U. S. ATOMIC ENERGY COMMISSION

DIRECTORATE OF REGULATORY OPERATIONS

REGION I

RO Inspection Report No.: 50-219/73-11

Docket No.: 50-219

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

License No.: DPR-16

Priority:

Category: C

Location: Oyster Creek, Forked River, N.J.

Type of Licensee: 1930 MWt, BWR

Type of Inspection: Routine, Unannounced

Dates of Inspection: June 26-29, 1973

Dates of Previous Inspection: Special May 11, 1973

Reporting Inspector: E B Greenman for
F.S. Cantrell, Reactor Inspector
Facility Operations Branch

Sept 18, 1973
DATE

DATE

Accompanying Inspectors: NONE

DATE

DATE

Other Accompanying Personnel: NONE

DATE

Reviewed By: D. L. Caphton
D.L. Caphton, Senior Reactor Inspector
Facility Operations Branch

9/19/73
DATE

SUMMARY OF FINDINGS

Enforcement Action

1. 10 CFR 20.201(b) specifies that -- "Each licensee shall make or cause to be made such surveys as may be necessary for him to comply with the regulations in this part." 10 CFR 20.101(b) further limits whole body exposure to 3 rem/quarter.

   Contrary to the above requirements, exposure records for the April-June 1972 quarter show that one man was exposed in excess of 3 rem. (Report details, paragraph 18)

2. Paragraph 4.6.L of the Technical Specifications requires a reactor coolant sample analysis for total radio-active iodine content every 72 hours.

   Contrary to the above requirement, this analysis was not made for approximately a 104 hour interval between June 9 and June 13, 1973. (Details, paragraph 17)

3. Paragraph 4.2 of the Technical Specifications (TS) requires an inspection of the control rod drive housing support system after assembly. Paragraph 6.5 of the TS requires -- "Records of principal maintenance activities, including inspection and repair, of principal items of equipment pertaining to nuclear safety".

   Contrary to the above requirements, the reactor was restarted following reassembly of the control rod drive support system without records for the required inspection. (Details, paragraph 3b)

Licensee Action on Previously Identified Enforcement Items

As a followup to the November 9 and 10, 12 and 13, 17, 20 and December 7 and 9, 1972 inspection, six violations of regulatory requirements were identified in a letter dated March 6, 1973 from J. P. O'Reilly, Director, Region I, to Jersey Central Power and Light Co. No reply was requested for Items 3, 5 and 6 since corrective actions had been initiated and the violations were reported in letters from Jersey Central Power & Light Co. dated August 22 and 29, September 28, and October 6, 1972. The surveys identified in Item 1 were verified during an inspection February 13-16, 1973 (RO Inspection Report No. 50-219/73-02). The corrective action concerning Items 2 and 4 which was discussed in the Jersey Central Power & Light Co. reply, dated March 27, 1973, was verified during the current inspection. (Details, paragraph 14 and 16)

An inspection conducted April 18-20, 1973 (RO Inspection Report No. 50-219/73-07) indicated that corrective action concerning two of the violations and the two safety items, identified in a letter to Jersey Central Power & Light Co. dated March 7, 1973, regarding the February 13-16, 1973 inspection (RO Inspection Report No. 50-219/73-02) had been initiated, but was incomplete. The inspector verified the installation of standpipes in the catch basin drain during the current inspection. (Details, paragraph 15). Action to control the access to high radiation areas is still in progress with a scheduled completion date of January 1, 1974. (Details, paragraph 13) Action on the two safety items involving deficiencies in the Management Control Systems, relative to the Radiation Protection Program, and the exposure control program is continuing and will be reviewed during subsequent inspections.

In a letter to J. P. O'Reilly, Director, Region I, dated April 26, 1973, Jersey Central Power & Light Co. was notified of 13 violations of their environmental monitoring program identified during an inspection conducted February 28, March 2, March 5 and 7, 1973. In a reply dated May 22, 1973, Jersey Central Power & Light Co. discussed the corrective action taken or proposed. This action will be verified during a followup inspection of the Environmental Monitoring Program.

Two violations were identified in a letter from J. P. O'Reilly, Director, Region I, to Jersey Central Power & Light Co. dated March 27, 1973, concerning an inspection on March 13, 1973. In a reply dated April 16, 1973, Jersey Central Power & Light Co. discussed their corrective actions. This corrective action was not inspected during this inspection.

Design Changes

An LPRM downscale rod block bypass was installed. (Details, paragraph 7)

Unusual Occurrences

A. External exposure in excess of 3 rem as described in Jersey Central Power & Light Co.'s letter to the Directorate of Regulatory Operations (DRO) dated June 5, 1973. (Details, paragraph 18)

B. Liquid poison pump failure described in JCPL letter to the Directorate of Licensing (DL) dated May 30, 1973. (Details, paragraph 27)

C. A gasket leak at the drywell manhole cover described in JCPL letter to DL dated June 5, 1973. (Details, paragraph 29)

D. Excessive leakage through one main steam isolation valve described in JCPL letter to DL dated June 5, 1973. (Details, paragraph 23)

E. Torus to reactor building relief valve failure described in JCPL letter to DL dated May 15, 1973. (Details, paragraph 25)

F. Isolation condenser drain valve failure described in JCPL letter to DL dated April 24, 1973. (Details, paragraph 26)

G. Electromatic relief valve failure described in JCPL letter to DL dated April 24, 1973 and June 22, 1973. (Details, paragraph 21)

H. Containment spray pump failure described in JCPL letter to DL dated June 28, 1973. (Details, paragraph 28)

Other Significant Findings

A. Current Findings

1. The refueling outage was completed and the turbine phased on line June 5, 1973. The plant reached full power for the summer 625 MW(e) (about 96%) on June 28, 1973. (Details, paragraph 2)

2. The reactor was shutdown June 16-17, 1973 for reactor operator licensing examinations. Eleven out of twelve candidates received reactor operator licenses (the other individual resigned subsequent to exam completion). (Details, paragraph 1)

3. A scram occurred June 21, 1973 due to the loss of the B feedwater pump (attributed to a burned lead on one phase). (Details, paragraph 2)

4. Significant progress has been made in the housekeeping at the plant, particularly in the rad-waste building. (Management Interview, paragraph 8)

5. One addition has been made to the radiation protection staff, since the February 13-16, 1973 inspection. Other additions are currently being considered.

B. Status of Previously Reported Unresolved Items

1. The relief valves on the liquid poison system were tested during the refueling outage. (Details, paragraph 3.e.6)

2. The paddle type flow switches in the liquid poison system and the clean up system were inspected. (Details, paragraph 31)

3. JCPL is still evaluating the modification to the controls for the air supply dampers for the cooling radiators on the emergency diesel generators. (Details, paragraph 30)

4. Reactor Vessel Level Instrumentation - The "A" GE/MAC level indicator does not agree with the "B" GE/MAC or the YARWAY level indicator. This area was not inspected.

