

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-254/88006(DRSS); 50-265/88007(DRSS)

Docket Nos. 50-254; 50-265

Licenses No. DPR-29; DPR-30

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Facility Name: Quad Cities Nuclear Generating Station, Units 1 and 2

Inspection At: Quad Cities Station, Cordova, Illinois

Inspection Conducted: March 15-17, 1988

Inspector: *Thomas J. Ploski*
Thomas J. Ploski

3/31/88
Date

Approved By: *William G. Snell*
William G. Snell, Chief
Emergency Preparedness Section

3/31/88
Date

Inspection Summary

Inspection on March 15-17, 1988 (Report Nos. 50-254/88006(DRSS); 50-265/88007(DRSS))

Areas Inspected: Special, announced followup inspection on the following areas of the emergency preparedness program: licensee actions on previously-identified items; emergency plan activations; review of licensee initiatives to improve the program following the November 1987 routine inspection; and operational status of the program. The inspection involved one NRC inspector.

Results: No violations of NRC requirements were identified.

DETAILS

1. Persons Contacted

- *R. Bax, Station Manager
- *R. Robey, Services Superintendent
- *D. Gibson, Regulatory Assurance Supervisor
- *J. Sirovy, Rad Chem Supervisor
- *P. Skiermont, GSEP Coordinator
- *C. Brown, GSEP Coordinator
- *L. Literski, GSEP Coordinator (Braidwood)
- *K. Schmidt, GSEP Training Instructor
- *C. Norton, Quality Assurance Engineer
 - A. Mosel, Instructor, Production Training Center
 - R. Hopkins, Quality Assurance Engineer
 - V. Evert, Emergency Planning Contractor

*Indicates those who attended the March 17, 1988 exit interview.

2. Licensee Actions on Previously-Identified Items

(Open) Item No. 265/87031-01: A Severity Level IV violation was issued for the untimely initial notification of the NRC following the SCRAM and ECCS discharge on October 19, 1987. As indicated in Reports No. 254/88002(DRSS) and 265/88002(DRSS), the licensee has already completed short-term corrective actions. The licensee's longer-term corrective action, scheduled for completion in April 1988, was in progress during this inspection. This corrective action involved upgraded training on NRC notification requirements and the Station's Emergency Action Levels (EALs) during semi-annual Senior Reactor Operator requalification training. One procedural upgrade was in progress as a result of trainee feedback. This item will remain open pending completion of the longer-term corrective action.

(Closed) Item Nos. 254/87031-03 and 265/87031-04: The licensee committed to define the 1988 training program for the onsite emergency organization by March 31, 1988. Based on records review and discussion with cognizant personnel, this commitment has been met. A matrix of training requirements has been approved. The 1988 training schedule has been finalized. A GSEP Training Instructor has been identified, certified, and has conducted several training sessions with guidance from a member of the corporate training staff. Modules used in these training sessions had the required internal approvals, while the remainder of the upgraded modules were in the latter stages of the approval process. Additional information on the 1988 training program is provided in Section 4.d of this report. This item is closed.

(Closed) Unresolved Item Nos. 254/87031-04 and 265/87031-05: The licensee's audit provisions for an annual evaluation of the adequacy of the Station's interface with offsite support agencies was not complete in November 1987. Quality Assurance (QA) Department staff conducted a

supplemental audit in December 1987 which addressed the adequacy of the interface with offsite agencies. However, this assessment was still considered incomplete, as an annual meeting with offsite officials was postponed from mid-December 1987 until early February 1988 due to severe weather conditions. QA staff attended the February meeting and have completed their evaluation. Reviews of the December audit and February surveillance reports indicated that the licensee had adequately evaluated the quality of the Station's interface with offsite support agencies. This item is closed.

(Open) Item Nos. 254/87031-05 and 265/87031-06: The licensee must re-establish and implement an adequate administrative system for selecting, documenting, and tracking corrective actions on items identified during internal drill critiques and other internal program evaluations. The Regulatory Assurance Department's Nuclear Tracking System (NTS) has been selected as the means to track self-identified items through completion of corrective action. The GSEP Coordinators were in the process of reviewing 1987 internal drill critiques and planned to add appropriate items to the NTS during March 1988. This item remains open, pending review of documentation indicating that the NTS is being utilized to track self-identified program improvement items in addition to NRC concerns.

