U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-295/90026(DRS); 50-304/90028(DRS)

Docket Nos. 50-295; 50-304 Licenses No. DPR-39; DPR-48

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place
Downers Grove, IL 60515

Facility Name: Zion Nuclear Power Station - Units 1 and 2

Inspection At: Zion, IL 60099

Inspection Conducted: October 22 - October 26, 1990

Inspector: Peggy R Rescheske for
G. W. Liefelt

Date 11/16/90

Approved by: Peggy R Rescheske for
Monte P. Phillips, Chief
Operational Programs Section

Date 11/16/90

Inspection Summary

Inspection on October 22 - October 26, 1990 (Reports No. 50-295/90026(DRS); No. 50-304/90028(DRS))

Areas Inspected: Routine, announced inspection to follow-up on findings from the emergency operating procedures (EOPs) Team Inspection (NRC Inspection Reports No. 50-295/90004(DRS); 50-304/90004(DRS)) covering EOPs - technical deficiencies, training concerns, and quality verification effectiveness.
Results: No violations or deviations were identified. All open items from the EOP Team Inspection were closed. In particular, the licensee's self initiated quality assurance (QA) audits in the area of procedural control were found to be effective (discussed in Paragraph 2.b.(4)).

REPORT DETAILS

1. Persons Contacted

   a. Commonwealth Edison Company (CECo) Personnel

   +*Adams, A.R., Senior EOP Writer, Contractor
   *Beale, G.W., Regulatory Assurance Staff
   *Bump, D.A., Nuclear Quality Program (NQP) Department, Superintendent
   *Denenburg, G.A., NQP, Group Leader
   + Joyce, T., Station Manager
   + Kurth, W., Production Superintendent
   *Madden, J.J., Assistant Technical Staff Supervisor
   + Saksefski, T., NRC Coordinator, Regulatory Licensing
   *Rieck, T.A., Technical Superintendent
   +*Valos, N., Operating Engineer

   In addition to the above, other members of the Plant Staff (e.g., training licensing, etc.) were contacted during the inspection period.

   b. [illegible]clear Regulatory Commission (NRC)

   +*Leemon, R.J., Resident Inspector
   +*Monninger, J.D., NRR

   +Denotes those present at Entrance Meeting on October 22, 1990.

   *Denotes those present at Exit Meeting of October 26, 1990.

2. EOP Team Follow-up Items (92701)

   a. (CLOSED) Open Item (295/90004-01; 304/90004-01): The corrective actions taken by the licensee to resolve the EOP technical deficiencies[1] were reviewed by the inspector. Procedural changes were completed by the licensee to resolve the following items:

      (1) subcriticality guidance[2];

      (2) contingency for tripping reactor coolant pumps[3];

      (3) restoration of power to service buses following a reactor trip[4]; and

      (4) verification of injection head for emergency boration[5].

      The following two evaluations were not yet completed by the licensee.

      (1) Determination if the containment spray pumps can be stopped when the reactor water storage tank (RWST) level reaches its "LO-LO" set-point[6] was scheduled for completion six months after receiving the contracted Westinghouse study. At the Exit

Meeting, the Technical Superintendent committed to obtain a firm date for the completion of the vendor's work.

(2) Methods to refill RWST to maximize length of time as source for ECCS pumps were being analyzed by the facility. The licensee has identified events that could involve the RWST as the only source of water for injection (e.g., EOPs E-0, ECA-1.2, and ECA-2.1); and has committed to include criteria for assessing the need for refill of the RWST in procedure revisions no later than December 31, 1990.

The actions taken by the licensee for this open item were found acceptable and long term commitments were established in the licensee's tracking system. This open item is considered closed.

b. (CLOSED) Open Item (295/90004-02; 304/90004-02): The following EOP Team Inspection concerns identified during in-plant walkdowns were resolved:

(1) Weaknesses in procedural valve location identification were corrected[7]. Also, the licensee took the initiative to correct other items that were similar in nature (e.g., local operation of auxiliary feedwater motor operated valves (MOV)[8]; and valve line-up for gravity feed between reactor water storage tanks (RWSTs))[9].

(2) As a compensatory action to provide emergency lighting in areas with no permanent emergency lighting[10], the licensee planned to utilize flashlights and miner-helmets which were maintained for fire protection usage in locked cabinets. All in-plant equipment locations that would require access to perform EOP action have been identified. However, long term corrective action to install additional permanent emergency lighting in the plant is pending completion of the licensee's evaluation (commitment date of June 1, 1991[12]), to determine number and location of emergency lighting.

(3) In-plant radio communications were tested in several locations in Unit 2 satisfactory on October 25, 1990[13]. Also, the inoperable in-plant telephones identified in the EOP Team Inspection were repaired and no additional phones were found inoperable. Inability to maintain continuous radio communications in the feed regulating valve areas was to be corrected by enhancing radio communication hardware (to be completed by 1993, based upon equipment availability from the vendor[14]).