5. The missing locking arm from the "B" electromatic relief valve (RO Inspection Report 50-219/73-01) was found in an inspection of the stop valve strainers. (Details, paragraph 22)

6. Observers were stationed in the torus area during testing of the electromatic relief valves. No flexing of the torus was observed. (Details, paragraph 12d)

7. The outside of the torus was repainted because of rusting. (Details, paragraph 12e)

Management Interview

An exit interview was conducted with Mr. Carroll on June 29, 1973. Items discussed are summarized below:

1. Torus Inspection - The licensee's representative stated that the results of the torus inspection conducted during the refueling outage would be reported in the "Semi-Annual Report" to the Commission. (Details, paragraph 12)

2. Chromated Water Storage - The licensee's representative stated that JCPL was ready to submit an application to the state of New Jersey, requesting approval for a process designed to separate the chromium and dispose of the water stored in various tanks at the site. In addition, JCPL was evaluating a contractor, that has stated he has the equipment to clean up the water. If the results of this evaluation show that the contractor has the capability and the necessary permits or licenses, the water will probably be shipped to this contractor for clean up within the next three months.

3. Paddle Type Flow Switches - The licensee's representative stated that the paddle type flow switches in the shutdown cooling system would be inspected prior to September 1, 1973 and that based on the results of this inspection of switches in the liquid poison system, the clean up system, and the shutdown cooling system, JCPL would develop a reinspection schedule for the switches in the liquid poison and shutdown cooling systems. (Details, paragraph 31). The inspector stated that he had no further questions about the program unless additional failures were found.

4. Overexposure reported in JCPL letter dated June 5, 1973 - The licensee's representative confirmed that in the future, contractors would be required to furnish exposure records to JCPL prior to using their employees for radiation work at Oyster Creek. These records will be in addition to requirements for completion of an "AEC Form 4". (Details, paragraph 18)

5. Surveillance of the Core Spray System Piping - The licensee's representative stated that the letter from Licensing requiring a magnetic particle or liquid penetrant test of various joints and sections of the piping during each refueling outage was received too late to be factored into the 1973 refueling outage. The licensee representative agreed however, that the required testing would be completed by September 1, 1973, and the results reported in the "Semi-Annual Report". The inspector accepted this explanation and agreed with the proposed schedule for testing.

6. Main Steam Isolation Valve (MSIV) Leakage - The licensee's representative agreed that the MSIV's would be leak tested anytime the reactor is in a cold shutdown condition long enough to obtain leakage results that are not affected by residual leakage. The licensee's representative was reminded that Appendix J to 10 CFR 50 does not permit exercising of isolation valves prior to a leak test. The representative stated that the JCPL procedure was compatible with Appendix J. (Details, paragraph 23). The inspector stated that he had no further question at this time.

7. Liquid Poison System - The licensee's representative agreed that a program would be established to determine the cause of the fluctuations in the chemical analysis of the liquid poison system and that the analysis would be repeated after any additions to the system. (Details, paragraph 3.e.)

8. Housekeeping - The inspector acknowledged a marked improvement in housekeeping in various areas of the radioactive waste and reactor buildings. The licensee's representative stated that extra help had been employed for clean up in these areas, and that work was continuing. The representative stated that plans were being made to paint concrete in certain areas outside the entrances to these buildings.

9. Plans for Controlling High Radiation Areas - The licensee's representative stated that the areas which require locking or special controls have been identified, and that he expected the necessary hardware to be procured and installed by January 1, 1974. (Details, paragraph 13)

10. Control Rod Drive (CRD) Housing Support System - The inspector stated that he was unable to verify by review of records or inspection that the CRD housing support system had been re-installed prior to reactor startup as required by T.S. 3.2.B.1. (Violation). (Details, paragraph 3.b.)

11. Shutters on the Radiator of the Emergency Diesel Generator - The licensee's representative stated that installation of the modification for the shutter controls would be completed by October 1, 1973. (Details, paragraph 30). These changes will be reviewed during a future inspection.

12. Minutes of the General Office Review Board (GORB) Meetings - The inspector stated that he was not able to verify that the GORB reviewed plant modifications approved by the Plant Operation Review Committee (PORC) at the PORC meetings May 22-25, 1973. Minutes of GORB meetings subsequent to January 25, 1973 were not available for review at the site. The licensee's representative stated that he would investigate ways of making GORB minutes available for review. The inspector stated that GORB minutes should be maintained in a file at the plant and should be available on a more timely basis. (Details, paragraph 5&6)

13. Minutes of PORC Meetings - The inspector stated that minutes were not available for PORC meetings reported to have been held during January, February and March, 1973 as required by T.S. Para 6.1(b) and (f). The licensee's representative stated that the person responsible for these minutes was on vacation, and that as soon as she returned he would supply the inspector a copy of the minutes. (Details, paragraph 5)

DETAILS

1. Persons Contacted

Mr. J. T. Carroll, Station Superintendent
Mr. E. I. Riggle, Maintenance Supervisor
Mr. J. L. Sullivan, Jr., Technical Supervisor
Mr. A. H. Rone, Engineer
Mr. E. J. Growney, Engineer
Mr. E. Rosenfeld, Engineer
Mr. R. Pelrine, Chemical Supervisor
Mr. J. Maloney, Shift Foreman
Mr. C. Dekker, Control Room Operator
Mr. D. Gaines, Engineer

Mr. D. Gaines, Engineer has been promoted to Manager, Quality Assurance, JCP&L.

Eleven operators passed the examination for a reactor operators license during a demonstration startup on June 16-17, 1973. Following the examination a twelfth operator resigned.

One assistant technician has been added to the health physics staff.

2. Reactor Operations

The reactor was shutdown April 13 for the 1973 refueling outage. 146 fuel assemblies were replaced, including 77 fuel assemblies identified as containing leaking fuel pins. Refueling and other outage work was completed, and the reactor was taken critical for operator tests June 3-4, 1973. The turbine was phased on line June 5, 1973. Power was increased gradually to 96% (625 MWE) June 28, 1973 which is expected to be full power for summer month operation.

The reactor was shutdown June 16-17, 1973 for reactor operator license examinations. A scram occurred on June 21, 1973 due to the loss of one feedwater pump as a result of a burned lead on one phase of the power supply.

