1301 or equivalent was submitted to Generation Engineering.
- e. Sealing of all openings to the 460 V. Switchgear Room with BISCO SF-20 foamed in place silicone, or equivalent. A proposal has been submitted to the PORC on September 12, 1975 and to the GORB on September 17, 1975. Additionally, a contractor has been on site for preliminary surveys.
- f. Sealing of all openings to the Cable Spreading Room with BISCO SF-20 foamed in place silicone or equivalent. A proposal has been submitted to the PORC on September 12, 1975 and to the GORB on September 17, 1975. Additionally, a contractor has been on site for preliminary surveys.

10. Facility Inspection (Fire Protection and Prevention)

The inspectors examined the fire alarming and extinguishing equipment in the Control Room, Cable Spreading Room, Switchgear Rooms, diesel generator room and battery room. Emergency lighting systems for the Cable Spreading Room and Control Room were visually verified for operability.

The fire alarming and extinguishing equipment and their location included:

- a. Fire alarm activation - station - control room.
- b. CO₂ extinguishers (2) control room.
- c. Fire System Status and Annunciation - control room (Deluge* and Sprinkler) including:
 - (1) Recirculation M6 Set Room
 - (2) Seal Oil Unit Lift Pumps
 - (3) Turbine Room
 - (4) Oil Equipment
 - (5) Decontamination

* NOTE: Inspector noted from the Shift Foreman's Log that the deluge system test was completed for both main transformers on 5/20/75.

- (6) Laundry Room
 - (7) Oil Lift Pumps
 - (8) Transformers
 - (9) Hydrogen Storage Bank
 - (10) Turbine Oil Tanks
- d. CO₂ Extinguishers outside Cable Spreading Room, Dry Chemical Extinguisher in proximity of the Cable Spreading Room and Water Hose outside Cable Spreading Room. The inspectors observed a recently installed cable conduit penetration. (Reference Details 6.c)
- e. Switchgear Rooms - CO₂ (2) extinguishers. Dry Chemical Extinguishers in 4160 room.
- f. Battery Room - CO₂ Extinguisher outside and adjacent to room and fire hose in access corridor to room.
- g. Diesel Generator Building - CO₂ (2) extinguishers one per unit.
- h. Portable fire extinguishers (chemical and CO₂ type) inspected annually throughout the plant.

The inspection tour also included examination of control room cabinets, housekeeping, caution tags, and temporarily installed wires. Areas of inspector concern including storage of combustible materials in areas examined were discussed with a cognizant licensee representative. The inspector noted that the licensee maintains an inventory of the portable fire suppression systems, however, an inspection frequency for the inventory has not been established.

Topics related to fixed fire protection systems are discussed in Details 9.

11. Review of Plant Operations

A facility tour was conducted during the course of this inspection. Areas examined included:

- a. Fluid level indications for four snubbers located on isolation condensers and the core spray system.

- b. Existence of fluid leakage including discussion of SBLC, pump drain problems and a review of work order issued by the licensee, and Isolation Condenser areas.
- c. Examination of radiation controls including posting, condition of stepoff pads and disposal of clothing.
- d. Storage of combustibles in the reactor building and housekeeping conditions.
- e. Examination of valve positioning.
- f. Verification of control room manning requirements.
- g. Discussions regarding lighted annunciator points.

The inspector additionally observed several process variables in the control room and balance of plant process variables monitored were compared with appropriate Technical Specification limits and included main steam line flow, condenser vacuum, reactor power, conductivity, reactor pressure main steam tunnel temperature, stack and offgas activity and absorption chamber volumes. The inspectors also noted no inoperable CRDs. Discussion with cognizant licensee representatives indicated the licensee was not experiencing CRD temperature problems.

The inspector additionally reviewed logs and records as referenced in Details 3 and verified that control room log sheet entries were complete as required and initialed, tour sheets were complete and initialed and log book reviews were being conducted. Logs and records were reviewed against requirements established by Procedure No. 101.0, Revision 2 dated February 10, 1975.

The inspectors observed indications of leakage from a pump seal or drain associated with the SBLC system. Review of surveillance test results was conducted and the inspector also reviewed the licensee's work order issued to correct the source of leakage. This system will be reviewed further during a subsequent inspection.

Observation of Standby Liquid Control System valve lineups, on November 20, 1975, indicated that Valve V-19-24 was unlocked. Following review by the inspector of the applicable procedure No. 304 Rev. 0 issued January 22, 1975, the cognizant shift foreman verified that the valve was additionally in the open position. Valve lineup was restored

to normal and a revised valve checklist was completed on November 20, 1975. The inspector also verified by examination of P&IDs and discussion with licensee representatives that system operability had not been impaired. This failure to follow procedure No. 304 is contrary to Technical Specification 6.2.A.1 and 6.2.C and as listed under Enforcement Action constitutes an apparent Infraction level Item of Noncompliance.

