U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/87026(DRSS); 50-457/87026(DRSS);
50-237/87028(DRSS); 50-249/87027(DRSS);
50-373/87025(DRSS); 50-374/87025(DRSS)

Docket Nos. 50-456; 50-457
50-237; 50-249
50-373; 50-374

Licenses No. NPF-72; CPPR-133
DPR-19; DPR-25
NPF-11; NPF-18

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

Facility Names: Braidwood Nuclear Power Station, Units 1 and 2
Dresden Nuclear Power Station, Units 1 and 2
LaSalle County Nuclear Power Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois and
Emergency Operations Facility, Mazon, Illinois

Inspection Conducted: August 3-7, 1987

Inspectors: T. Plosk W. Snell for — 8/14/87 Date

M. Smith W. Snell for — 8/14/87 Date

Approved By: William Snell, Chief — 8/14/87 Date
Emergency Preparedness Section

Inspection Summary

Inspection on August 3-7, 1987 (Reports No. 50-456/87026(DRSS); 50-457/87026(DRSS); 50-237/87028(DRSS); 50-249/87027(DRSS); 50-373/87025(DRSS); 50-374/87025(DRSS))
Areas Inspected: Routine, unannounced inspection of the following areas of the licensee's emergency preparedness program: activation of the emergency plan; operational status of the emergency preparedness program; emergency detection and classification; protective action decisionmaking notifications and communications; shift staffing and augmentation, and licensee action on previously identified items. This inspection involved two NRC inspectors.
Results: One violation of NRC requirements was identified at the Mazon Emergency Operations Facility. The violation is applicable to the Braidwood, Dresden, and LaSalle Stations.

DETAILS

1. Persons Contacted

*E. E. Fitzpatrick, Station Manager
*K. L. Kafron, Production Superintendent
*R. D. Kyrouac, Quality Assurance Superintendent
*L. E. Davis, Assistant Superintendent
*P. Barnes, Regulatory Assurance Supervisor
*R. E. Aker, Radiation Chemistry Supervisor
*M. Takaki, Regulatory Assurance
*L. Literski, GSEP Coordinator
*A. Scott, Emergency Planning Trainer
*A. J. D'Antonio, Quality Control
*L. D. Benington, Quality Assurance Inspector
*J. L. Bowman, Emergency Planning
*T. Markwalter, Nuclear Services Emergency Planning
W. Brenner, Principal Offsite Emergency Planner
P. Habel, Shift Engineer
F. Krowzack, Technical Assessment Supervisor

*Denotes those personnel listed above who attended the exit interview on August 7, 1987.

2. Licensee Action on Previously Identified Items

(Closed) Item No. 457/80015-BB: Bulletin issued in 1980 on possible loss of power to the Emergency Notification System (ENS) to the NRC Operations Center. As indicated in Inspection Reports No. 456/87010(DRSS) and No. 457/87010(DRSS), ENS telephones have been installed in the Control Room and Technical Support Center. The inspector determined by visual inspection and records checks that both instruments were still installed and have been periodically tested in accordance with procedures. The power failure requirements have been met, as both telephones receive power from the Security Bus, backed by the Security Diesel Generator, which would start and take load if the bus would fail. This item is closed.

(Open) Open Items No. 456/87021-01; No. 457/87019-01: The 1987 Braidwood Public Information Brochures, containing revised language, will be distributed within the 10-mile Emergency Planning Zone during 1987. The inspector interviewed the Principal Emergency Planner (Offsite), who indicated that the brochures would be ready for distribution by mid-August, 1987. Following completion of mail and bulk distribution, a letter will be sent to the NRC regional office verifying distribution completion with mailing dates and bulk distribution lists. This item remains open.

3. Emergency Plan Activations

The inspector reviewed Licensee Event Reports (LERs) for the period March through mid-July 1987, plus licensee records associated with two emergency plan activations which occurred during that period. The Unusual Events declared on March 9 and July 1 were properly classified. These were the only situations which warranted an emergency plan activation for the aforementioned time period. Initial notifications for both Unusual Events to the State of Illinois and the NRC were completed within the regulatory time limits. Notification messages were adequately documented. The licensee's evaluations of these emergency declarations were adequate.

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

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

a. Emergency Plan and Implementing Procedures (also 82204)

The NRC regional staff documented its approval of Revision 2 to the Braidwood Annex to the Generating Station Emergency Plan (GSEP) by letter dated July 8, 1987. The Braidwood Annex accurately reflected the approved generic GSEP, Revision 6/6A, and provided accurate plant-specific information.