(Closed) Item Nos. 254/87031-06 and 265/87031-07: A Severity Level IV violation was issued due to the failure to update and promptly issue the fourth quarter 1987 revision to the procedure utilized to list and notify members of the onsite emergency organization. The need to improve administrative mechanisms to ensure timely updating of the callout procedure was monitored using the NTS. Procedure QEP 560-1, "Scheduling of GSEP Surveillance Requirements," has been adequately revised to address the need to update the callout procedure each quarter. This item is closed.

(Open) Item Nos. 254/87900-01 and 265/87900-01: Followup on NRC Information Notice No. 87-58. This notice was addressed to all nuclear power reactor facilities having an operating license, and emphasized the requirement that the licensee must maintain adequate personnel onshift to permit continuous communications with the NRC following an emergency declaration.

At present, the Shift Engineer (SE) or Station Control Room Engineer (SCRE) would continually maintain communications with the NRC if so requested by NRC Duty Officers. However, by August 1988, the licensee planned to have an additional Engineering Assistant (EA) onshift at all times. In addition to their normal duties, the EAs would help make initial notification calls to the States and NRC following emergency declarations, and would maintain continuous communications with the NRC if so requested. This item remains open until EAs trained on emergency communications responsibilities are onshift at all times.

3. Emergency Plan Activations (92700)

NRC and licensee records associated with all emergency plan activations between October 20, 1987 and January 31, 1988 were reviewed. These records included: Licensee Event Reports (LERs); records generated by NRC Duty Officers; Control Room logs; Nuclear Accident Reporting System (NARS) forms completed following an emergency declaration; and the internal evaluation of one activation.

During this time period, onshift personnel correctly classified one Unusual Event. Based on the LER review, there were no other classifiable events through January 1988. Initial notifications to Illinois, Iowa, and NRC officials were completed within the regulatory time limits.

The GSEP Coordinators' proceduralized evaluation of records associated with this emergency declaration was correct and very thorough. One problem was identified regarding the need to better document the relevant EAL in a Control Room log. Corrective action on this self-identified concern has been completed. Comments on the evaluation had been solicited from both onshift personnel involved in the Unusual Event declaration and termination, and from appropriate Station management.

Based on the above findings, this portion of the licensee's program was acceptable.

4. Operational Status of the Emergency Preparedness Program (82701)

This section primarily addresses actions taken on many of the items identified in the licensee's Emergency Preparedness Improvement Program. Progress was evaluated on items for which Station personnel had been assigned lead responsibility or had made a significant contribution. With a few minor and understandable exceptions, corrective actions on these items were on or ahead of schedule. The quality of the corrective actions has remained good.

a. Emergency Plan and Implementing Procedures

Work continued on the total upgrade to the Station's Emergency Plan Implementing Procedures (EPIPs). A review of a sample of these QEP-series procedures indicated that greater emphasis was being placed on the use of checklists instead of lengthy procedure text. Contractor and licensee staff involved in this project indicated that feedback was usually being solicited from a sample of persons who would be qualified to implement the various procedures. Some procedure refinement was also anticipated following an April 1988 tabletop drill. The licensee's original target date for completing the EPIP drafts was mid-April, with training on the upgraded and approved EPIPs to be completed by June 1988. These dates were likely to slip several weeks, which is understandable and acceptable given the magnitude of the development task and the quality of the work reviewed during this inspection. The licensee planned to issue entirely new QEP manuals during June, rather than issuing the upgraded procedures piecemeal. Use of the upgraded EPIPs would be demonstrated during the August 1988 exercise.