12. Non-Routine Event Review

The inspector verified by examination of facility procedures and discussions with cognizant licensee representatives that the licensee's administrative system provides for review and evaluation of off normal operating events, and planned maintenance and testing activities to identify safety related events, and violation of Technical Specification requirements. Supporting documentation included:

- a. PORC action items
- b. Technical Specification acceptance check sheets
- c. Procedure No. 101
- d. Procedure No. 105

Discussion with cognizant licensee representatives indicated that personnel understood their respective responsibilities. The inspector also reviewed abnormal occurrences reported since the last inspection, including maintenance performed on Diesel Generators to provide verification with respect to safety limits, limiting safety system settings and abnormal occurrence reporting. No inadequacies were identified.

13. Primary System

RCS Chemistry

The inspector reviewed the completed RCS Chemistry data sheets for the period of January - November 1975. The inspector noted that the RCS Cl^- and conductivity results were within the Technical Specification limits for the period reviewed. Additionally, RCS conductivity, as observed by the inspectors on a control room indicator during the plant tour, was found to be within the required limits. No inadequacies were identified.

14. Reactivity Control and Core Physics

a. Control Rod Drop Times

The inspector reviewed the control rod drop time results for measurements conducted on all rods after the May outage and for measurements conducted on selected rods on 7/25/75 and 10/3/75. The inspector noted that the measured rod drop times were within the Technical Specification limits. No inadequacies were identified.

b. Shutdown Margin Determination

The inspector reviewed the results of the test conducted per procedure 1001.27, Shutdown Margin Measurement, on May 17, 1975. The inspector noted that the BOC V rod worth measurements showed that the minimum shutdown margin requirement given in the Technical Specifications was met. No inadequacies were identified.

c. Core Performance

The inspector reviewed the reactivity anomaly checks performed by the licensee on Core V. The inspector noted that the anomaly calculations were conducted periodically as stated in the Technical Specifications, and that the calculation results were within the allowable limits.

The inspector reviewed, on a sampling basis, the daily surveillance data taken to monitor core thermal and hydraulic conditions. The review included inspection of the reactor engineering analysis of axial and local LHGR's performed during the period of November 1-20, 1975. No inadequacies were identified.

d. Reactor Protection System Surveillance

The inspector reviewed selected Reactor Protection System Surveillance tests conducted during the interval from January 1 - November 1, 1975, which included the following RPS trip functions:

- (1) Reactor trip - hi drywell pressure
- (2) Reactor trip - hi water level in scram discharge volume
- (3) Reactor Isolation - MS line low pressure
- (4) Core Spray Actuation - low reactor pressure

- (5) Core Spray Actuation - lo-lo reactor level
- (6) Core Spray Actuation - hi drywell pressure
- (7) Containment Spray - hi drywell pressure
- (8) Offgas Isolation - hi radiation in offgas line
- (9) Isolation Condenser Initiation - hi reactor pressure

The inspector noted that the surveillance tests were conducted at the required intervals and that the test results were found to be acceptable by the licensee. No inadequacies were identified.

15. Auxiliary Systems

The inspector reviewed the monthly surveillance records for the operability checks performed on the motor operated isolation valves on the Isolation Condensers. The review covered the period of January - November, 1975. The inspector noted that the surveillance test was conducted at the required frequency and that the test results were found to be satisfactory by the licensee. No inadequacies were identified.

16. Electrical Systems

The inspector reviewed the results of the surveillance tests conducted on the emergency diesel generator for the period from January - November 1975. The tests were conducted periodically as required to verify that the diesel generators were operable, that the minimum fuel oil inventory was maintained and that the generators were capable of feeding the 4.16 KV busses. The inspector noted, based on a sample review of the data sheets, that the minimum operability and surveillance requirements on the diesel generators were met. No inadequacies were identified.

17. Containment

The inspector reviewed the daily surveillance checks performed on the main steam isolation valves for the period from August - November, 1975. The tests included the exercising conducted daily to verify valve operability and to measure the valve closing times. No inadequacies were identified.

18. Emergency Core Cooling Systems

The inspector verified that routine surveillance checks were performed on the core spray system to verify that the system was operable and available, and that system actuation occurs when a simulated ES signal is received by the control cabinets. In addition, the inspector

verified during the facility tour that system valves V-20-11, V 20-18, and V-20-21, located external to the drywell, were aligned as required by procedure. The inspector had no further comments at this time.

19. Miscellaneous

Housekeeping

The inspector observed housekeeping conditions within the plant and external to the reactor building during various tours of the facility. Items observed included:

- a. Control Room rear panel access.
- b. Storage of combustibles including resins and compound stored within the reactor building.
- c. Cigarette butts in isolated areas.
- d. Switchgear rooms.

The inspector discussed storage of combustibles with cognizant licensee representatives. This item was also discussed at the exit interview with respect to consideration of fire retardant coatings.