The inspector reviewed the Document Control staff's distribution records of changes to the Plan and Emergency Plan Implementing Procedures (EPIPs). A sample of records were examined to determine whether such revisions had been properly sent to the NRC within 30 days of final approval as required by 10 CFR 50.54(q). No discrepancies were identified in the examined distribution records.

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

b. Onsite Emergency Facilities, Equipment, and Supplies

The inspector toured the onsite Emergency Response Facilities (ERFs) which were located as described in the Braidwood Annex. The facilities were adequately maintained and in a state of operational readiness. In addition to the official telephone directories, copies of unofficial March 1986 telephone directories were located at all positions in the TSC. The GSEP Coordinator indicated these directories were not official plant directories and had been provided for the 1986 exercise by corporate emergency planning staff. The inspector indicated concern for out-of-date, unofficial documents being available for use by GSEP personnel in an emergency situation. The telephone directories were removed by the GSEP coordinator for updating by corporate personnel.

During the TSC tour, the inspector noted that Area Radiation Monitors (ARMs) AR073 and AR074 were malfunctioning. The ARMs gauges indicated no reading, while the ARMs' visual alarms indicated high radiation levels. The inspector determined that the problem had existed for several weeks. Licensee staff speculated that the malfunction was due to startup testing involving the RM-11 system. The licensee generated Work Request No. A15207 in order to return both ARMs to operational status. A sufficiently high priority was assigned to the work request so that repair work would commence within about one week. The inspector noted that the TSC's Continuous Air Monitor was operable. Also, adequate procedural provisions existed for periodic habitability surveys of the TSC should it be activated.

The inspector reviewed documentation of quarterly emergency supplies inventories required by BwZP 5001-5 and found records complete with one exception. The inventory for the hospital kit is conducted by Dresden personnel as the hospital is used jointly by both plants. An earlier agreement had been reached between the two plants regarding the responsibility for hospital inventories. Copies of the quarterly inventories were produced by the Braidwood GSEP Coordinator for the inspectors review in the same day. The records verified the quarterly inventories were completed by Dresden personnel as required.

The inspector reviewed letters of agreement with offsite support agencies and contractors who support the utility during an incident. All letters were on file according to requirements. Letters were sent to the town of Essex and Custer Park Township. Copies of these letters had not been signed and returned. An interview with the GSEP Coordinator revealed that the two agencies were part of a mutual aid agreement with the Braidwood Fire Department and thus were legally required to assist them. Although letters of agreement are not on file, training is offered to both entities by the Braidwood Station.

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

c. Offsite Emergency Facilities, Equipment, and Supplies

On August 4, 1987, the inspector toured the Emergency Operations Facility (EOF) and determined that it was not in an adequate state of operational readiness. The inspector observed several tables containing numerous stacks of procedures and plan revisions and aperture cards of P&ID's from all three plants which use the Mazon facility as their EOF during an emergency situation. The inspector discovered that the filing was backlogged roughly six months for Braidwood procedures, and five months for LaSalle procedures, and about one month for Dresden procedures. About a six month backlog of aperture card filing existed for all three plants. Upon further

research and interviews, the inspector determined that the licensee did not have sufficient provisions to ensure timely filing of these reference materials on a routine basis.

This constitutes a violation of 10 CFR 50.47(b)(8) which states, "Adequate emergency facilities and equipment to support the response are provided and maintained. In addition, 10 CFR 50, Appendix B, Section IV, states in part: "Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures assure that documents including changes . . . are distributed to and used at the location where the prescribed activity is performed."

In response to the inspector's concern, the Braidwood Station sent eight clerical personnel to the EOF on August 5. This staff completed the filing of Braidwood procedures and aperture cards within one day. LaSalle Station sent two clerical personnel to complete their backlog of filing. By the end of the inspection, the licensee assured the inspector that the immediate filing backlog problem was solved; however, a long-term solution had not been finalized. The Braidwood Quality Assurance staff have added an audit line item in their permanent audit schedule of the GSEP, which requires a review of the operational readiness of the Mazon EOF. The Manager, Quality Assurance, was expected to instruct all Stations' QA staffs to address EOF operational readiness in their annual audits of the Stations' emergency preparedness programs. This is a Severity Level IV violation (Supplement VIII).

The violation will be tracked as Open Item No. 50-456/87026-01; No. 50-457/87026-01; No. 50-237/87028-01; No. 50-249/87027-01; No. 50-373/87025-01; and No. 50-374/87025-01.