3. Reactivity & Power Control

The following information was obtained during discussions with licensee representatives and review of plant records.

a. Shutdown margin (T.S. Para. 4.2.A) - Shutdown margin was measured May 17, 1973. The shutdown margin was determined to be > 1% Δ K with the strongest control rod withdrawn by withdrawing the adjacent control rod. There was no Gadolinium in the fuel surrounding the strongest control rod, and calculations show that none of the control rods surrounded by fuel containing Gadolinium will become the strongest control rod during Core III.

b. Control Rod Drive (CRD) Housing Support System (T.S. Para. 4.2.B) A licensee representative stated that the CRD housing support system had been inspected by the contractor (General Electric) that performed the CRD maintenance during the outage, however, no records were available at the site to verify this inspection (Violation). He stated that this inspection was assigned to the contractor because of the relatively high exposures that JCPL personnel had received during the outage. (Subsequent to this inspection the inspector was provided a copy of the check sheet that was used by the contractor to demonstrate completion of the inspection).

   A licensee representative stated that the Drywell Closure Checkoff Sheet (No. 202.4) would be revised to include an inspection of the CRD Housing Support System. (Revision 3 of procedure 202.4, which was issued July 19, 1973 included the above change.)

c. Scram Testing Control Rods (T.S. Paragraph 4.2.c)

   i. All control rods were scram tested after the refueling outage and prior to returning the reactor to power.

   ii. Twenty six control rods were connected to a recorder to assure that the scram time is measured for at least 8 control rods on each scram.

   iii. During Core II, all outages were initiated by a scram, therefore, it was unnecessary to scram test control rods on any start up with exception of the initial startup of Core II.

d. Control Rod Drive Exercise (T.S. Paragraph 4.2.D) The check sheets for the period January thru March 1973 showed that each partially or fully withdrawn CRD was exercised each week and individually checked off.

e. <u>Standby Liquid Control System</u> (MRS 3/6/73)

The following items were noted in reviewing surveillance records and in discussions with licensee representatives:

(1) Records for January - June 1973 showed that the pump operability check was performed satisfactorily each month and as required by T.S. 4.2.E.

(2) Records for January - June 1973 showed that the liquid poison system was sampled and that the volume and the concentration met the requirements of T.S. 3.2. A review of the laboratory results showed a 3% fluctuation in pentaborate concentration from month to month without any records to show water, or boric acid-borox additions. A preliminary evaluation indicated that the solution concentration vs volume of solution met the requirements of T.S. 3.2 during this period even if the maximum probable error was assumed in the lab analysis. A licensee representative agreed to review the sampling and analytical techniques used, and prepare standard samples for analysis by the lab technician. These results will be used to re-evaluate lab results for the liquid poison system during Core II. The results of this evaluation will be scheduled for review during a future inspection.

(3) The "Tech Spec check Log Sheet" showed that the daily solution volume temperature check was completed for the period reviewed (April 13-17, 1973) as required by T.S. 4.2.E.

(4) Records showed that the annual functional test was completed May 30, 1973 as required by T.S. 4.2.E.

(5) Level in the liquid poison storage tank is measured by means of a float indicator.

(6) The relief valves on the liquid poison system were tested during the refueling outage.

(7) Control Rod Inventory (T.S. Paragraph 4.2.F)

A predicted control rod inventory (total notches vs exposure) has been prepared with the assistance of the fuel supplier. Oyster Creek is scheduled to compare the current inventory with the predicted inventory each month.

(8) Core Operation

The power of the reactor is being manipulated in accordance with specific recommendations of the reactor vendor for the new fuel cycle, as a means of minimizing the fuel failure rate and the stack release rate. The licensee representative stated that these recommendations which impose limits on the power ascension program are considered proprietary information by the reactor vendor. The general recommendations were reviewed by the inspector. No unreviewed safety problems or conflicts with the requirements of the technical specifications were apparent.

4. Procedures

The following information was obtained during discussions with licensee representatives and in a review of plant records.

a. Paragraph 6.2.c. of the T.S. specifies that standing instructions require procedures to be followed in conducting certain plant activities. Procedure 101.2 specifies disciplinary action for willful violation of procedures. A licensee representative stated that this procedure was being rewritten to include a positive statement on adherence to procedures.

b. Paragraph 6.2.. of the T.S. requires that original procedures and procedure changes be approved by the PORC. The inspector verified that PORC meeting minutes indicated PORC approval of two preselected procedures (Fuel Examination Procedure No. 215 Rev 0 and Abnormal Relief Valve Operation No. 527 Rev 1.)

c. Paragraph 6.2.F of the T.S. permits two members of the supervisory staff to make a temporary procedure change if one member is a shift Foreman. Currently there is no central record of temporary procedure changes; however, a licensee representative stated that this matter was currently being discussed and that probably all temporary procedure changes would be required to be submitted to the PORC secretary within a specified time. In addition, a time limit would be established for temporary procedure changes or a review frequency would be specified.

d. Proposed New Administrative Procedures require a yearly review of procedures and assign specific responsibility to various members of the PORC. Records indicate that revised procedures are reviewed by the PORC.

e. Completed procedures or check sheets are reviewed and approved by either the Instrument Foreman or the Shift Foreman, and the Operations Supervisor.

f. The retention schedule of records was established based on the T.S. requirements, and a document "Regulations to Govern the Preservation of Records of Public Utilities and Licensees", Federal Power Commission, January 1, 1972 (Enclosure No. 1).

g. Non-routine maintenance procedures require PORC approval if the work involves a safety related system. An example cited was the work on the isolation condenser drain valve (V14-35).

Several weaknesses were noted in the "procedure system" as noted above, however, no specific violations were observed. The actions discussed above, when implemented, will strengthen the procedure system.

5. Plant Operation Review Committee (PORC) Meetings

Minutes of 1973 PORC Meetings through June 1, 1973 (No. 13-73) were reviewed except for the first three meetings of the year. The person responsible for preparing the official meeting minutes was on vacation, and the minutes could not be located by the present PORC secretary. (A copy of these three meetings were subsequently reviewed in the RO:I Office by the inspector. (Since plant records showed that the meetings were held as required, responsibility for the minutes was designated in the file and the minutes were promptly produced following the inspection, the failure to have a copy in the file was not cited as a violation.)

6. General Office Review Board (GORB) Meetings

Minutes of GORB meetings March 1, 1972 through January 25, 1973 were reviewed and indicated that the GORB was discharging its responsibility as assigned in the Technical Specifications. Minutes were not available for any meetings subsequent to the January 25, 1973 meeting, however, proposed agendas were available for meetings in March and May 1973. PORC meeting minutes showed approval of certain modifications made during the April - May refueling outage. There were no minutes available to show GORB concurrence. A licensee representative could not explain why minutes were not available at the site, or what specific method was used to get GORB minutes into the file at the site.