Administrative (QAP-series) procedures permit any Station employee to initiate a proposed EPIP revision. However, relevant administrative procedures did not require that the onsite technical experts in emergency planning be in the review chain for all proposed EPIP changes. Instead, one of the GSEP Coordinators' supervisors would likely be included in the review process. Therefore, the potential existed that an EPIP revision could be approved that would conflict with the Emergency Plan, other EIPs, or with regulatory requirements simply because an emergency planning specialist had not been included in the review chain. The coordinators suspected that the omission of a GSEP Coordinator from some previous EPIP reviews had resulted in cases of incomplete upgrades to related EIPs, poor cross-referencing of related EIPs, or needless duplication of instructions in several EIPs. Although the licensee had identified this review problem, a corrective action had not been finalized. The licensee should revise appropriate administrative procedures to ensure that the GSEP Coordinator is always included in the review chain for proposed EIP changes. This is an Open Item. (254/86006-01)

The GSEP Coordinators and the Procedures Coordinator had an informal agreement during the current EIP upgrade project. Any proposed EIP changes were being forwarded to the GSEP Coordinators so that these ideas could be factored into the EIP upgrade project. Another benefit of this informal arrangement was that the GSEP Coordinators were aware of all proposed changes to the current EIPs, and could identify and reject any that conflicted with current commitments and regulatory requirements before time had been spent by a number of onsite reviewers.

The licensee planned to significantly upgrade the Station's Emergency Action Levels (EALs) prior to the 1988 exercise. No delays were currently expected regarding the receipt of some inputs from the architect/engineer. The proposed EALs were scheduled to be submitted for NRC review in mid-May 1988.

The Station's current EALs were listed in procedure QEP 200-T1. An Unusual Event would be declared, in conformance with regulatory guidance, if an earthquake was felt onsite or was detected by the Station's seismic instrumentation. QEP 340-1, "Operation During Earthquake Conditions", included a statement that offsite seismic information may be obtained from the National Earthquake Information Center. However, the procedure did not clearly indicate whether this center was to be promptly contacted to confirm a suspected onsite earthquake. A 24-hour telephone number for the information center was not provided in either QEP 200-T1 or QEP 340-1. The licensee indicated that this point of confusion would be eliminated in the new set of EALs.

Based on the above findings, this portion of the licensee's program was acceptable; however, the following item should be considered for improvement:

- To improve the efficiency of reviewing future EPIP revisions, the GSEP Coordinators should be included early in the review process so that proposed revisions that conflict with current commitments, other EIPs, or regulatory requirements can be more quickly identified and rejected.

b. Emergency Facilities, Equipment, and Supplies

The inspector toured the Technical Support Center (TSC), Emergency Operations Facility (EOF), and Joint Public Information Center (JPIC). All were being maintained in an operational state of readiness. The TSC's emergency ventilation system has been on an annual surveillance frequency. The most recent successful leak rate and pressure drop tests had been performed in November 1987. A successful charcoal bed adsorbency test was conducted in January 1988. The licensee indicated that work orders had been submitted to enable a portable area radiation monitor to be wall-mounted and to better seal around a pipe penetration in the ventilation system's room.

By correspondence dated March 9, 1988, the licensee notified NRC Region III that the JPIC upgrade had been completed. The facility was essentially an addition to the EOF building. The new JPIC is a substantial upgrade to a nearby garage that had been converted for use as a JPIC during exercises. The new facility had a heating and air conditioning system. The JPIC's entrance and restrooms were separate from the EOF's. The carpeted briefing room was equipped with a stage, public address system, and could accommodate at least 100 persons. Another large room was provided for the licensee's, States', counties', and the NRC's public information staffs. However, separate work areas had not yet been identified for each organization. Another room contained over thirty telephone booths for media use. The various rooms were well lit and provided with emergency lights.

The EOF's internal layout had not yet been revised to include such refinements, resulting from the Zion Station's Federal Field Exercise, as electronic status boards.

The licensee initiated a re-evaluation of criteria for acceptable offsite relocation areas for nonessential persons who may be ordered to evacuate any of the six nuclear stations during an emergency. The emergency planning contractor and GSEP Coordinators had developed a comprehensive set of acceptance criteria and have forwarded them to corporate staff for consideration. The coordinators had already made efforts to identify potential relocation areas that would be improved over the two locations currently identified in the EIPs.

Progress has been made toward procuring an improved paging system for key members of the emergency organization at Quad Cities and possibly other stations. However, longer time was needed than had been anticipated to gather information on available options. Bid requests were issued in early March. Contract issuance was not expected until May 1988, with system implementation at the Station likely to occur in June 1988.

