

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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Report Nos: 50-237/97023(DRS); 50-249/97023(DRS)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Dresden Nuclear Station, Units 2 and 3

Location: 6500 N. Dresden Road
Morris, IL 60450

Dates: October 27 - 30, 1997

Inspectors: Robert Jickling, Emergency Preparedness Analyst

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

EXECUTIVE SUMMARY

Dresden Nuclear Station, Units 2 & 3 NRC Inspection Reports 50-237/97023; 50-249/97023

This inspection reviewed the Emergency Preparedness (EP) program, an aspect of Plant Support. This report evaluated the quality of the 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 one regional inspector.

Overall, the EP program was in an effective state of operational readiness. Emergency response facilities, equipment, and supplies were well maintained. Management support to the program was strong and key emergency response personnel demonstrated competent knowledge of responsibilities and emergency procedures.

- The licensee appropriately declared two Unusual Events and made offsite notifications to State, local, and Federal agencies in a timely manner. (Section P1.1)
- Emergency response facilities, equipment, and supplies were well maintained. Demonstration of selected emergency response equipment verified that the equipment was operable. (Section P2.1)
- The emergency implementing procedures had been recently revised. The reviewed procedures were clear and easy to use. (Section P3)
- The EP training program appeared effective. Interviewed key emergency response personnel demonstrated competent knowledge of responsibilities and emergency procedures. (Section P5)
- The new EP Supervisor had been in place for approximately one year and the EP staff had been challenged by a number of audit and self assessment issues. Management support for the program appeared strong. (Section P6)
- The licensee had effectively addressed and corrected a number of issues identified in the EP program audit and self assessment which included the protective action recommendation procedures not being revised. (Section P7)
- The licensee's 1997 Site Quality Verification EP program audit and 1997 EP Self-Assessment Report were effective in identifying a number of problems and satisfied the requirements of 10 CFR 50.54(t). (Section P7)

Report Details

IV. Plant Support

P1 Conduct of Emergency Preparedness (EP) Activities

P1.1 Actual Emergency Plan Activations

a. Inspection Scope (82701)

The inspector reviewed records and documentation packages regarding plant response for actual emergency events which occurred during 1996.

b. Observations and Findings

An Unusual Event (UE) was declared at 11:22 a.m. on May 15, 1996, due to overall degraded plant conditions. A Unit 3 automatic reactor scram on low reactor vessel water level occurred due to a loss of feedwater flow with the feedwater pumps running, emergency core cooling system discharge to the reactor vessel, and main steam isolation valve closure. The shift engineer appropriately declared the UE using emergency action level (EAL) HU2, "Conditions indicate a potential degradation in the level of safety of the plant." Offsite notification to the State of Illinois via the Nuclear Accident Reporting System (NARS) was transmitted at 11:31 a.m. which met the 15 minute requirement. The Emergency Notification System (ENS) call to the NRC was initiated at 11:41 a.m., well within the one hour requirement. The UE was terminated at 11:08 p.m. based on reactor water chemistry indications of no fuel element problems and the NRC was notified at 11:16 p.m..

An UE was declared at 2:15 p.m. on April 8, 1996, when a potentially contaminated injured person was transported to an offsite medical facility. A worker was injured in a fall in a contaminated area of Unit 1 and taken to the hospital in Morris. Because of his injuries, some of his clothing was not able to be surveyed for contamination. The shift engineer conservatively declared the UE using EAL HU7, "Transportation of radioactively contaminated person to an offsite medical facility." NARS notifications to the State were made at 2:21 p.m. and the NRC was notified at 2:37 p.m. The UE was terminated at 3:55 p.m. when it was determined that the person was not contaminated.

The events were reviewed by the licensee and detailed evaluation packages were compiled by the EP staff. The packages contained evaluation reports, event summaries, associated Problem Identification Forms (PIFs), Accident Investigation Reports, logs, and notification forms. The licensee identified that the classifications were appropriate and offsite notifications were made in a timely manner.

c. Conclusions

The inspector concluded that the licensee appropriately implemented the emergency plan in declaring the Unusual Events. The emergency classifications were made

correctly and offsite notifications were timely. The evaluation packages were detailed and provided good assessments of the plant's response to the actual events.

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 materiel condition of the control room, Technical Support Center (TSC), Operations Support Center (OSC), and the Generating Stations Emergency Plan (GSEP) "barn" and vans. 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 computer terminals, portable generators, GSEP vans, 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 control room also had two cellular phones and a fax machine for offsite notifications.