7. Local Power Range Monitor (LPRM) Rod Block Bypass

The following information was obtained in discussions with licensee representatives. A single bypass switch was installed to permit simultaneous bypassing of the downscale rod block associated with all of the inputs to the average power range monitor (APRM). The change was made in accordance with FD1 310 & 312 from the reactor vendor. The justification as provided indicated that when the intermediate range monitors (IRM) were approaching full scale and the APRM's were on scale, most of the time more than 3 inputs to the APRM (normal 8) were not reading 72% scale. Provisions are made to bypass up to 3 of the 8 inputs to each APRM's, however, with the flux shapes encountered during certain startups, the IRM's were over ranged before 5 of the 8 APRM inputs reached 2%. As a result, it was necessary to adjust the gain on a number of LPRM's to overcome the "rod block" caused by the low reading. Plant records showed that a safety evaluation had been made as required by 10 CFR 50.59 and that the change had been approved by the PORC on July 29, 1971. The installation of the bypass was reported in the Semi-Annual Report (July - December 1971).

The inspector stated that based on discussions with "Licensing", JCPL would probably receive a request to provide additional justification and to submit a safety evaluation to Licensing for the LPRM rod block for the bypass switch.

8. Fuel Channel Measurements

A licensee representative stated that during the refueling outage, nine fuel channels were measured by the reactor vendor for bowing and dimensional changes, and that JCPL was told that the results were being evaluated; however, the changes observed would not affect the amount of bypass flow in the core or the operation of the control rods. The representative stated that JCPL would submit a written report of the findings to the Commission when the results and evaluation are reported to them.

9. Irradiated Fuel Channel Shipment (RO Inspection Report 219/72-05 Paragraph 9)

The following information was obtained during discussions with licensee representatives. The sections of irradiated fuel channels that were cut for shipment were loaded into the shipping cask. A special procedure approved by the PORC was used. The fuel channel samples were loaded into the cask underwater in the equipment storage pool, during the refueling outage. The cask lid was bolted on while the cask was in the equipment storage pool, and the "cask guards" were installed around the cask on the 119 foot elevation prior to lowering the cask to the shipping truck. The radiation rate was a maximum of 8 mr/hr at contact. The cask was shipped from Oyster Creek June 4, 1973, and was reported to have been received at San Jose, California the following week. A licensee representative stated that JCPL had not received any reports from GE on the "hot laboratory" examination of the fuel channel samples.

10. Checks for Uncoupled Control Rods (FACF RO I/73-8)

The following information was obtained during discussions with licensee representatives, and in review of plant records. Plant procedures (No. 203) require a check for an uncoupled rod by attempting to withdraw the control rod past notch 48 each time a control rod is completely withdrawn (Notch 48). Travel beyond notch 48 would provide a "rod uncoupled" alarm, and a black background on the control panel. This check is also made on each control rod that is fully withdrawn when the control rods are exercised each week. Any abnormalities are required to be reported to the shift foreman and recorded in the control room logbook. In the event of a control rod problem, the shift foreman will immediately contact the Technical Supervisor or the Operating Supervisor. In the event of an uncoupled control rod, the procedures (No. 302.4.1) specify steps to take to "couple" the rod, and if the rod cannot be coupled, specifies that the rod should be fully inserted, valved out and the scram accumulator discharged and vented. One of the control room operators was questioned about the procedures. He appeared to be thoroughly familiar with both procedures.

Licensee representatives were only aware of three problems of an uncoupled control rod (30-03;, 14-23; and 46-19). The problem was resolved by replacement of the control rod drives. The trouble was attributed to leaking stop piston seals.

11. Auxiliary Systems - Instrument Air

The following information was obtained during discussions with licensee representatives and in review of plant records.

a. Design Changes

The plant compressed air system has been redesigned as a result of a study initiated following a complete loss of instrument air (JCPL letter to Licensing December 17, 1971). The equipment required for the modification is now available at the plant, but has not been installed. The modification tc the air supply consists primarily of the addition of a third identical air compressor, receiver and isolation and check valves. The purpose of these changes is to increase capacity and facilitate repairs while reducing the chances of losing the instrument air supply.

b. Surveillance Checks

At least once per shift, the system is checked by the equipment operator. He blows down the after cooler and air receiver and checks for proper operation. Based on his checks of ΔP, the drying tower prefilter and postfilters are changed. The desiccant in the drying towers is changed each refueling outage. Currently, there is no routine program to check the air for oil or water. A licensee representative stated that the air would be analyzed for oil and water and that he would review the results and make recommendations as appropriate for routine sampling and analysis.

12. Electromatic Relief Valves Discharge Piping and Torus Inspection

JCPL letter to Licensing July 6, 1972. The torus was reinspected using divers with full protective suits. These measures were required because sodium dechromate had been added to the torus water to inhibit corrosion.

a. Baffles

The inspection showed that the outside end of the middle and lower baffles at azimuth 326° were loose and resting on the bottom of the torus. The middle baffle also had bolts that were missing during the 1972 inspection. These bolts were not replaced because of misalignment of the holes between the middle baffle and its anchor. A licensee's representative stated that JCPL's evaluation showed the bolts holding the middle baffle at azimuth 326° gave way as a result of vibration from operating one or more relief valves allowing the end of this baffle to drop on the lower baffle. This added force caused the lower baffle to fail. The lower baffle was replaced and the middle baffle was removed from the torus. No other problems were noted with the baffles. The licensee's representative stated that evaluations made by General Electric have shown all of the baffles may be removed without affecting integrity of the torus.

b. Torus Shell (Guide)

The inspection of the torus paint showed the presence of slight corrosion in a one foot band around the torus at the water line. No corrosion was found above or below this band. In addition no indication of corrosion was found on the baffles that were removed. A licensee's representative stated that JCPL will probably establish a continuing torus inspection program after the results of this inspection are evaluated.

c. Support for the ERV Tailpiping in the Suppression Chamber (JCPL report to Directorate of Licensing dated August 22, 1972)

The 1" cable installed to prevent overstressing the ERV tailpiping in the event all ERV operated simultaneously was replaced with two rigid horizontal support structures (17 feet x 10 inches) that transfer the reaction force to the ring girder. Additional braces were added to rigidly connect the end of the "tailpipe" to the canal fitting (A 20" diameter pipe approximately 53 inches long.) into which it discharges. All of the above bracing was designed to be installed without welding to the torus.

d. Torus Flexing

Observers were stationed in the torus area during testing of the electromatic relief valves (ERV). Flexing was not observed during this testing (Flexing was reported to have been observed during the ERV failure December 29, 1972 (RO Inspection Report 50-219/73-01). During the test, the ERV were not allowed to stay open for an extended period of time.

e. Outside of Torus

Rust was removed from outside surfaces and the torus was repainted. (RO Inspection Report 219/73-01)

13. Additional Control of High Radiation Areas

The plans for controlling high radiation areas were reviewed with a licensee representative. These plans have not been finalized and in most cases hardware has not been ordered. A licensee representative stated that JCPL planned to complete this work by January 1, 1974.

was inspected while the reactor was shutdown early in January 1973. Very fine pitting was observed on the walls of the accumulator near the discharge area (near the upper stroke of the piston), but none was observed in the vicinity of the normal piston location. The representative stated that it is JCPL's evaluation that the pitting observed could not affect the operation of the accumulator. The representative stated that additional accumulators would be inspected as the opportunity presents itself.