Based on the above findings, this portion of the licensee's program was acceptable.

c. Organization and Management Control

Based on discussions with Station management and the GSEP Coordinators, plus evaluation of the work done since the January 1988, inspection, it was apparent that Station and corporate management have continued to devote significant attention and resources toward improving the Station's emergency preparedness program.

Corporate staff, with the assistance of one INPO representative, conducted an onsite program assessment in early February 1988. This assessment was in addition to QA Department efforts. Although the final report was not yet available for review, it was understood that the assessment was similar in scope to those already conducted at the Byron and Braidwood Stations. Assessment findings would be tracked through resolution. An INPO assessment visit was planned for some unspecified time in the second half of 1988.

Procedure QEP 520-3 outlined the training program for the Station's GSEP Coordinator. However, as indicated in Inspection Report Nos. 254/87031(DRSS) and 265/87031(DRSS), that training program had a number of flaws. In early March, the program had been substantially upgraded in response to NRC and some self-identified concerns. A multi-level qualification program has been developed and implemented. The program has flexible deadlines for completing different levels, and allows an individual to make progress on several levels simultaneously. The qualification program includes required readings of relevant NRC, INPO, and FEMA documents; reactor systems training; professional training opportunities; familiarization with State and county emergency plans and response facilities; and comprehensive training on the licensee's emergency preparedness program as implemented at Quad Cities, other stations, and at corporate-staffed facilities. A corporate emergency planning supervisor has been assigned the responsibility to monitor and evaluate progress made by the Station's GSEP Coordinators on this qualification program. The licensee was in the latter stages of determining which qualification elements were appropriate for the GSEP Training Instructor position.

More consistent use of existing administrative procedures has been chosen as the means of ensuring that the GSEP Coordinators and Training Department staff remain aware of normal job assignment changes that may impact emergency organization staffing levels. The emergency organization's callout procedure for the second calendar quarter has been revised to identify trained communicators for TSC or OSC use by technical background. At present, the pool of trained communicators consisted of about twelve technical/operations staff, three Rad Chem staff, and three maintenance personnel. Additional communicators were scheduled for training in late March. The second calendar quarter revision to the callout procedure no longer contained the redundant "OSC Support Staff" category, which consisted of communicators. Another change was planned for the third quarter revision to the callout procedure. That revision would list the names of OSC Directors and Supervisors, all of whom were Shift Foremen and Rad Chem Foremen, respectively.

Based on the above findings, this portion of the licensee's program was acceptable.

d. Training

The following expands on information provided in Section 2 of this report.

The Station has appointed a GSEP Training Instructor, who has successfully completed the licensee's basic instructor training program. The licensee was also determining the emergency preparedness training qualifications that this person would need, as an outgrowth of the upgraded qualification program for the GSEP Coordinators. The new instructor has conducted several training sessions for communicators under the guidance of a certified instructor from the licensee's Production Training Center (PTC), who has a good background in the licensee's emergency preparedness program. The new instructor has also visited counterparts at the licensee's Byron, Braidwood, and LaSalle Stations to establish working relationships and to gather potentially useful information for the Quad Cities Station's program, such as additional examination questions.

The PTC instructor has been detailed to the Quad Cities Station since mid-January. One of his major tasks has been the upgrade of existing training modules. As of early March 1988, all had been initially rewritten. Those used in several 1988 training sessions had already been approved, while the remainder were in the latter stages of the review process. Upgrades included adding more references to Station EIPs, a task which will have to be redone to some extent in mid-1988 since the EIPs' organization is changing as part of their upgrade.

A need for two additional training modules was recognized during the upgrading project. Module No. 69 was being developed to provide more details on the Station's Emergency Response Facilities (ERFs), the Corporate Command Center, and the facilities' communications equipment. Module No. 70 was being developed to provide additional training on the Station's Safety Parameter Display System (SPDS) and the Point History trending program. Module No. 70 would involve classroom and "hands-on" training, as would the associated examination. Neither module had been approved at the time of this inspection.

The 1988 training schedule for the onsite emergency organization was approved in mid-March, with relevant modules for specific positions determined from an approved matrix. The bulk of the training would be conducted between April and December. Position-specific training was spread out during this 8-month period, rather than being compressed into one or two months as in previous years. Tabletop drills were scheduled in May, August, and November. The scope of the May tabletop drill was under discussion during the inspection.

