U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-254/87031(DRSS); 50-265/87031(DRSS)

Docket Nos. 50-254; 50-265 Licenses No. DPR-29; No. DPR-30

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

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

Inspection At: Quad Cities Station, Cordova, Illinois

Inspection Conducted: November 2-6, 1987

Inspectors: T. J. Ploski W. Snell for 12/1/87
Date

M. J. Smith W. Snell for 12/1/87
Date

Approved By: W. Snell, Chief W. Snell 12/1/87
Emergency Preparedness Section Date

Inspection Summary

Inspection on November 2-6, 1987 (Reports No. 50-254/87031(DRSS); No. 50-265/87031(DRSS))
Areas Inspected: Routine, unannounced inspection of the following areas of the licensee's emergency preparedness program: emergency plan activations; operational status of the emergency preparedness program; emergency detection and classification; notifications and communications; changes to the program; shift staffing and augmentation; knowledge and performance of duties (training); and licensee audits. The inspection involved two NRC inspectors.
Results: Two violations of NRC requirements, one Unresolved Item and six Open Items were identified during the inspection. The Notices of Violation are enclosures to the report's transmittal letter. The violations and other items are described in the text of the inspection report.

DETAILS

1. Persons Contacted

*R. Bax, Station Manager
*R. Robey, Services Superintendent
*D. Gibson, Quality Assurance Superintendent
*G. Spedl, Assistant Superintendent, Tech Services
*J. Golden, Supervisor of Emergency Planning, Tech Services, Nuclear
*T. Gilman, Emergency Planning Supervisor, Tech Services, Nuclear
*P. Skiermont, GSEP Coordinator
*J. Sirovy, Rad Chem Supervisor
*R. Carson, Lead Health Physicist
*J. Wunderlich, Regulatory Assurance Staff
*C. Norton, Quality Assurance Engineer
*M. Melton, Training Instructor
D. Clark, Shift Engineer
C. Hekel, Station Control Room Engineer

*Indicates those present at the November 6, 1987 exit interview.

2. Licensee Action on Previously Identified Items

(Closed) Open Item Nos. 254/86017-03; 265/86017-03: Semi-annual training required by Section 8.2 of the Generating Stations Emergency Plan (GSEP) for Control Room personnel had not been completed. The revised Control Room personnel requalification lesson plans met GSEP Section 8.2 criteria. The lesson plans also required a passing score of 80% on the requalification test. A review of Reactor Operator training records indicated that most operators had successfully completed the required training, except that the final group of operators were attending training during this inspection. This item is closed.

(Open) Open Item Nos. 254/86017-04; 265/86017-04: Walkthroughs with Rad Chem Technicians indicated that they did not know the correct procedure for collecting onsite air samples. Corrective action for this item was to be addressed during the April 1987 retraining for Rad/Chem Technicians. The requalification lesson plan had been reviewed and presented to plant Rad/Chem Technicians; however, about 12 supervisory personnel also listed on the Emergency Rad/Chem Call List as Rad/Chem Technicians had not received the requalification training. These supervisory personnel were prioritized on the callout list such that they were most likely to be notified to respond to an emergency. They would, therefore, be expected to perform the Rad/Chem Technician responsibilities, including collection of an onsite air sample. At the exit interview, the licensee indicated that it would consider deleting the supervisory personnel from the Emergency Rad/Chem Call List, thereby leaving about 40 to 45 fully trained technicians on the Call List. The inspectors accepted this solution, provided that it would be implemented promptly. This item remains open.

3. Emergency Plan Activations

(Closed) Open Item Nos. 254/860xx-02 through 04: Emergency Plan Activations. Licensee and NRC records associated with emergency plan activations that occurred between October 1, 1986 and October 19, 1987 were reviewed. These records included: License Event Reports (LERs); records generated by NRC Duty Officer; Control Room logs; Nuclear Accident Reporting System (NARS) forms completed by onshift personnel; and the licensee's internal evaluations associated with each emergency plan activation.