20. Liquid Penetrant and Magnetic Particle Testing of the Core Spray System (Licensing letter to JCPL, April 10, 1973)

The referenced letter concurred in the conclusion reached in the Core Spray System Water Hammer Study submitted by JCPL in letters dated December 15, 1973, April 24, 1972, and October 3, 1972 and required a visual check of the core spray pump discharge liner and header, following each monthly pump operability test; and a magnetic particle or liquid penetrant tests of the ties, pipe flanges and elbows identified in Table 3 of the Core Spray System Water Hammer Study during each refueling outage. MP-LP tests were not performed on the core spray piping during the refueling outage that was completed June 5, 1973. A representative of the licensee stated that the letter imposing the MP-LP testing was received too late for scheduling during the outage, however, this testing would be completed by August 31, 1973.

21. Electromatic Relief Valve (ERV) Failure (JCPL letter to Licensing, April 24, and June 22, 1973)

The following information was obtained during discussions with licensee representatives and in review of plant records.

One ERV failed to open during an operability test performed April 13, 1973. A cocked guide pin in the solenoid actuator on the pilot valve restricted internal movement of the solenoid plunger assembly sufficiently, to prevent operation of the pilot valve. A poor silver solder joint was the causative factor in guide pin separation from its plate. Upon recommendation of the vendor, new guide pins were machined, the support plate was drilled through, the guide pin was inserted and "TIG" welded to the support plate. A space was added to eliminate interference between the weld and the mounting bracket. This modification was made to the solenoid actuator on all five ERV's. A licensee representative stated that these guide pins had been replaced in 1972 as a result of a vibration problem at another BWR in

14. Shielding Glass in Drum Handling Truck (RO Inspection Report 50-219/72-05)

During a tour of the Rad-Waste Building, the inspector verified that the shielding glass had been reinstalled in the drum handling truck.

15. Standpipe for Catch Basin Around Outside Storage Tanks (RO Inspection Report 50-219/73-06)

An inspection of the catch basin around the outside radioactive storage tanks showed that standpipes had been installed in the drains to retain rainwater and small spills so that such water could be sampled prior to routing to radioactive waste or to the canal. A large spill would overflow the standpipe directly to radwaste.

16. Concentrated Waste Tank Alarm (RO Inspection Report 50-218/72-05)

The inspector verified that the high level alarm on the concentrated waste tank was set at <95% during a tour of the rad-waste building.

17. Frequency of Reactor Coolant Analysis (JCPL letter to Licensing dated June 28, 1973)

The failure to obtain an analysis of the reactor coolant for radioactive iodine between June 9 and June 13, 1973 (104 hours) because of an inoperable multichannel analyzer was reviewed. The inspector had no further questions concerning this item.

18. Personnel Exposure in Excess of 3.0 REM/Quarter (JCPL letter to F.E. Kruesi June 5, 1973)

The referenced report and licensee records were reviewed with licensee representatives. An AEC Form 4 was completed by the individual prior to receiving any exposures. In response to questioning, a licensee representative stated that the AEC Form 4 was the only record that JCPL has of individuals previous exposures. He stated that in the future, contractors for work involving radiation would be required to furnish JCPL a record of each employees previous exposure in addition to requiring a completed AEC Form 4 from the individual. The inspector had no further questions concerning this item.

19. Inspection of Control Rod Drive (CRD) Accumulator (RO Inquiry Report No. 50-245/73-01Q)

The following information was obtained in discussions with licensee representatives. In response to a request by RO I, one CRD accumulator which a notch was worn in the pin from the vibration of the spring bracket against the guide pin. This notch provided a shoulder that prevented operation of the plunger assembly.

22. Stop Valve Strainers (RO Inspection Report 50-219/73-01 Para. 2.c)

A license representative stated that the missing locking arm from the "D" ERV was found during an inspection of the No. 4 main steam stop valve strainer. The missing tie wire was not located.

23. Excessive Leakage Main Steam Isolation Valve (NSO3B) (JCPL letter to Licensing June 5, 1973)

The following information was obtained in discussion with licensee representatives. MSIV-NSO3B was disassembled and the seat lapped, following the above failure of the valve to meet the local leak rate test requirement. A new valve stem which had previously been ordered (to eliminate the cushion speed, RO Report 219/71-05 Para 4) was installed and the valve was retested satisfactorily (no detectable leakage thru the valve.) A licensee representative stated that Jersey Central had employed a consultant to make a study of the suitability of these valves for the service in which they are used because of previous problems with these valves. He stated that the information concerning these failures had been forwarded to the consultant.

24. Testing of Main Steam Safety Valves

A licensee representative stated that JCPL plans to continue sending all of their main steam safety valves back to the vendor for the required test of the setpoint of each safety valve (T.S. Para 4.3.D).

25. Failure of Torus to Reactor Building Relief Valve (JCPL letter to Licensing May 15, 1973)

The failure which occurred May 3, 1973, was reviewed with licensee representatives. No other deficiencies were noted.

26. Isolation Condenser Drain Valve Failure (JCPL letter to Licensing April 24, 1973)

The following information was obtained during discussions with licensee representatives, and in review of plant documents. Following the repairs discussed in RO Report 219/73-10, Paragraph 4, current traces were made while operating this valve. The current trace indicated a maximum of 20.5 amps on the opening cycle as compared to a maximum of 75 amps when the valve failed to open April 15, 1973. As another method of assuring that repairs have been effective, licensee representatives agreed to obtain another current trace when the valve is initially operated during a plant cooldown. (These are the conditions under which the valve failed to operate April 15, 1973.) (The licensee routinely obtained current readings on all valves following the maintenance).

27. Liquid Poison Pump Failure (JCPL letter to Licensing May 30, 1973)

P&ID 885 D949 was reviewed with a licensee representative with respect to the pump failure. The inspector verified that selected fuse locations in the control room were posted with the required type and size fuses as stated in the referenced letter. The inspector had no further questions concerning this item.