Several licensed individuals had been identified for the 1988 exercise scenario development team. Initial meetings with corporate emergency planning staff would begin in April.

Records were reviewed for the February 1988 meeting with representatives of offsite support organizations. This meeting fulfilled the regulatory requirement for 1987, as the December 1987 meeting was postponed due to severe weather conditions. The agenda included: a discussion of emergency classes and EALs; information on obtaining relevant QA audit reports; information on the licensee's emergency response facilities, emergency organization, and offsite notification provisions; and an update on the Chernobyl situation. Attendance sheets indicated that over forty representatives from Illinois and Iowa support organizations attended the meeting.

Based on the above findings, this portion of the licensee's program was acceptable.

e. Audits

As indicated in Section 2, a supplemental December 1987 audit and a February 1988 surveillance together contained an adequate evaluation of the quality of the Station's interface with offsite support organizations. QA Department staff indicated that they were being kept adequately informed of upcoming meetings between licensee and offsite support organizations' staffs which could be incorporated into the 1988 evaluation of the quality of offsite interface.

A QA Department surveillance report on a March 1988 inplant Health Physics drill was reviewed. The surveillance was adequately documented and indicated that several improvement items had been identified by drill participants.

Based on the above findings, this portion of the licensee's program was acceptable.

5. Preliminary Assessment of Provisions for the NRC Expanded Site Team

Requirements for workspace and communications equipment for NRC emergency responders located in licensee Emergency Response Facilities (ERFs) predate the Expanded Site Team concept, as described in IE Information Notice No. 86-18, "NRC-On-Scene Response During a Major Emergency." Thus, an Expanded Site Team may find it difficult to fulfill its statutory responsibilities from licensee ERFs due to workspace and communications equipment limitations, although the licensee's provisions for an initial on-scene NRC presence would be in compliance with current regulatory requirements. Therefore, Region III staff are assessing the adequacy of ERFs for an Expanded Site Team's needs. Should an ERF be considered adequate with respect to requirements for an initially small Site Team, but lack sufficient workspace and/or communications equipment for an Expanded Site Team, regional management may elect to negotiate for additional provisions on a case-by-case basis.

The TSC could accommodate five or six NRC staff at most. However, there were no provisions for NRC workspace next to the Station Director or Rad Chem Director. The sole NRC desk, upon which the Emergency Notification System (ENS) and Health Physics Network (HPN) telephones were located, was in the rear of the TSC. A telephone having in plant and an outside line for NRC use was also on this desk.

A portion of a large meeting room in the EOF had approximately 500 square feet of floorspace, twelve desks, and about eight outside telephone lines and at least one plant extension reserved for NRC use. This workspace was also provided with an ENS phone, an HPN phone, and a public address speaker so that EOF briefings could be readily monitored. This workspace could accommodate about fifteen Site Team personnel, and could be segregated from the remainder of the meeting room by a movable partition.

Three additional desks reserved for Site Team use were located in the rear of the EOF room where the licensee's key staff would function. These NRC desks were near those provided for Illinois, Iowa, and FEMA representatives. Telephones on each desk gave access to two local lines, two microwave lines, and one plant extension. An HPN telephone was located near the workstations of the licensee's dose assessment and protective measures staffs. However, this portion of the EOF had no provisions for positioning principal Site Team staff near their licensee counterparts.

The new JPIC included a large workroom for use by the licensee's, Illinois', Iowa's, the four counties', and the NRC's public information staffs. However, workstations for each organization had not been predesignated.

Based on the above findings, this portion of the licensee's program was acceptable.

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The licensee indicated that refinements to the TSC's, EOF's, and JPIC's internal layouts were scheduled for completion prior to the August 1988 exercise. The licensee was willing to discuss counterpart seating and additional communications equipment desires with NRC staff, preferably before that exercise.

6. Exit Interview

On March 17, 1988, the inspector met with those licensee representatives identified in Section 1 to present and discuss the preliminary inspection findings. The licensee agreed to consider the items discussed, and indicated that none were proprietary in nature.