During the aforementioned time period, the licensee correctly classified eleven Unusual Events. Based on the LER review, there were no other classifiable events during the period. With the exception of the Unusual Event declared on October 19, 1987, all initial notifications to the States of Illinois and Iowa and to the NRC Operations Center were completed in a timely manner.

At 7:59 p.m. on October 19, 1987, an equipment operator was directed to open the circuit breaker for the Unit 2 Circulating Water Pump. He inadvertently opened the adjacent breaker for the Control Rod Drive Hydraulic Pump which was operating at the time. The incident caused Bus 23 to trip from overcurrent, resulting in the loss of power to Condensate and Condensate Booster Pumps 2A and 2B. The loss of these pumps caused the reactor feed pumps to trip, resulting in a full reactor scram from about 90 percent power at 7:59:33 p.m. due to low reactor vessel level. Within the next two minutes, two Emergency Core Cooling Systems (ECCS) (Reactor Core Isolation Cooling and High Pressure Coolant Injection systems) initiated and all Main Steam Isolation Valves closed. Reactor vessel level was quickly restored and a reactor feed pump was manually restarted and began feeding water into the vessel. Due to the loss of the electrical bus, however, feedwater regulating valves could not be controlled by the operators, resulting in vessel level reaching +48 inches and the trip of the Reactor Core Isolation Cooling (RCIC) pump and a reactor feed pump due to high vessel level. RCIC was then restarted to manually control vessel level. Unit 2 achieved cold shutdown at about 11:15 p.m.

Based on a review of licensee and NRC records plus a discussion with the Station Control Room Engineer (SCRE) onshift during this event, it was determined that the licensee initially notified the NRC Headquarters Duty Officer of the scram and valid ECCS initiation at about 9:17 p.m., or about 75 to 77 minutes after the scram. The situation was initially described as a 1-hour, non-emergency report per 10 CFR 50.72(b)(iv). Roughly 90 minutes after the scram, onshift personnel finally concluded that the situation also satisfied Unusual Event Emergency Action Level (EAL) No. 14(1). Therefore, at about 9:30 p.m., the Shift Engineer (SE) declared an Unusual Event and the required initial notifications of State, and NRC officials began per 10 CFR 50, Appendix E IV.D.3 and 10 CFR 50.72(a)(3), respectively. These notifications were completed within the regulatory time limits following the Unusual Event declaration.

Although the eventual emergency declaration was based on the correct EAL and that State and NRC officials were promptly notified of the declaration, onshift personnel were unacceptably slow to recognize the fact that abnormal Unit 2 conditions on October 19, 1987, warranted earlier notification of NRC and State officials. Onshift personnel exhibited unacceptable unfamiliarity with 10 CFR 50.72(b)(iv) and the Station's EALs. 10 CFR 50.72(b)(iv) requires that, for situations that are not determined to warrant an emergency declaration, the licensee shall notify the NRC as soon as practical and in all cases within one hour of the occurrence of . . . "(iv) any event that results or should have resulted in ECCS discharge into the reactor coolant system as a result of a valid signal." In this case, however, the licensee did not initially notify the Headquarters Duty Officer of the scram and ECCS discharge until about 77 minutes after these events. Unusual Event EAL No. 14(1) is simply worded "ECCS initiation (not spurious)." Yet, in this case, this EAL was not recognized as being applicable to Unit 2 events until almost 90 minutes after ECCS discharge began. The untimely initial notification of the NRC following the scram and ECCS discharge is in violation of the requirements of 10 CFR 50.72(b)(iv). This is a Severity Level IV Violation. The violation will be tracked as Item No. 265/87031-01.

A review of the GSEP Coordinator's evaluation of the October 19, 1987, declaration was performed. Several comments made by the Coordinator and a subsequent management reviewer were conflicting. While the Coordinator correctly concluded that the Unusual Event declaration was untimely, a management reviewer disagreed based on the level of Control Room activities. The portion of the evaluation form listing proposed corrective actions referred to an internal Potentially Significant Event (PSE) report, which had already been submitted in draft form to the licensee's corporate office.