28. Containment Spray Pump Failure (JC?L letter to Licensing dated June 28, 1973)

Following a routine surveillance test, the No. 2 system failed to automatically reset to the operable mode, due to a burned relay in the control system. Following replacement of the burned relay (16K 22B), an operability test was performed on the containment spray system, and the "C" pump failed to start due to a broken wire on the key lock switch. The control system was reviewed with a licensee representative using P&ID 237E901, Sheet 1 and 2. The licensee's representative demonstrated how the No. 2 system could have been operable if needed, and stated that he believed the broken wire, which could have been making intermittent contact, was the cause of a previous failure of this pump (JCPL letter to Licensing dated August 11, 1972. The licensee had not been able to determine the actual cause of the broken wire failure).

29. Drywell Head Manhole Cover Gasket Leak (JCPL letter to Licensing June 5, 1973)

The details of this report were reviewed with a licensee representative. The drywell head has only one manhole. The inspector had no further questions concerning this item.

30. Emergency Diesel Generator (EDG) Test Failure (JCPL letter to Licensing dated June 30, 1972)

The following information was obtained during discussions with licensee representatives and in a review of licensee records. The problem of the inoperable radiator louver was described to a representative of the vendor. In a letter recommending modification to improve the reliability of the EDG's, the vendor stated that with the louvers closed, the EDG could operate about three minutes under no load and only about one minute under full load without destroying the engine. The letter pointed out that if the louvers were left open during extreme cold weather, or opened too soon when the diesel started, the unit would not heat properly and could carbonize the fuel in the cylinder causing a loss of power. The corrective action recommended involved the addition of a timing circuit that would open the louvers after a fixed time if the louvers were not being controlled by the temperature sensing element. JCPL was also evaluating adding a redundant temperature sensor as a backup. A licensee representative stated that they expected the above modification wouuld be finalized and approved as applicable, and that installation of the changes would be completed by October 1, 1973.

31. Paddle Type Flow Switches ("PEECO")

The "PEECO" flow switches that were installed in the clean up system and in the liquid poison system were inspected during the 1973 refueling outage. The vanes on the switches in the clean up system were broken off and all of the vanes were recovered. The vanes which were about 2½ inches long could not get out of the mounting "tee" without additional breakage. This switch is used for a mimimum flow indications through the clean up system. As a result of the vane breakage the switch was not replaced. The operating procedure was changed to require a field check to open the bypass recirculation lines when starting the recirculation pump. The "PEECO" switch in the liquid poison system was intact and was subsequently reinstalled. This switch is only subjected to flow during the annual inspection test of the liquid poison system (or during an emergency addition). The "PEECO" switches in the shutdown cooling system were not inspected however, a licensee representative stated that these switches are scheduled for inspection by September 1, 1973.

32. BWR Control Rod QA Problems (letter to F.E. Kruesi, Director of Regulatory Operations from A.P. Bray, Manager Applications Engineering, General Electric Company dated April 26, 1973)

A licensee's representative stated that he had not been specifically advised of the recommendations for operating plants as contained in the attachment to the referenced letter however, the action recommended had been taken. The cases where a control rod settled at notch "02" on a scram always occurred with a control rod drive (CRD) which had high "stall flow", which is another indication of excessive stop piston seal leakage. This condition was corrected by replacing the CRD during a subsequent reactor outage.

ENCLOSURE No. 1

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

Regulations
To Govern the Preservation of Records of Public Utilities and Licensees

Effective January 1, 1972

Schedule of Records and Periods of Retention-Continued

DESCRIPTION	RETENTION PERIOD
OPERATIONS AND MAINTENANCE	
22.2 Production - Nuclear	
(a) Records of normal plant operation, including power levels and periods of operation at each power level	6 years/operating charts for the first year's operation will be stored for the life of the corporation.
(b) Records of principal maintenance activities, including inspection, repair, substitution or replacement of principal items of equipment pertaining to nuclear safety	6 years/operating charts for the first year's operation will be stored for the life of the corporation.
(c) Records of abnormal occurrences	6 years/operating charts for the first year's operation will be stored for the life of the corporation.
(d) Records of periodic checks, inspections and calibrations performed to verify that surveillance requirements are being met	6 years/operating charts for the first year's operation will be stored for the life of the corporation.
(e) Records and prints of changes made to the plant as described in the Final Safety Analysis Report	Life of corporation.
(f) Records of new and spent fuel inventory and assembly histories	Life of corporation.
(g) Records of monthly plant radiation and contamination surveys	Life of corporation.

Schedule of Records and Periods of Retention-Continued

DESCRIPTION	RETENTION PERIOD
OPERATIONS AND MAINTENANCE	
Production - Nuclear (Contd)	
(h) Records of off-site environmental monitoring surveys	Life of corporation.
(i) Records of radiation exposure of all plant personnel, including all contractors and visitors to the plant who enter radiation control areas	Life of corporation.
(j) Records of radioactivity in liquid and gaseous wastes released to the environment	Life of corporation.
(k) Records of any special reactor tests or experiments	Life of corporation.
(l) Records of changes made in the operating procedures	Life of corporation.
Transmission and distribution - Electric:5/	
(a) Substation and transmission line logs	3 years.
(b) System operator's daily logs and reports of operation	3 years.
(c) Storage battery and other equipment logs and records	3 years.
(d) Interruption logs and reports	6 years.
(e) Records of substation general inspections and operation tests	3 years.
(f) Apparatus failure reports	6 years.

ic § 125.2, General Instructions (n) - Schedule of Notes, 5/.

UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I
~~970 BROAD STREET~~
~~NEWARK, NEW JERSEY 07102~~
631 Park Avenue
King of Prussia, Pennsylvania 19406

SEP 24 1973

D. L. Caphton, Senior Reactor Inspector, Facility Operations Branch
Directorate of Regulatory Operations, Region I

RO Inspection Report No. 50-219/73-11
Jersey Central Power & Light Company
Oyster Creek

It appears to me that Jersey Central has made great strides in their management controls at the site. In addition, there seems to be more of a desire to keep us informed of unusual events.

The requested information was obtained or action initiated, as appropriate for the following items:

Request	Information or Action
MRS 1/31/73	Procedure written but not reviewed by PORC (Proprietary)
MRS 3/5/73	Very fine pitting observed in the discharge area of the cylinder (P 19)
MRS 3/6/73	Liquid poison level is measured by float.
Letter Knuth to Regional Director - 5/24/73 FACF RO:I/73-8	Have had occasion of rods failing to fully insert; however, evaluation indicated seal leakage.

The problem with the GORB Minutes was discussed with Mr. Don Ross, Manager, Nuclear Generating Stations. I was assured that copies of "draft" and "official" minutes would be placed promptly in a file at the site so that they would be available for our review.

According to Mr. Carroll, Jersey Central is actively interviewing for a Radiation Protection Supervisor, but has not had success in locating a certified H. P.

