

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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Report Nos: 50-254/97019(DRS); 50-265/97019(DRS)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Quad Cities Nuclear Power Station, Units 1 and 2

Location: 22710 206th Avenue North
Cordova, IL 61242

Dates: October 6 - 10, 1997

Inspectors: Robert Jickling, Emergency Preparedness Analyst
Don Funk, Emergency Preparedness Analyst

Approved by: James R. Creed, Chief, Plant Support Branch 1
Division of Reactor Safety

EXECUTIVE SUMMARY

Quad Cities Nuclear Power Station NRC Inspection Reports 50-254/97019; 50-265/97019

This inspection reviewed the Emergency Preparedness (EP) program, an aspect of Plant Support. This report evaluated the quality of EP program related audits and reviews, reviewed the effectiveness of management controls, verified the adequacy of emergency response facilities and equipment, reviewed EP training and qualification activities, and included follow-up on previous inspection findings. This was an announced inspection conducted by two regional inspectors.

Overall, the EP program had been maintained in an effective state of operational readiness. Emergency response facilities, equipment, and supplies had been well maintained. Management support to the program was strong and interviewed key emergency response personnel demonstrated competent knowledge of responsibilities and emergency procedures. Personnel performance observed during a medical drill was effective and demonstrated good teamwork.

- Emergency response facilities, equipment, and supplies had been well maintained. Demonstration of selected emergency response equipment verified the equipment was operable. (Section P2.1)
- Teamwork by the Radiation Protection Technicians during the medical drill response was evident and response to the simulated contaminated injured person was effective. (Section P5)
- The EP training program was effective. Training records verified that emergency response personnel were trained within the required frequency. Reports indicated that additional involvement by the EP staff during licensed operator simulator training improved operator performance. (Section P5)
- Interviewed key emergency response personnel demonstrated competent knowledge of responsibilities and emergency procedures. (Section P5)
- EP staff reported that management support to the program had remained strong and that the new Radiation Protection Supervisor had improved the support. (Section P6)
- Changes to the EP coordinators' responsibilities realigned their focus to improve the effectiveness of the program. (Section P6)
- The licensee's 1997 Site Quality Verification EP program audit and 1997 EP Self-Assessment Report were effective and satisfied the requirements of 10 CFR 50.54(t). (Section P7)

Report Details

IV. Plant Support

P2 Status of EP Facilities, Equipment, and Resources

P2.1 Material Condition of Emergency Response Facilities (ERFs)

a. Inspection Scope (82701)

The inspectors evaluated the material condition of the control room, Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF). Field monitoring kits were also inspected. The licensee demonstrated the operability of numerous pieces of emergency response equipment, including radiological survey instruments, dose assessment and plant data computers, portable generators, and communications equipment. Records of periodic inventories and equipment tests were also reviewed.

b. Observations and Findings

The control room was well maintained and had current EP procedures available. The emergency notification system phone was verified operable.

The OSC, TSC, and EOF were well maintained. One enhancement discussed was the assembly card readers were now connected to a new security computer. Telephones, computer terminals, and other equipment were operable. Current procedures were available in the facilities. The licensee provided demonstrations of the portable generators, dose assessment computers, and plant data computers.

Prompt alert and notification siren records for 1996 and 1997 were reviewed by the inspectors. Annual operability for 1996 was 98.1 percent with 94.1 percent for the lowest month's average. The current 1997 annual operability average was greater than 97.8 percent with 95.5 percent for the lowest month's average. Siren operability exceeded the acceptability limit of greater than or equal to 90 percent.

The inspectors reviewed the semiannual augmentation drill records. Four drills had been conducted since the last routine NRC inspection and were reported as successful. The inspectors noticed that the callouts for the drills had been conducted at approximately the same time frame and month, between 7:30 p.m. and 8:00 p.m. and in June and December, which might lead to some predictability.

c. Conclusions

Overall, the ERFs, equipment, and supplies were well maintained. All emergency equipment requested to be demonstrated were verified operable. The prompt alert and notification system sirens were well maintained.

P3 EP Procedures and Documentation

a. Inspection Scope (82701)

The inspectors reviewed a selection of licensee emergency plan implementing procedures (EPIPs) and emergency plan sections. Also, a number of Problem Identification Forms assigned to the Emergency Preparedness Group were reviewed.

b. Observations and Findings

QEP 0300-01, "Notification For GSEP Emergencies," Revision 21, May 21, 1997, was reviewed by the inspectors. This revision removed the requirement to use the State Agency Update Checklist (SAUC) form for the periodic updates to the offsite agencies. Periodic updates continue to be provided on an hourly basis and are documented by log book in the responsible ERF.