The draft PSE report dated October 22, 1987 was reviewed. The report listed five self-identified problems, including the fact that the initial NRC notification was not completed within one hour of ECCS initiation, per the 10 CFR 50.72 requirement. The untimely recognition that the situation also satisfied EAL No. 14(1) was not identified as a problem in the draft PSE report. Nine corrective actions were listed in the draft report. None specifically addressed the untimely notification of the NRC for the situation initially evaluated as a "1-hour, non-emergency" or the untimely recognition that conditions also satisfied EAL NO. 14(1). The only corrective action with potential emergency preparedness implications was a general statement that: "Documented training sessions on lessons learned from this event will be conducted with station personnel. Personnel safety aspects will be included." At the exit interview, the licensee stated that Quality Assurance (QA) personnel will monitor some unspecified corrective actions to be developed for the emergency preparedness aspects of the October 19th event.

Based on the above findings, one Violation was identified. In addition, the following item should be considered for improvement:

- The licensee's corrective actions should include remedial training on EALs, and the reporting requirements for emergency and non-emergency situations, per 10 CFR 50.72.

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

a. Emergency Plan and Implementing Procedures (Also 82204)

A review was conducted of portions of the Generating Stations Emergency Plan (GSEP), Quad Cities Annex to the GSEP, Emergency Plan Implementing Procedures (EPIPs) and other relevant documents. The Annex and QEPs were consistent with the program requirements and the commitments of Revision 6/6A of the GSEP. Revision 7 of the Quad Cities Annex to the generic GSEP was approved by NRC Region III in October 1987.

The licensee's provisions for preparing, internally reviewing, and distributing changes to the Quad Cities Annex to the GSEP and QEPs were reviewed and determined to be adequate. It was also determined, based on randomly selected QEP changes, that the changes had the proper management approval and were distributed to the NRC within 30 days after approval.

A spot-check was made of procedural guidance versus information contained in the GSEP or in other procedures. EPIPs were designated as QEP-series procedures. QEP-350 series procedures contained offsite Protective Action Recommendation (PAR) guidance that was consistent with the current Revision 6/6A of the GSEP with one exception. This exception was that several QEP manuals contained a March 1982 internal memorandum with attached PAR guidance that was obsolete.

Procedures QEP 110-1, 110-2, and 120-1 refer the Station Director, Acting Station Director, and Operations Director, respectively, to the need to authorize emergency worker exposures in excess of those specified in 10 CFR Part 20. However, the appropriate exposure limits were not listed or referenced in these three procedures. Emergency worker exposure limits were specified in QEP 620-2, and were in conformance with 10 CFR Part 20.

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

- The licensee should review QEP manuals and delete the obsolete PAR guidance from the QEP-350 series procedures.

- QEP 620-2 should be referenced in procedures QEP 110-1, 110-2, and 120-1.

b. Emergency Facilities, Equipment, and Supplies (Also 82204)

A tour was conducted of the Technical Support Center (TSC) and Operational Support Center (OSC). Both were located as described in the Quad Cities Annex to the GSEP. The internal layout of the TSC had been revised before the July 1987 exercise, so that the key directors' workstations were in close proximity to the Station Director's (SD's). Status boards were located behind each key

director's workstation. A new Public Address (PA) system had been installed to improve periodic briefing capabilities within the TSC. The system was designed so that briefings could be heard within the adjacent OSC, when so desired by TSC staff. Although the TSC was a dedicated workspace, the OSC was occasionally utilized as a meeting room. The facility had one wall-mounted, blank status board available for use.

An examination was made of records of periodic inventories of supplies maintained in the Station's emergency response facilities. All required inventories had been performed and adequately documented through the third quarter of 1987. An inspector also examined emergency supplies stored in the TSC and OSC. No shortages or damaged items were evident. Survey instruments, air samplers, and a portable area radiation monitor all had current calibration stickers.

A tour was conducted of the onsite assembly areas that would be utilized by non-essential personnel. These areas were as described in the Quad Cities Annex to the GSEP and in an informational booklet provided to personnel being granted unescorted access privileges. These assembly areas were adequately identified by signs. Route markers on the 595-foot elevation of the Turbine Building adequately indicated directions to the Unit 1 ard Unit 2 trackway assembly areas. A portion of the Unit 2 Trackway area contained a low-level, dry active waste packaging and temporary storage facility which was adequately posted with appropriate radiation area signs.