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According to Mr. Carroll, Oyster Creek has a handwritten procedure for a "bomb threat." However, this procedure has not been reviewed by the PORC. He plans to present the procedure to PORC, but maintain a very limited distribution.

E. J. Greenman for

F. S. Cantrell
Reactor Inspector
Facility Operations Branch

Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 539-6111

September 18, 1973

Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Power Failure

The purpose of this letter is to report a violation of the Technical Specifications, paragraph 3.7.A.2., in that although both startup transformers were energized to carry power to the station 4160V AC buses, neither transformer could be considered operable due to an improper setting on the C phase differential monitoring relays. Further, during the event, neither diesel generator was able to restart after having once been initiated in the "fast start" mode and been secured when power was again lost to the 4160V AC buses.

These situations are considered to be abnormal occurrences as defined in the Technical Specifications, paragraph 1.15.D. (failure of one or more components or an engineered safety feature that causes the feature to be incapable of performing its intended function) and 1.15.G. (observed inadequacies in the implementation of procedural controls such that the inadequacy causes the existence or development of an unsafe condition in connection with the operation of the plant).

Notification of this event, as required by the Technical Specifications, paragraph 6.6.2.a., was made to AEC Region I, Directorate of Regulatory Operations, by telephone on September 8, 1973, and further elaborated upon personally with Mr. B. Greenman from AEC Region I, Directorate of Regulatory Operations on September 11, 1973 during his visit to the site. Further, the problem with the startup transformers was telecopied to AEC Region I on September 10, 1973, and the difficulty experienced with the diesel generators was telecopied on September 13, 1973.

A plant shutdown had progressed to the point where, with electrical output at approximately 90 MWe, a transfer of station loads from the auxiliary transformer to the startup transformers was attempted. When a closing signal was applied to the S1A breaker, a loss of power occurred on the 1A 4160V AC bus which, among other things, caused two circulating water pumps, three reactor recirculation pumps, and the operating condensate and feedwater pumps to trip. Diesel generator

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No. 1 was initiated in the "fast start" mode, reenergizing the 1C 4160V AC bus, restoring power to the requisite safeguard systems should they have been required. An attempt was made to start the B and C condensate pumps, but before either pump could be started, the reactor scrammed due to low water level. In reconstructing the subsequent events, the following seems pertinent:

1. Following the scram, the 1B 4160V AC bus was energized properly from the SB transformer.

2. The "lockout" relay, 86SA, was reset manually, the S1A breaker was closed, diesel generator No. 1 was synchronized with "system", and the 1C breaker was closed.

3. Diesel generator No. 1 was secured. At this time, the "trouble" alarm was annunciated in the control room and an electrician was dispatched to determine the cause.

4. An attempt was made to start the A condensate pump, but the in-rush current apparently tripped S1A breaker. Diesel generator No. 1 was not initiated in the "fast start" mode due to the engine "lockout" relay which has previously been actuated (the cause from the "trouble" alarm).

5. An attempt was made to start the B or C condensate pumps, but the in-rush current apparently tripped the S1B breaker. Diesel generator No. 2 was initiated in the "fast start" mode reenergizing the 1D 4160V AC bus. For the period of time taken for diesel generator No. 2 to come up to speed, buildup voltage and reenergize the bus (less than 15 seconds), the station was without AC power.

6. Both the SA and SB transformer "lockout" relays were reset manually and both S1A and S1B breakers were closed.

7. Diesel generator No. 1 was initiated in the "fast start" mode when the electrician reset the engine "lockout" relay.

8. Diesel generator No. 2 was synchronized with "system", the 1D breaker closed, and the diesel generator was secured. Upon securing the unit, the "trouble" alarm was annunciated (apparently due to the engine "lockout" relay being activated). The electrician was advised of the situation.

9. Again, an attempt was made to start the B or C condensate pumps with the same results as before. However, diesel generator No. 2 failed to start.

10. The electrician reset the engine "lockout" relay for diesel generator No. 2 and the unit was initiated in the "fast start" mode.

11. With two CRD pumps running, the control rod drive system hydraulic control station bypass valve was opened to assist in the recovery of reactor water level. The minimum level reached, as recorded by the feedwater control system level recorder, was 9' above the core, 1' 10" above the actuation point for initiating the core spray system and isolating the reactor.

12. The MSIV's were closed by the operator and the isolation condensers were manually initiated to eliminate the water inventory loss from the vessel and to provide for decay heat removal.

The problem experienced with the startup transformer breakers S1A and S1B was traced to an incorrect setting of the current transformer ratio matching taps for the C phase differential relay on both units. In attempting to either carry a sizeable load and/or start a large load, a differential fault current based upon the improper tap setting was sensed, tripping the bus supply breakers. Relay nomenclature is as follows:

Manufacturer: General Electric
Model No.: 12BDD15B11A
5 amps, 60 cycles, 125-250 DC Control Volts

The problem experienced with the diesel generators was identified to be as a result of relay contact actuation which is inherent in the design of the circuit (see Figure 1). When the unit is initiated in the "fast start" mode, power to the engine fault circuit is cut off. With the unit at speed, the OAD relay is energized closing contacts in the engine "lockout" circuit. Under normal conditions, the bearing oil pressure switch would be closed, enabling the MBR relay to be energized, opening a contact in the engine "lockout" circuit. However, that relay could not be energized due to the opened "fast start" relay contacts and consequently the bearing oil pressure contacts remained closed. When the unit was secured, the "fast start" relay was deenergized, closing the "fast start" relay contacts. Before the MBR relay could be energized and its respective contacts opened in the engine "lockout" circuit, the "lockout" relay was actuated which prevented a subsequent start. The engines would remain locked out until the relays could be manually reset locally, as was the case.

The current transformer ratio matching taps were set up properly and station loads were returned to normal. This action was completed by 8:30 a.m. The company Relay Department was contacted and load checks were conducted on each of the transformer phase differential relays. All checks were satisfactory. As regards to the diesel generator problem, during the loss of power conditions, the "lockout" relays were reset allowing the units to restart. A "fast start" test of diesel generator No. 1 was subsequently conducted while monitoring the engine fault relay circuitry, turning up the problem as previously discussed. General Motors has been contacted with regards to a modification which could be made to the circuit to circumvent the problem.

The designed redundancy for the station vital power supplies (i.e., off-site power and diesel generators) was not present and, in fact, had not been present since July 30, 1973, when a test of the startup transformer phase differential relays had been conducted. Under a bona-fide loss of power condition, both diesel generators would have performed their intended function and, in fact, did since both units actuated to energize their respective buses upon initially sensing undervoltage. However, had a problem arisen, which required a subsequent "fast start" immediately after the units had been secured from a "fast start", such as occurred here, no AC power would have been available to power any necessary safeguards equipment until the engine "lockout" relays could be reset.