The OSC, TSC, and GSEP "barn" were well maintained. One change discussed was the relocation of the OSC to the Outage Control Center (OCC). The relocation to the OCC improved the OSC's layout and increased the size of the work area. Current procedures were available in all of the facilities inspected. All ERF status boards had been updated and were clear and concise. The licensee provided demonstrations of the portable generators, GSEP vans, dose assessment computers, and plant data computers.

Prompt alert and notification siren records for 1996 and 1997 were reviewed by the inspector. Annual operability for 1996 was 97.8 percent with 94.9 percent for the lowest month's average. The current 1997 annual operability average was 98.1 percent with 96.8 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 semi-annual augmentation drill records. Four drills had been conducted since the last routine NRC inspection and three were reported as satisfactory. One drill was identified by the licensee as unsatisfactory where no one received the call out page due to an operator error. This drill was re-performed two days later and reported as satisfactory.

c. Conclusions

Overall, emergency facilities, equipment, and supplies were well maintained. All emergency equipment requested to be demonstrated was verified operable. The

prompt alert and notification system sirens were well maintained. Records of periodic tests and drills reviewed were detailed and complete.

P3 EP Procedures and Documentation

a. Inspection Scope (82701)

The inspector reviewed a selection of licensee emergency plan implementing procedures (EPIPs). Also, the Dresden Nuclear Tracking System (NTS) was reviewed.

b. Observations and Findings

The EP staff recently revised a large number of emergency procedures and Emergency Plan Maintenance Procedures to ensure consistency with the latest revision to the GSEP. More than 23 of the site's EPIPs had been revised between July and September of 1997.

EPIP 0105-01, "Station Director Implementing Procedure," Revision 6, dated August 4, 1997; EPIP 0100-01, "Acting Station Director Implementing Procedure," Revision 9, dated October 14, 1997; and EPIP 0160, "OSC Director Implementing Procedure," Revision 5, dated August 4, 1997, were reviewed by the inspector. Revision 9 to EPIP 0100-01, included the new protective action recommendations (PAR) for minimum recommendations at the General Emergency level and revised flowchart and was consistent with the current GSEP.

The inspector reviewed the NTS (the process that the EP group used to identify, track, and close EP issues) to determine the range of issues identified and the effectiveness of tracking and disposition of the identified issues. The items reviewed were clearly identified by number and description, cognizant management and responsible persons, due dates, and item status were also listed. Documentation packages for selected items were reviewed and found to be detailed and complete, with clearly trackable issues, status, dates, and closure documentation.

c. Conclusions

The EPIPs reviewed were clear and easy to use. The NTS was effective relative to emergency planning (EP) issues and the method to track and close these issues. No problems were identified in the procedures or documents reviewed.

P5 Staff Training and Qualification in EP

a. Inspection Scope (82701)

The inspector 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, Acting Station Director, and

reviews of attendance records and the Fourth Quarter GSEP Augmentation Telephone List.

b. Observations and Findings

Interviews with three key emergency response personnel indicated appropriate knowledge of procedures and emergency responsibilities. The Station Director adequately demonstrated knowledge of the NRC's and Department of Energy's incident response. During the interviews, personnel commented on the responsiveness of the EP group and that an open attitude regarding questions and concerns was maintained by the EP staff. Also, interviewed personnel discussed the effectiveness of the scenario based training and "super-job performance measures" (super JPMs) they had received.

Records indicated that drills and training were formally critiqued. Training records were compared with the Fourth Quarter GSEP Augmentation Telephone List to verify ERO personnel listed on the call list were qualified. All ERO personnel reviewed were currently qualified for their emergency response positions.

c. Conclusions

Overall, EP training appeared effective. Competent knowledge of emergency responsibilities and procedures was demonstrated by key ERO personnel. Drills, tabletops, and "super JPMs" were effectively used as part of requalification training. All personnel reviewed listed on the current call out telephone list were qualified for their emergency response positions.

P6 EP Organization and Administration

Changes to the EP organization included the replacement of the previous EP Supervisor (who had the position for approximately one year) in May of 1997. Shortly after the previous EP Supervisor departed, a required program review and program self assessment were conducted and identified a number of issues. In response to the issues identified, management oversight and support had been increased. Quarterly program status reports were also used to ensure the EP program was being appropriately implemented. Currently, management support for the program appeared to be strong as indicated by a number of program upgrades which included ERF status board upgrades, additional ERF computer monitors, the OSC relocation, emergency procedure revisions, status reports of the program, and discussions with site and corporate personnel.