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

c. Organization and Management Control (Also 82204)

The current GSEP Coordinator was the fourth person to hold that full-time position within the last two years. As was the case with his two most recent predecessors, the Coordinator had also been appointed as the Station's GSEP Training Instructor. The Coordinator reported to the Station Manager through the following individuals: Lead Health Physicist, Rad Chem Supervisor, Assistant Services Superintendent, and the Services Superintendent. The Lead Health Physicist, the Coordinator's immediate supervisor, had some previous involvement with the GSEP program in addition to holding an emergency response position. The Coordinator indicated that he had no major problems when interfacing with his supervisors on emergency preparedness issues, or in seeking and receiving advice from the two former coordinators with whom he shared an office.

The April 1984 revisions to procedure QEP 520-3 and checklist QEP 520-S1 described the "initial" and "on-the-job" training programs for the GSEP Coordinator. The adequacy of training provided to the GSEP Coordinator position had been a topic of the 1986 and 1987 Quality Assurance (QA) Department audits of the emergency preparedness program. One audit identified the fact that the former GSEP

Coordinator had not completed the training program. The inspectors noted that the same was true for the current coordinator who took over the position, following an approximate 60 day transition period, shortly after the July 1987 exercise. During this transition period, the current coordinator assisted in the Station's preparations for the July exercise and was familiarized with the position's routine duties.

The inspector reviewed QEP 520-3 and QEP 520-S1 and discussed the GSEP Coordinator training program with the current coordinator. The Station GSEP Coordinators training program had several basic flaws, procedurally and in practice. For example, training on regulatory requirements and guidance need not begin until after a person had become the coordinator and was expected to adequately perform the duties of GSEP Coordinator. The procedure and checklist specified no deadlines for completing "initial" or "on-the-job" training items, which could generally be considered as "on-the-job" items in practice. The procedure did not adequately address how completed training would be evaluated by Station management and/or Corporate emergency planning staff. The procedure and checklist did not address the Coordinator's current additional duty as GSEP Training Instructor. The present coordinator could not say if or when he would receive any formal training to become a certified training instructor. Such flaws contributed to the current situation where an individual was expected to function adequately in the duel capacity as the GSEP Coordinator/Training Instructor before being sufficiently trained and evaluated as qualified to perform either role.

The Coordinator was asked what had been his pervious involvement in the GSEP program. The Coordinator had previously held emergency organization positions in the Operational Support Center (OSC) and on offsite radiation survey teams. The Coordinator stated that his major accomplishments and priorities included: assisting his predecessor in upgrading TSC status boards and facility layout prior to the 1987 exercise; becoming somewhat familiar with emergency preparedness regulations and guidance; becoming increasingly familiar with the licensee's overall GSEP program and its implementation at the Quad Cities Station; personally performing and/or reviewing records of such periodic functions as communications tests, facility checks, and inventories of emergency supplies; and developing the annual GSEP training program scheduled for December 1987.

Regarding training opportunities, the Coordinator has attended INPO emergency preparedness workshops on exercise scenario development and other topics that were held in mid-1987. He has attended several scenario and EAL development meetings relevant to the Quad Cities Station. Due to a commitment to be at the Station's Emergency Operations Facility (EOF), he was unable to attend a GSEP Coordinator Counterpart Meeting in September 1987. He has functioned either as a player or controller at 1987 exercises conducted at two of the licensee's other nuclear stations. However, his involvement was either in the OSC or with field teams, rather than observing the relatively unfamiliar activities taking place in a TSC or EOF.