Other supplies and equipment such as telephones, maps, radios, computer equipment, etc., were operational. However, copies of unofficial telephone directories from March 1986 were located at various positions and were out-of-date. The inspector noticed that Dresden had onsite and offsite emergency organizations call out procedures dated March 1985 on file in the Dresden Station EPIP binder. The inspector understood that current call out directory had been discontinued from the Dresden Station EPIPs because it contained plant personnel's home telephone numbers.

In addition to the aforementioned violation, the following items should be considered for improvement:

- The licensee should ensure that a current copy of the onsite emergency call out directory for the Dresden Station is maintained at the Mazon EOF.

- Copies of unofficial telephone directories in the Mazon EOF should be eliminated or incorporated into the official telephone directories.

d. Organization and Management Control

In the Spring of 1987, the licensee formed a Technical Services Consolidated Performance Assessment Department, which is based at the corporate offices and reports to the Technical Services Manager. The inspector discussed the function of this department with its supervisor, who was onsite with about ten individuals to conduct a three-day, pilot assessment of health physics, the ALARA program, radwaste, and emergency preparedness activities. In addition to these four areas, the department was also expected to eventually assess chemistry and training at the six nuclear stations and the corporate offices. However, overall training activities were not planned for in-depth assessment by this group until the INPO accreditation process had been completed. Also, assessment of the corporate aspects of these six functional areas was not planned until sometime after a comprehensive INPO evaluation of corporate activities that was scheduled for later in 1987. Assessments at the Dresden and Byron Stations were scheduled in 1987. The goal of the new assessment department was to have all six stations ranked among the top 25 percent of the nation's nuclear plants by 1992 based on such industry performance measurement systems as INPO guidelines and good practices.

The inspector understood that the department's current full-time staffing consisted of a supervisor, an administrative coordinator, and three team leader positions (Health Physics/ALARA), (Chemistry/Radwaste), and (Training/Emergency Preparedness). Not all of the team leader positions had been filled. Staffing for the pilot assessment team had been drawn from other stations and the corporate offices.

The team assessing Braidwood's emergency preparedness program consisted of a corporate emergency planner (acting team leader) and the GSEP Coordinators from the Byron and LaSalle Stations. Categories addressed by this team included: emergency organization and administration; emergency preparedness training; emergency response facilities and equipment; emergency assessment and notification; onsite personnel protection provisions, and the emergency plan. Performance objectives and associated evaluation criteria were listed under each category, along with numerical references to various INPO documents. The inspector understood that the assessors selected a sample of performance objectives from each category and determined if they had been adequately met based on record reviews and interviews. Station management was informed of the team's preliminary findings during an exit meeting. The team's findings would later be documented in an internal report.

The GSEP Coordinator has participated in meetings with her counterparts from the other five stations. Meetings during 1986 and 1987 had been conducted on about a quarterly basis. Some meetings had also included members of the corporate emergency planning staff besides the corporate supervisor based at the Mazon EOF. The meetings served a number of useful purposes, including the opportunity to compare experiences and exchange ideas.

The inspector obtained a copy of the agenda for the GSEP Coordinator counterpart meeting scheduled for September 1987.

The overall decline in the six stations' SALP ratings for emergency preparedness is to be a major topic for discussion. Attendees have been asked to be ready to discuss a number of listed suggestions for improving the stations' SALP ratings, many of which have already been expressed in NRC Inspection Reports and/or exit interviews associated with recent appraisal, exercise, and routine emergency preparedness inspections. The inspector concluded that a number of the suggestions reflected the valid need for the licensee to go outside its organization to gather information on how other licensees prepare players and controllers for annual exercises and how the exercise scenarios can be made more innovative and challenging.

The GSEP Coordinator was a station employee who reported to the Services Superintendent through the Rad Chem Supervisor. The coordinator also functionally reported to the corporate Supervisor of Emergency Planning through an Emergency Planning Supervisor based at the Mazon EOF. The coordinator was responsible for the day-to-day maintenance of the onsite program. The coordinator was also actively involved in conducting some onsite emergency preparedness training activities, such as certain drills. A training instructor from the Station's Training Department conducted classroom GSEP training and maintained GSEP training records for members of the onsite emergency organization.

During 1986, the licensee had assigned various corporate emergency planning staff members to visit each Station's GSEP Coordinator on a quarterly basis in order to review the Coordinators' progress on assigned tasks. The visits were announced and were intended to verify that responsibilities were being carried out, rather than how well the tasks were being done. The visits were correctly <u>not</u> considered as audits of the Coordinators' work. The Braidwood Station's Coordinator stated that several such visits had occurred during 1986, but that none had taken place in 1987. The Coordinator had no documentation of the 1986 reviews, and had assumed that the quarterly visits had been discontinued for 1987.