P7 Quality Assurance in EP Activities

a. Inspection Scope (82701)

The inspector reviewed the Site Quality Verification (SQV) Audit Report #QAA-12-97-05, "Emergency Planning Audit #12-97-05," dated May 15, 1997. Also reviewed was the May 1, 1997 Emergency Preparedness Program Self Assessment report, conducted by

corporate, Quad Cities, and Zion EP personnel, and the "Root Cause Investigation Report," Number 237-200-97-03300.

b. Observations and Findings

In May 1997, the SQV staffs identified that management attention was needed in the area of EP, specifically in the area of maintaining emergency procedures. Four findings were identified in SQV's audit related to EIPs not being maintained current with the changes made to the GSEP Manual (specifically the EIPs containing the PAR procedures had not been revised to reflect the more conservative PARs developed from the revised GSEP manual which were currently agreed upon by the State of Illinois), the GSEP Augmentation and Notification Phone List not being adequately maintained, specific training records were not readily retrievable, and a lack of attention to detail of GSEP Equipment Surveillances.

Due to the audit and self assessment findings, a "Root Cause Investigation Report," Number 237-200-97-03300, was conducted. The root cause report identified that senior management had failed to monitor the EP program. This appeared to have led to the program being identified as "marginally acceptable" (identified in a PIF dated May 1, 1997). Corrective actions included hiring an experienced EP Supervisor and immediately addressing and correcting the audit findings.

The corrective actions reviewed by the inspector included the hiring of a new experienced EP Supervisor, counseling of the responsible management, revision of the PAR EIPs and a majority of the other emergency procedures, identifying personnel not attending GSEP training to the Station Manager, performing monthly update meetings with station management, performing an EP program effectiveness review, and controlling the use of the ERFs. These corrective actions were timely and appeared to be appropriate to correct the problems as well as prevent possible recurrence.

The failure to update the PAR EIPs within four months of a GSEP Manual revision as stated in the GSEP Manual, Revision 71, Section 8.5 is a violation of 10 CFR 50.54 (q), "Conditions of Licenses." This non-repetitive, licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. (NCV 50-237;249/97023-01(DRS)).

c. Conclusions

The licensee's 1997 SQV EP program audit and 1997 EP program self assessment were effective in identifying problems. The audit satisfied the requirements of 10 CFR 50.54(t) to evaluate and document the adequacy of offsite interface with the State and local agencies. The audit and EP program self assessment were of good scope and depth. Identified issues were appropriately identified, tracked, effectively corrected, and closed in a timely manner.

The inspector noted that the licensee had effectively addressed and corrected a number of issues identified in an EP program audit and self assessment. One Non-Cited Violation of GSEP Manual Section 8.5 was identified.

P8 Miscellaneous EP Issues

- P8.1 (Open) Inspection Followup Item No. 50-237/97014-01; 50-249/97014-01: During the 1997 emergency exercise the scenario incorrectly interpreted the basis for an Alert emergency action level (EAL). Corrective actions in progress included a discussion of revising the EAL basis during the next GSEP revision in mid 1998. This item will remain open pending completion of appropriate corrective actions.

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 30, 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

G. Abrell, NRC Coordinator
K. Deck, EP Trainer
L. Duchek, EP Staff
C. Richards, Audit Supervisor, Q & SA
R. Rysner, Lead Auditor, Q & SA
H. Simons, EP Supervisor
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M. Vonk, EP Director
D. Winchester, Manager, Q & SA

NRC

B. Dixon, Resident Inspector
K. Reimer, Senior Resident Inspector
D. Roth, Resident Inspector

IDNS

C Settles, Resident Inspector

INSPECTION PROCEDURES USED

IP 82701 Operational Status of the Emergency Preparedness Program

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-237;249/97023-01	NCV	Failure to revise the PAR EIPs within four months of a change to the GSEP manual.
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Discussed

50-237;249/97014-01	IFI	1997 Dresden exercise related to tracking licensee actions to clarify the Alert EAL basis for loss of control room annunciators.
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LIST OF ACRONYMS USED

CEOF	Corporate Emergency Operations Facility
CFR	Code of Federal Regulations
ComEd	Commonwealth Edison
DRS	Department of Reactor Safety
EAL	Emergency Action Level
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
NCV	Non-Cited Violation
NTS	Nuclear Tracking System
OCC	Outage Control Center
OSC	Operations Support Center
PAR	Protective Action Recommendation
PIF	Problem Identification Form
RPT	Radiation Protection Technician
SQV	Site Quality Verification
TSC	Technical Support Center