(4) The concern with the control and use of EOPs by the Auxiliary Operator (AO) was resolved on October 25, 1990, with a demonstration by the licensee. Several in-plant tasks that would be directed by the EOPs, such as isolating reactor coolant pump (RCP) seals[15] and prevention of accumulator discharge[16], were determined to be performed satisfactory. The information for performing the local EOP actions was concisely given to the AO by a Unit Supervisor. Also, the Unit Supervisor required repeat backs for the information given[17].

To address the EOP Team concern for providing equipment operators with EOPs to be used in-plant, the licensee placed controlled copies of EOPs in the control room for immediate distribution. The inspector noted that these EOPs were not included in a weekly audit with other controlled information in the control room. To correct this, the EOP copies for use in the plant were placed on a weekly audit schedule. Upon further review, it was determined that a facility self-initiated quality assurance (QA) audit of controlled procedures had identified the need to establish formal procedural verification of control room documentation used for plant operations.[18] Furthermore, the licensee was evaluating a method of using a computer check of the procedural data base before a procedure was used to supplement the routine audits.

The actions taken by the licensee to resolve this open item were found acceptable and long term commitments were established in the licensee's tracking system. This open item is considered closed.

c. (CLOSED) Open Item (295/90004-03; 304/90004-03): The EOP Team Inspection identified the need to provide EOP basis training to non-licensed operators. To resolve this concern, a training plan was established by the licensee. However, full implementation for all non-licensed operators will not be completed until January 1, 1992[19].

Another concern identified by the EOP Team was that the policy for control room protocol was not formalized. The EOP Review Committee was currently considering a new ZAP 5-51-4 series procedure to resolve this concern.

The actions taken by the licensee for this open item were found acceptable and long term commitments were established in the licensee's tracking system. This open item is considered closed.

d. (CLOSED) Open Item (295/90004-04; 304/090004-04): The EOP Inspection Team determined that the licensee failed to actually walk-down all specific local EOP actions[20]. To correct this concern, the licensee revised the validation procedure to ensure that EOP tasks will actually be verified in the plant[20]; and walked down all the local EOP actions. Additional guidance was also provided in Nuclear Quality Program Instruction (NQPI) No. 22, "Use of Field Monitoring Program," Revision 0, for conducting QA field walk downs and categorizing the findings.

No violations, deviations, or unresolved items were identified. Four previously identified open items were closed.

3. Entrance and Exit Meetings

The inspector met with licensee representatives (denoted in Paragraph 1) to discuss: inspection scope on October 22, 1990, and inspection findings on October 26, 1990. The licensee did not identify any documents or processes for this report as proprietary.

ENDNOTES USED FOR
ZION EOP FOLLOW-UP REPORT NOS.
50-295/90026(DRS) AND 50-304/90028(DRS)

1. Zion EOP Team Inspection Report Nos. 50-295/90004(DRS) and 50-304/90004(DRS), Paragraph 2.c.(1).

2. Procedure change 0-90-0484 deleted ambiguous caution from Zion Critical Safety Function (CSF) status Tree F-0.1.

3. Added as immediate action in E-0, "REACTOR TRIP OR SAFETY INJECTION," Step 6.c, Rev. 10, with Procedure Change 0-90-0097.

4. EOP ES-0.1, "REACTOR TRIP RESPONSE," Rev. 10, Steps 7 and 8 were revised; and Appendix C was added to restore offsite power to the service buses by Procedure Change 0-90-0557.

5. FR-S.1, "RESPONSE TO NUCLEAR POWER GENERATION/ATWS," Rev. 7, Step 6 was revised as an immediate action by Procedure Change 0-90-0228.

6. Westinghouse evaluation is tracked as 295-100-90-00401.03.

7. Procedure Change 0-90-0488 corrected location levels for valve accessibility.

8. Procedure Change 0-90-0115 for E-2, "FAULTED SG ISOLATION."

9. Procedure Change 0-90-0488 for ECA-3.2, "SGTR WITH LOCA - SATURATED RECOVERY."

10. No emergency lighting fixtures were found in the pump rooms for core spray (CS), residual heat removal (RHR), safety injection (SI), and charging that could require entry using ECA-0.0, ECA-0.1, and ECA-0.2.

11. Equipment is audited by PT-231, "FIRE OPERATING PROCEDURE EQUIPMENT INVENTORY CHECK."

12. Licensee's response for the EOP Inspection Team Report dated May 4, 1990, Attachment 1.

13. Unit-2 Diesel Generator Rooms and auxiliary feedwater pump area.

14. See licensee's response for the EOP Inspection Team Report dated May 4, 1990, Attachment 1.

15. ECA-0.0, "LOSS OF ALL AC POWER," Rev. 10, Steps 7a and 7b.

16. ES-0.4, "NATURAL CIRCULATION COOLDOWN WITH STEAM VOID IN VESSEL (WITHOUT RVLIS)," Rev. 6, Step 12.a.

17. ZAP 10-52-7, "OPERATIONAL COMMUNICATIONS," Rev. 3.

18. Facility QA Report, NQP 22-90-01, Finding No. 2.

19. Agreement obtained at the Exit Meeting on October 26, 1990.

20. ZAP 5-51-4B, "PROCEDURE VALIDATION," Section F, Step 2.c, and Procedure Change A-90-612.