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

e. Training (also 82206)

The inspector determined that all required emergency preparedness drills had been conducted and critiqued since the Fall of 1986. The drills were adequately documented. The GSEP Coordinator's tracking system had been satisfactorily implemented to correct items identified during critiques.

The inspector reviewed the emergency preparedness training records of 16 randomly selected members of the onsite emergency response organization. The training program consisted of a generic GSEP training, position specific training and required reading. A test is administered for both types of training sessions and a passing grade of 70 percent is required. Personnel who fail to meet the required time frame for training are referred to the Plant Manager. The inspector concluded that all personnel reviewed had completed or were in the final process of completing training within the required annual time frame.

Plan and implementing procedures revisions are routed to cognizant emergency personnel as required reading. A cover sheet requiring a signature and return date within two weeks of receipt is attached. The inspector's review of training records indicated signature pages of required reading were returned within the required timeframe.

The inspector reviewed documentation of training presented to offsite support agencies. The training was presented by Radiation Management Corporation to primary fire departments, ambulance support and hospital staff. Sign-in sheets and lesson objectives were reviewed. The inspector determined that the annual training requirement of offsite support personnel had been met.

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

f. Audits (also 82210)

The inspector reviewed records of audits and surveillances of the emergency preparedness program and discussed these activities with the Quality Assurance (QA) Superintendent. Two audits were performed in October 1986. One was an "onsite" audit conducted by QA Department staff based at Braidwood Station, while the other was an "offsite" audit performed by QA staff from other locations. Both audits were adequate in scope and depth to meet the requirements of 10 CFR 50.54(t). Audit records were complete and readily available. The "onsite" audit was entirely devoted to the Station's emergency preparedness program, while emergency preparedness was one of several topic areas addressed in the "offsite" audit. All audit concerns were resolved in a timely manner. The 1987 annual "onsite" audit of the program was scheduled for later in August. In response to the inspectors' concern regarding the untimely filing of procedures and other documents at the Mazon EOF (see Paragraph 4.d), the maintenance of Braidwood Station records kept at that facility has been added to the annual audit checklist.

The inspector also determined that several emergency preparedness related items had been addressed in two audits that had been performed during March and July 1987. Three surveillances of certain aspects of Braidwood's emergency preparedness program had already been conducted during 1987. One involved observations of player activities during the annual exercise. Another involved player activities during the annual medical drill. The third surveillance involved the periodic inspection of respiratory protection equipment available to emergency response personnel in certain ERFs and the GSEP Van. No auditor concerns were identified during the drill and exercise surveillances, which focused on player performances rather than on critique quality or critique item followup. The concern identified during the equipment surveillance was resolved in a timely manner.

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

- Surveillances of emergency preparedness drills and exercises should also address the adequacy of the critiques and followup actions taken on identified problems.

5. Emergency Detection and Classification (82201)

Since 1985, the licensee has been involved in an Emergency Action Level (EAL) upgrade and standardization project that encompasses all six of its nuclear stations. A corporate emergency planning supervisor based at the Mazon EOF was currently in charge of this effort, assisted by several emergency planning staff having reactor operator background in BWRs or PWRs. The inspector determined that efforts were well underway to finalize a set of generic EALs for the Bryon and Braidwood Stations which would be as identical as possible. The proposed EALs had been in the internal review and comment process at both Stations, with the goal of having all comments resolved and the proposed EALs submitted for NRC approval in September 1987. The schedule had fallen a bit behind, as some input had not been received from the architect/engineer for certain "radioactive effluent release" EALs. However, the licensee still expected to have the proposed EALs ready to submit to the NRC in the early Fall of 1987.

The inspector reviewed the draft, revised EALs for the Byron and Braidwood Stations plus the currently approved Braidwood EALs for earthquake situations. The proposed and currently approved Unusual Event EALs addressed an earthquake of sufficient magnitude to cause seismic monitoring instrumentation to alarm. No EAL addressed the possibility, expressed in the guidance of NUREG-0654, Revision 1, that onsite seismic instrumentation may be inoperable at the time of an earthquake. Technical Specification 3.3.3.3 stated that the seismic monitoring equipment was to be operable at all times. However, should the equipment be inoperable for more than 30 days, the licensee need only to submit a Special Report within another ten days that described

the equipment malfunction and the plans for restoring the equipment to operable status. Thus, it was possible for the plant to experience an earthquake and yet an Unusual Event would not be declared if the seismic monitoring equipment was inoperable.