Many of the problems identified in this evaluation of the Station's emergency preparedness program appear to be the result of insufficient Station and Corporate management attention and coordination in order to maintain a strong program, particularly in view of the relatively high turnover rate in GSEP Coordinators at this Station over the last two years. The current and previous coordinators have essentially been expected to adequately perform GSEP Coordinator/Training Instructor duties while they were beginning to learn the emergency preparedness speciality. Although the GSEP Coordinator is the licensee's "resident emergency preparedness expert" at the Station, there are no criteria in place for evaluating the timeliness of completing "initial" and "on-the-job" training or for evaluating how well the individual has comprehended the training. Station and Corporate management have demonstrated some cooperation for training the new Coordinator on regulatory requirements and guidance, but primarily after he was given full responsibility for the program. Also, full advantage was not taken of several other learning opportunities.

Based on the above findings, the following items should be considered for improvement:

- The licensee should designate someone with sufficient expertise in emergency preparedness to oversee the performance of a recently appointed coordinator, pending completion of initial training in the emergency preparedness specialty.

- The licensee should re-evaluate the feasibility of designating one person as both the GSEP Coordinator and GSEP Training Instructor.

- The licensee should revise the GSEP Coordinator's qualification program such that completion milestones are specified for both "initial" and "on-the-job" training.

- The GSEP Coordinator should be afforded every opportunity to attend counterpart meetings and to observe activities within unfamiliar emergency response facilities.

- The coordinator's training program should include evaluations, by emergency planning specialists, of the comprehension and timeliness of learning emergency preparedness regulations and guidance.

- The coordinator's training program should address GSEP Training Instructor responsibilities, if the individual is expected to perform such duties.

d. Training (Also 82206)

A review was conducted of the generic GSEP training requirements, Station specific lesson plans, training records and schedules for onsite emergency response personnel. The training program was inadequate and did not meet the GSEP commitments.

Section 8.2 of the generic GSEP requires emergency directors to receive initial and annual retraining as designated by the "GSEP training matrix." Following required training, the directors are required to pass a test which checks each individual's knowledge of his responsibilities. While evaluating the implementation of the above training requirements, it was discovered that formal training program records, procedures and 1987 training schedules were not available. Procedure QEP-520, "Training," did not adequately describe a formal training program. Attachment QEP-520-T5, "GSEP Training Requirements for GSEP Directors and Alternates" was proceduralized; however, it was a matrix of annual required reading on EPIPs relevant to specific director-level positions. QEP 520-TS did not address training modules which the licensee also planned to incorporate in the December 1987 training program. Since the 1986 training, these draft training modules had been typed in final, but had not yet been formally reviewed or approved by the Training Department. Tests to determine the level of knowledge for individual director positions were not developed at the time of this inspection.

A review of the training tracking system revealed that personnel who were assigned to director positions had not yet been trained for 1987. A training schedule to complete the required training, which had been planned to be initiated and completed in December, had not yet been developed.

The GSEP Coordinator was also designated as the GSEP Training Instructor, although his personal training requirements did not reflect this added responsibility. The GSEP Coordinator was assigned to the dual position in August 1987 with little previous emergency preparedness background. He had not received the instructor's training required to conduct training as required by the Training Department. Therefore, at the time of this inspection the Coordinator, although untrained as an instructor and still unfamiliar with certain aspects of the licensee's emergency preparedness program, had still been assigned the responsibility of developing and conducting the 1987 training program for onsite emergency response personnel using unapproved training modules.

The above findings were discussed with the licensee at the November 6, 1987 exit interview. The licensee committed to develop and complete an approved GSEP training program by December 31, 1987, in accordance with the GSEP training commitments. The commitment to develop and complete the 1987 training program for all onsite emergency organization personnel by December 31, 1987 is an Open Item (254/87031-01 and 265/87031-02). Furthermore, the training must be conducted by qualified training instructors, utilizing a combination of emergency plan implementing procedures and approved lesson plans relevant to the needs of specific emergency organization positions. This is an Open Item (254/87031-02 and 265/87031-03).

In order to avoid recurrence of having the 1988 onsite emergency preparedness training program so ill-defined by the fourth calendar quarter, as was the 1987 training program, the licensee committed to define the 1988 training program by March 31, 1988. Program definition would include: a matrix of all training requirements for all specific positions in the onsite emergency organization; a workable training schedule; and identification of personnel to conduct and track the training. This commitment will be tracked as an Open Item (254/87031-03 and 265/87031-04).