One of the emergency implementing procedures reviewed by the inspectors was BwZP 1000-2, "Offsite Notifications," Revision 6, October 22, 1996. A recent change was that the "Additional Information" section of the Nuclear Accident Reporting System (NARS) form should only be used to explain why a NARS form is being issued, not for a change in the classification. Discussion with the licensee indicated that the offsite agencies that receive the NARS form had an EAL manual that explained each of the EALs and the potential impact on the public, and agreed additional information would not be needed.

The inspectors reviewed Problem Identification Form, PIF#Q1997-03802, "Rubber Gloves In OSC Deteriorating" and Procedure Change Request for QEP 0600-S02, "OSC Inventory Checklist," Revision 16. These documents had been written for when the inspectors noted several deteriorated rubber gloves in the OSC supply cabinet. The PIF was issued immediately to correct the current problem and additionally covered long term corrective actions to prevent recurrence. The gloves were immediately replaced and the OSC inventory checklist procedure was changed to include inspecting the clothing including rubbers and gloves during the first quarter of the year and replace as necessary. The EP staff was proactive in correcting this issue within the same day of identification. The actions taken by both documents appear to be appropriate to correct the problem and prevent recurrence.

c. Conclusions

The EPIPs reviewed were clear and easy to use. The EP staff was proactive in their immediate correction of the deteriorated rubber gloves stored in the OSC supply cabinet. The procedure change initiated appeared to be effective for preventing recurrence of this issue.

P5 Staff Training and Qualification in EP

a. Inspection Scope (82701)

The inspectors reviewed various aspects of the licensee's training program. The reviews included interviews with selected key emergency response organization (ERO) personnel including a Station Director, OSC Director, and Acting Station Director, review of course critique forms, attendance records, examinations, and the Fourth Quarter Emergency Call List. The inspectors also observed an the onsite portion of an annual medical drill.

b. Observations and Findings

Interviews with three key emergency response personnel indicated appropriate knowledge of procedures and emergency responsibilities. During the interviews, personnel commented on additional involvement by the EP coordinators in operator simulator training. This additional involvement was reported to have shown an improvement in operator performance. Records indicated that drills and training were formally critiqued. Training records were compared with the Fourth Quarter Call List to verify ERO personnel listed on the call list were qualified. All ERO personnel reviewed were currently qualified for their emergency response positions.

Response to the simulated contaminated injured person was effective. Radiation Protection Technicians (RPTs) rapidly responded to the scene after the victim was located. Additional support was quickly requested when the extent of the injuries were identified. All personnel worked efficiently together to care for and transport the victim. Continuous area radiological monitoring for dose rates and contamination were appropriately demonstrated. No problems or impediments were observed.

c. Conclusions

Overall, EP training appeared effective. Competent knowledge of emergency responsibilities and procedures was demonstrated by key ERO personnel. Drills and walkthroughs were effectively used as part of requalification training. Teamwork by the RPTs during the medical drill response was evident and response to the simulated contaminated injured person was effective.

P6 EP Organization and Administration

Few significant changes have been made to the EP organization since the last inspection. The EP Coordinators' responsibilities had been growing beyond the EP program area. These additional responsibilities were cut back to realigned their focus on the EP program and to improve overall effectiveness. Discussions with site and corporate EP staff indicated management support to the program had been maintained and improved with the report to the new Radiation Protection Supervisor.

P7 Quality Assurance in EP Activities

a. Inspection Scope (82701)

The inspectors reviewed the Site Quality Verification (SQV) Audit Report QAA-#04-97-04, "Audit Report for Emergency Preparedness," dated April 11, 1997. Also reviewed was the 1997 Emergency Preparedness Program Self-Assessment report, dated September 12, 1997, conducted by corporate and Byron, Zion, and Dresden EP personnel.

b. Observations and Findings

The SQV staff's audit concluded that the overall implementation of the EP program had been effectively maintained. The audit identified that the interface with the state and local governments have been effective, which satisfied the requirements of 10 CFR 50.54(t). Two level 2 findings related to the untimely update of GSEP manuals and corporate emergency plan implementing procedures in the TSC and EOF, and not tracking or resolving exercise survey sheet improvement items. The EP Program Self-Assessment Report used NRC inspection procedure 82701 as the base document for the review. This review concluded that the Quad Cities EP program had been maintained at an adequate level.

The inspectors followed up on the findings and reviewed the completed actions taken for the identified issues. Licensee evaluation of these items, documentation, tracking, corrective actions, and closure were effective and appropriate. Examples included ensuring that revisions to GSEP manuals were available in the TSC and EOF in a timely manner by making the TSC's copies a "live-time" set of procedures and placing all exercise survey sheet items on the Rad/Chem Tracking System to ensure tracking and resolution. Good practices were also identified in the reports and included new quarterly EP program status reports and additional involvement of the EP coordinators in the licensed operator simulator training.

c. Conclusions

The licensee's 1997 SQV EP program audit and 1997 EP Program Self-Assessment Report were effective and satisfied the requirements of 10 CFR 50.54(t). The audit and program self assessment were of good scope and depth. Identified issues were appropriately tracked and resolved.