To prevent a reoccurrence of this type event, the following actions are being taken:

1. Prepare procedures, in conjunction with the Relay Department, for all Relay Department work in the Oyster Creek plant. All work in the future will be coordinated with the shift foreman.

2. Prepare a design change to the diesel generator logic circuits to prevent lockout following shutdown of the diesel. General Motors will be contacted for recommendations.

3. Review and revise Procedure No. 511 "Loss of Feedwater System" as required.

We are enclosing forty copies of this report.

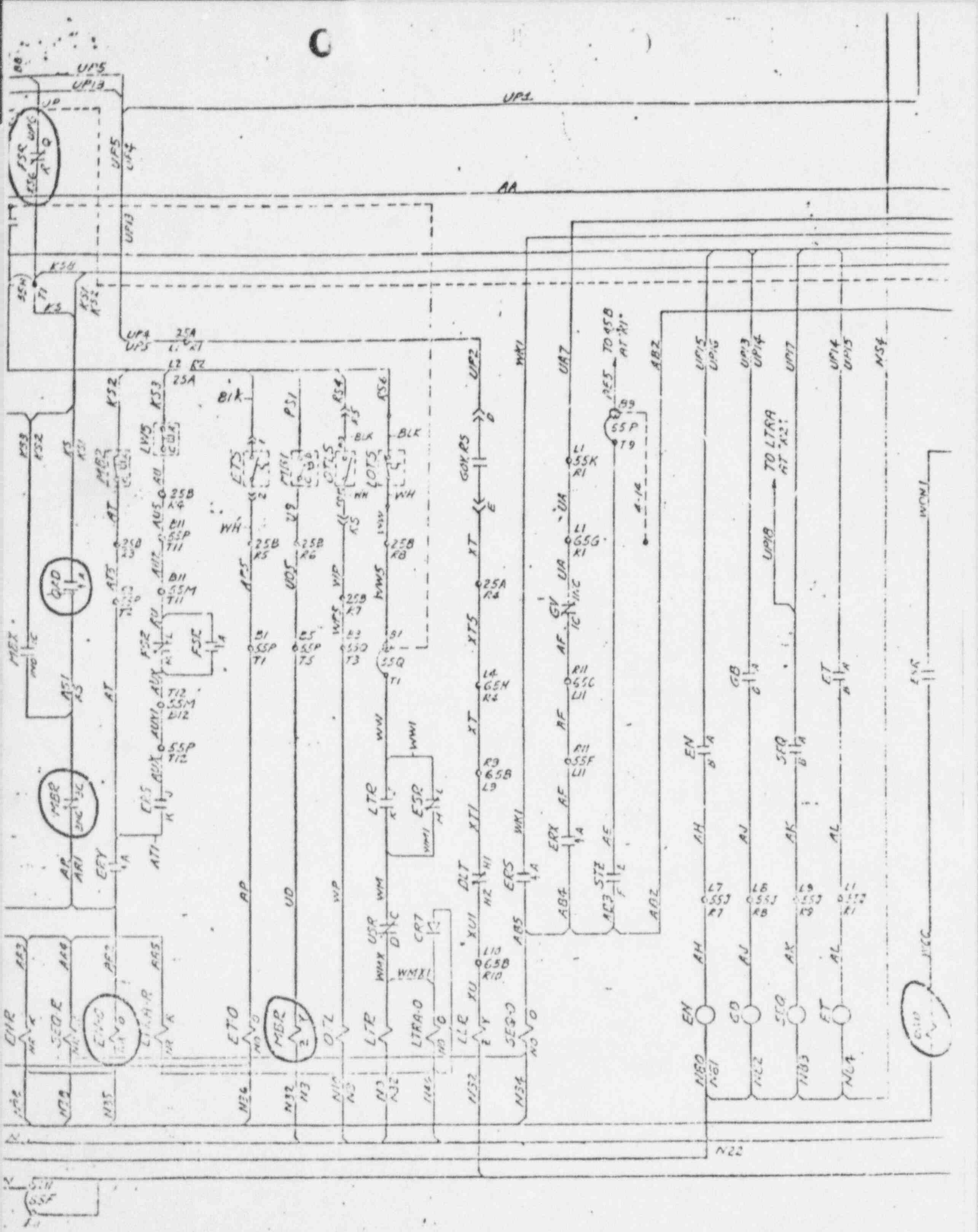
Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Nuclear Generating Stations

cs
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region I



CONTROL SCHEMATIC FOR EMERGENCY DIESEL GENERATOR

Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 539-6111

September 18, 1973

Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Isolation Condenser Failure

The purpose of this letter is to report a failure of isolation condenser NE01A condensate return valve V-14-34 to operate during the last stages of a plant cooldown. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, Paragraph 1.15.D. Notification of this event as required by the Technical Specifications, Paragraph 6.6.2.a., was made to AEC Region I, Directorate of Regulatory Operations, on September 10, 1973.

During the later stages of a plant cooldown, an attempt was made to initiate the "A" isolation condenser. The condensate return valve V-14-34, however, failed to operate. Pertinent data is as follows:

Valve Manufacturer: Crane
Size: 10" Wedge Gate
Operator Manufacturer: Philadelphia Gear Company/Peerless Electric
Operator Type: SNV Size 2
Motor Rating: 4.3 h.p. @ 1900 rpm, 125 volts DC, 35 amps

Prior to this failure, the valve had been operating successfully with no failures on previous operability surveillance tests and also had been used several times during the initial stages of the above mentioned plant cooldown.

Both overloads for the starting contactor were found tripped.

The overloads were reset and the valve was operated electrically with no prior manual operation. It was fully stroked open and closed twice, operating satisfactorily. A trace of currents drawn by the motor was taken and compared with a trace taken the previous Thursday (September 6, 1973). No differences were detected.

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New overloads were tested and installed. Field and armature contacts were checked for corrosion and contact wipe. Shunt and series field resistance and connections were checked. All were satisfactory.

The significance of this event is the loss of redundancy of the isolation condenser system, one of which is required to act as a means for heat removal as detailed in Amendment 67 to the FDSAR.

To minimize the possibility of a reoccurrence of this event, we intend to:

1. Perform weekly surveillance tests on isolation condenser NE01A, monitoring the motor current during the test.

2. Investigate the design service of the valve motor to determine allowable number of starts per hour, ambient conditions, etc.

3. After determining the design service in "2" above, cycle V-14-34 several times to determine if the overloads trip during repeated operation. This will be done with the original overloads and with the replacements.

We are enclosing forty copies of this report.

Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Nuclear Generating Stations

cs
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region I