A review was made of licensee records of emergency preparedness drills and the annual exercise which occurred since October 1986. All required drills and the exercise had been conducted, critiqued, and adequately documented. The annual medical drill had included training of five Rad Chem Department personnel, in addition to members of the local ambulance service and hospital. The licensee's problems with initiating and documenting the corrective action process on items identified during drills and exercises are described in Paragraph 4e of this report.

Due to the status of the 1987 training program, only one walkthrough was conducted during this inspection. Two Control Room personnel were interviewed. Their performances are described in Paragraph 5 and 6 of this report.

Based on the above findings, three Open Items were identified in order to track licensee commitments.

e. Independent Reviews/Audits (Also 82210)

Records were reviewed of Quality Assurance (QA) Department audits and surveillances of the Station's emergency preparedness program conducted since August 1986. The audits have been performed on a regular basis. Semi-annual "onsite" audits were conducted by QA staff based at the Station, while an annual "offsite" audit of many activities at the Station, including emergency preparedness, was done by QA staff not based at the Quad Cities Station. QA Department guidelines indicated that only one annual surveillance of the program was required; however, program surveillances had been conducted more frequently. Audit and surveillance records were complete and readily available. Audit findings and observations were adequately tracked and followed up on by QA personnel until corrective actions were completed.

With one exception, "onsite" audits and surveillances were adequate in scope and had identified some program deficiencies, such as several inadequacies in the training program for the GSEP Coordinator position. 10 CFR 50.54(t) requires that the annual audit address the adequacy of the Station's interface with State and local government organizations. The "onsite" audits did not directly address the offsite interface requirements although several related questions were asked dealing with such matters as the existence of current letters of agreement and the mailing of letters of invitation for an offsite support agency meeting. The regulatory

requirement to assess the adequacy of the Station's interface with offsite support agencies was not adequately addressed by the "onsite" audits. This conclusion was also made by the licensee's "offsite" auditors, as evidenced by a finding in the October 1987 Offsite Audit No. 4-87-11.

The licensee's reply to this audit finding was not yet available for review. Therefore, the inspectors were unable to evaluate the adequacy of the licensee's corrective action to satisfy the annual audit requirement for 1987. The licensee's provisions for an annual evaluation of the adequacy of the Station's interface with offsite support organizations will be tracked as an Unresolved Item No. 254/87031-04 and 265/87031-05.

An examination was made of the GSEP Coordinator's provisions for tracking corrective actions on items identified in Quality Assurance (QA) Department audits, NRC Inspection Reports, and internal critiques from emergency preparedness drills and exercises. The Coordinator had copies of responses that he forwarded to the QA Department for audit findings and observations. He also maintained copies of responses forwarded to Regulatory Assurance staff on items that had been identified and tracked by the NRC. Records were examined of internal critiques on emergency preparedness drills and exercises that had taken place since October 1986 plus the final report on an INPO assistance visit that had occurred in mid-1987. The internal critiques had been prepared in a timely and adequately detailed manner. Previous GSEP Coordinators had utilized an informal tracking system, consisting of a logbook containing unproceduralized forms, for documenting what critique items were being acted upon and what corrective actions were being taken. The most recent entry in the logbook was dated in the fourth quarter of 1986. The GSEP Coordinator admitted that no final decisions had been made regarding what corrective actions would be taken on any items identified in internal critiques of 1987 emergency preparedness drills (except for communications tests and augmentation drills) and the annual exercise. He stated that he was waiting for some additional information from corporate staff regarding possible action items from the internal critique of the July 1987 exercise.

The licensee must establish and implement an adequate administrative system for determining, documenting, and tracking corrective actions taken on items identified in internal drill and exercise critiques, plus program improvement items identified in other evaluations of the Station's emergency preparedness program. This is an Open Item (254/87031-05 and 265/87031-06).

Based on the above findings, one Unresolved Item and one Open Item were identified.