P8 Miscellaneous EP Issues

- P8.1 (Closed) Inspection Followup Item No. 50-254/96011-08; 50-265/96011-08: During the 1996 emergency exercise the Shift Engineer selected the wrong emergency action level for the Unusual Event. Corrective actions taken included counseling the individual, discussion of the issue with all senior reactor operators during training, and including a related question in the training examination. Corrective actions for this personal error in judgement were adequate and this item is closed.

- P8.2 (Closed) Inspection Followup Item No. 50-254/96011-09; 50-265/96011-09: During the 1996 emergency exercise the NRC notification for the Unusual Event was untimely. corrective actions included counseling the individual, discussion of the issue with all senior reactor operators during training, and including a related question in the training examination. Corrective actions for this personal error in judgement were adequate and this item is closed.
- P8.3 (Open) Inspection Followup Item No. 50-254/96011-10; 50-265/96011-10: During the 1996 emergency exercise the simulator had problems and the controllers failed to promptly correct and control the scenario. Corrective actions taken included improved controls on scenario development and identification and correction of previously unidentified simulator modeling problems. Also, corrective actions to improve control of the scenario included discussing this issue at a scenario development meeting and an effort to provide more realistic scenarios which would not require extraordinary controller intervention. This item will remain open pending appropriate demonstration of control room simulator scenario control.
- P8.4 (Open) Inspection Followup Item No. 50-254/96008-17; 50-265/96008-17: Was identified for untimely minimum staffing of the Corporate EOF (CEOF) for the declared Alert for the May 10, 1996 tornado event. The issue was for clarification of emergency facility minimum staffing time requirements from the time the emergency was declared and demonstration of the capability to meet these requirements. Corrective actions taken included revising the GSEP manual to reflect changes to the Bulk Power Operations (BPO) standing order to notify the Nuclear Duty Officer (NDO) after activating the CEOF call out and changes to the NDO's procedure to confirm that the BPO Dispatcher had activated the CEOF. Also, the new Community Alert Network System (CANS) for ERO call out had been put in place. Additionally, the licensee agreed to clarify their commitment to minimally staff the CEOF within 60 minutes of classifying an Alert or higher classification during their next GSEP revision. This item will remain open pending appropriate demonstration of timely CEOF staffing.

V. Management Meeting

X1 Exit Meeting Summary

The inspector presented the inspection results to licensee management at the conclusion of the onsite inspection on October 10, 1997. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- P. Behren, Chemistry Supervisor
- A. Chernick, Regulatory Affairs Supervisor
- M. Field, Emergency Preparedness Coordinator
- T. Kirkham, Technical and Health Physics Supervisor
- L. Kreuder, Emergency Preparedness Coordinator
- J. Kudalis, ComEd Business Manager
- L. Pearce, Site Vice President and Acting Station Manager
- C. Peterson, Regulatory Affairs Manager
- B. Rittmer, Assistant Site Security Administrator
- B. Sharer, Maintenance Manager
- D. Stobaugh, Corporate Emergency Preparedness Supervisor

NRC

- L. Collins, Resident Inspector
- C. Miller, Senior Resident Inspector
- K. Walton, Resident Inspector

IDNS

- B. Ganzer, Resident Inspector

INSPECTION PROCEDURES USED

IP 82701 Operational Status of the Emergency Preparedness Program

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-254; 265/96011-08	IFI	Shift Engineer selected incorrect EAL for Unusual Event classification.
50-245; 265/96011-09	IFI	Untimely initial notification of NRC for Unusual Event.

Discussed

50-254; 265/96011-10	IFI	Simulator scenario control problems.
50-254; 265/96008-17	IFI	Untimely minimum staffing of the CEOF for the Alert declared due to the May 10, 1996 tornado event.

LIST OF ACRONYMS USED

BPO	Bulk Power Operations
CEOF	Corporate Emergency Operations Facility
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EPIP	Emergency Implementing Procedures
ERF	Emergency Response Facilities
ERO	Emergency Response Organization
GSEP	Generating Stations Emergency Plan
IFI	Inspection Followup Item
IDNS	Illinois Department of Nuclear Safety
NARS	Nuclear Accident Reporting System
NDO	Nuclear Duty Officer
OSC	Operations Support Center
PIF	Problem Identification Form
RPT	Radiation Protection Technician
SAUC	State Agency Update Checklist
SQV	Site Quality Verification
TSC	Technical Support Center