An earthquake was felt by some personnel in the Service Building, including the Senior Resident Inspector, on the evening of June 10, 1987. The earthquake was not felt in the Control Room. While the seismic monitoring system was operable, it did not alarm. Subsequent equipment examinations uncovered no problems with the seismic instrumentation, indicating that the earthquake was less than the alarm setpoint. No onsite damage from the earthquake was discovered by licensee personnel who performed some precautionary inspections of plant systems once the Control Room had received several reports from onsite personnel that they had felt an earthquake. However, in accordance with the currently approved EALs, an Unusual Event was not declared.

The inspector interviewed a Shift Engineer (SE) who, as Acting Station Director, would be responsible for the initial classification of an emergency situation. The SE was readily able to correctly classify several abnormal plant conditions using the currently approved EALs found in Procedure BwAP 200-1. The SE was also adequately aware of the regulatory time limits for initially notifying State and NRC officials following any emergency declaration, and adequately understood which emergency response facilities (ERFs) must be activated within about one hour following an appropriate emergency classification.

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

- The licensee should revise the generic PWR and generic BWR EALs for all six nuclear stations so that an Unusual Event would be declared if an earthquake was felt onsite and the seismic monitoring systems were inoperable.

6. Protective Action Decisionmaking (82202)

The inspector compared procedural guidance on onsite and offsite protective action decisionmaking to that contained in the GSEP and Braidwood Annex. The procedural guidance accurately reflected the information found in the approved emergency plan.

The inspector interviewed a SE and concluded that he was adequately familiar with procedural guidance on protective action decisionmaking. The SE understood that, among his undelegable responsibilities as Acting Station Director, were the responsibilities for making protective action recommendations to offsite authorities and authorizing onsite emergency worker exposures in excess of normal regulatory limits. He adequately understood when onsite assembly and accountability was required, and under what circumstances the subsequent evacuation of non-essential personnel would or would not be appropriate. He knew the minimum offsite

protective action recommendation for any General Emergency declaration and was adequately familiar with procedural guidance for formulating offsite recommendations.

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

7. Notifications and Communications (82203)

The inspector reviewed records of monthly, quarterly, and annual communications tests performed since the Fall of 1986 and determined that all were satisfactorily completed. Identified problems were corrected in a timely manner.

The inspector reviewed Procedure BwZP 300-1 through BwZP 300-3, "Initial Notification and GSEP Response" and determined that procedures were consistent with the classification and emergency action levels. Random testing of telephones in various emergency response facilities was conducted. All telephones were operational. Call out and notification procedures were complete and current. A review of emergency plan activation for this year verified the licensee can perform notifications within the regulatory time requirements.

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

8. Shift Staffing and Augmentation (82205)

The numbers and types of person required to augment onshift personnel following an emergency declaration were specified in Section 4 of the GSEP and in Procedure BwZP 600-1, "Prioritized Call Listing for Staff Augmentation." Augmentation provisions met the criteria in Table B-1 of NUREG-0654, Revision 1. The procedure identified adequate numbers of currently trained personnel for each position in the onsite emergency organization (Station Group). The procedure also specified which director, technical staff, and support positions must respond to the Station for each of the four emergency classes. For staff and support level positions, the numbers of emergency responders varied somewhat depending on which class of emergency had been declared. Persons identified in the call out procedure were prioritized by their estimated travel times from their residences to the Station. The GSEP Coordinator was responsible for updating the call out procedure on a quarterly basis.

The licensee has conducted semiannual, off-hours drills to demonstrate the capability of the Station Group to adequately augment onshift personnel in a timely manner. The licensee conducted an unsuccessful augmentation drill on March 10 and a successful drill on March 11, 1987. The first drill was considered unsuccessful since one call list supervisor had to be prompted on what to do when another call list supervisor could not be reached to assist him in making the notification calls. Records of both drills were complete and adequately detailed.

The licensee's corporate emergency planning staff has been responsible for maintaining the "GSEP Telephone Directory," which identified adequate numbers of persons for specific positions in the offsite emergency organization. Primary and alternate response personnel were identified for each of the licensee's nuclear generating stations. The directory has been updated quarterly.

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

9. Exit Interview

On August 7, 1987, the inspectors met with those licensee representatives denoted in Paragraph 1 to present their preliminary findings. The licensee indicated that none of the items discussed were proprietary in nature.