5. Emergency Detection and Classification (Also 82201)

Emergency Action Levels (EALs) contained in procedure QEP 200-1 were consistent with those listed in the current Revision 7 to the Quad Cities Annex to the GSEP. Substantial revision to the Station's EALs was in progress as part of the licensee's efforts to improve the standardization of the EALs for all three of its Boiling Water Reactor (BWR) nuclear generating stations. The proposed EALS had not yet been submitted to the NRC for review and comment.

A walkthrough with a Shift Engineer (SE) and a Station Control Room Engineer (SCRE) was conducted. The SE clearly understood that his non-delegatable responsibilities as Acting Station Director (SD) included the decision to declare an emergency in accordance with the Station's EALs. Both individuals were readily able to list the emergency classes in order of increasing severity and to properly classify postulated abnormal plant conditions utilizing procedure QEP 200-1. Both persons were also adequately familiar with regulatory requirements and procedural guidance for informing State and NRC officials of any emergency declaration.

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

6. Protective Action Decisionmaking (82202)

Except as noted in Paragraph 4.a of this report, procedural guidance regarding onsite and offsite protective action decisionmaking was consistent with that found in the current GSEP and Quad Cities Annex revisions.

During the walkthrough, as described in Section 5, the SE and SCRE demonstrated adequate familiarity with procedural guidance on offsite and onsite protective action decisionmaking. Both knew the correct minimum offsite PAR for any General Emergency declaration. Both knew what emergency class declarations necessitated the assembly and accountability of all onsite personnel, and the subsequent evacuation on nonessential personnel to one or more predesignated offsite reassembly areas. Both were aware of the procedurally listed circumstances which could warrant a delay in ordering the evacuation of nonessential personnel. Both persons were able to locate procedural guidance which specified emergency worker exposure limits in excess of those listed in 10 CFR Part 20. The SE was aware that his undelegatable responsibilities as Acting SD included the authorization of emergency exposure limits for volunteers performing life-saving or vital equipment-saving tasks.

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

7. Notifications and Communications (82203 and 82701)

Reports of monthly, quarterly, and annual emergency communication systems tests were reviewed. All tests had been conducted in accordance with regulatory requirements and emergency plan commitments and were adequately documented. Corrective actions were taken in a timely manner.

Appropriate QEP-series procedures provided adequate guidance on regulatory requirements for initially notifying Illinois, Iowa, and NRC officials after any emergency declaration. Sufficient copies of the current revision of the NARS form, used to document initial notification calls to State officials, were readily available in the TSC.

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

8. Shift Staffing and Augmentation (82205)

The licensee's provisions for the minimum shift staff, as stated in the GSEP, met the goals of Table B-1 of NUREG-0654, Revision 1. The licensee's provisions for augmenting onshift personnel were described in the GSEP and in the following implementing (QEP-series) procedures: 310-1, 310-T1, 310-T3, and 320-1.

Procedure QEP 310-T3 was a Prioritized Notification Listing of members of the onsite emergency organization. Per QEP 320-1, director-level personnel were prioritized such that department heads and group leaders were given top priority in the listing, while alternates for the director-level positions were prioritized with respect to estimated travel times from their residences to the Station. Revision 20 to QEP 310-T3 listed 57 persons on the "Rad-Chem Call List." Personnel on this list had been prioritized such that about 12 supervisory personnel were listed first, followed by non-supervisory personnel listed with respect to estimated travel times from their residences to the Station.

During this inspection, the current revision to QEP 310-T3 was Revision 20, approved on June 24, 1987. This revision was to be effective for the period July through September 1987. The GSEP Coordinator, who was responsible for QEP 520-1 for maintaining the QEP 310-T3 roster, stated that issuance of Revision 21 had been delayed, as several changes to the lists of qualified Maintenance and Environs Directors were anticipated.

10 CFR 50.54(q) states, in part, that "a licensee authorized to operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 50.47(b) and the requirements in Appendix E to this part." Section 8.5 of Revision 6/6A to the Generating Stations Emergency Plan (GSEP) states, in part, that the "names and phone numbers of the GSEP organization and support personnel shall be reviewed and updated at least quarterly." The word "quarterly" is interpreted, per Technical Specifications, as 92 days plus a grace period of 25 percent. Therefore, the failure to issue Revision 21 to QEP 310-T3 within 92 days (plus a 25 percent grace period) is in violation of NRC requirements. This is a Severity Level IV Violation.

By the conclusion of the inspection, the licensee indicated that the internal review and approval of Revision 21 to QEP 310-T3 had been expedited. Corrective actions to be taken to prevent recurrence of the untimely issuance of quarterly revisions to the Prioritized Notification Listing (QEP 310-T3) will be be tracked as Item Nos. 254/87031-06 and 265/87031-07.

Revision 20 to QEP 310-T3 listed three individuals as qualified Onsite Environs Directors and four persons as Rad Chem Directors. However, the primary person on the Environs Director list no longer worked at the Station, and an alternate Onsite Environs Director was also the primary Rad Chem Director. The licensee stated that several persons had already been identified as Onsite Environs Director candidates and had completed some required training. However, one of these candidates was already an alternate Rad Chem Director. Also, one training session for the Onsite Environs Director candidates had been postponed until late November. At the exit interview, the licensee indicated several additional, qualified Onsite Environs Director will be added to the augmentation roster effective January 1, 1988.

Since the licensee's current and proposed augmentation rosters have overlap of one or more persons for the Rad Chem and Environs Director positions, the licensee should ensure that there are adequate numbers of qualified personnel (at least three persons for each position with no overlap) for both the Rad Chem and Onsite Environs Director positions to better ensure an around-the-clock staffing capability. This is an Open Item (254/87031-07 and 265/87031-08).

Revision 20 to QEP 310-T3 identified personnel for the following categories of positions: directors; the on-call duty person; maintenance and rad chem technicians; staff engineers; radwaste handling personnel; and OSC directors and their assistants. However, QEP 310-T3 did not list personnel who would function as communicators and/or status board plotters in the TSC. The licensee indicated that during drills and exercises persons who were also qualified as directors were utilizied as communicators and/or plotters for the Station, Operations, Maintenance, Rad Chem, and Environs Directors. Personnel were not identified to fill the proceduralized Station Director's Communicator position. This practice raises a concern on the adequacy of 24-hour staffing capabilities as, only three or four persons were identified for the Station, Operations, Maintenance, and Rad Chem Director positions. Also, only two Environs Directors were currently available. The licensee indicated that persons besides alternate directors could be asked to report to the TSC to serve as communicators/plotters for the various directors. However, it was unclear if these persons had received training on communicator/plotter responsibilities besides possible "on-the-job" experience during a drill or exercise. The licensee should identify in the Prioritized Notification Listing (QEP 310-T3) sufficient numbers of appropriately trained communicators and status board plotters as part of the TSC staff. This is an Open Item (254/87031-08 and 265/87031-09).

The GSEP Coordinator had begun to research equipment to upgrade the Station's staff augmentation capabilities. The three individuals qualified as Station Director and the On-Call Duty Person were the only

personnel equipped with pagers for emergency plan activation purposes. However, based on discussions with the GSEP Coordinator and several supervisory personnel, it was unclear whether funds had been allocated to procure an automated emergency notification system for key Station Group personnel.

A review of documentation indicated that the two most recent off-hours augmentation drills had been conducted in late 1986 and the first half of 1987, in accordance with procedure QEP 530-3. Both unannounced drills were successful. The GSEP Coordinator was in the process of improving the documentation of these drills to more clearly indicate whether they were successful and whether any problems had been identified.

Based on the above findings, one Violation and two Open Items were identified. In addition, the following item should be considered for improvement:

- The licensee should procure an automated notification system for key Station Group personnel.

9. Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, violations, or deviations. An Unresolved Item identified during this inspection is described in Paragraph 4e.

10. Exit Interview

On November 6, 1987, the inspectors met with licensee representatives, identified in Paragraph 1, to present their preliminary inspection findings. The inspectors also received several commitments, as described in Paragraphs 4.d, that certain GSEP training program requirements would be completed by specified dates. The licensee also indicated that none of the matters discussed at the exit interview were proprietary in nature.