

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-454/88018(DRSS); 50-455/88016(DRSS)

Docket Nos. 50-454; 50-455

Licenses No. NPF-37; NPF-66

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

Facility Name: Byron Nuclear Generating Station, Units 1 and 2

Inspection At: Byron Site, Byron, Illinois

Inspection Conducted: September 19-22, 1988

Inspectors: *T. Ploski*  
*for* M. Smith

*10/3/88*  
Date

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Approved By: *for* William Snell, Chief  
Emergency Preparedness  
Section

*10/3/88*  
Date

Inspection Summary

Inspection on September 19-22, 1988 (Reports No. 50-454/88018(DRSS); 50-455/88016(DRSS))

Areas Inspected: Routine, unannounced inspection of the following areas of the Byron Station emergency preparedness program: action on previously identified items (IP92701); emergency plan activations; (IP 92700), and the operational status of the emergency preparedness program (IP82701). Section 5 of this report provides an updated summary of the TMI Safety Issues Management System (SIMS) items related to Emergency Preparedness. The inspection involved two NRC inspectors.

Results: Two open items were identified during this inspection. One item addressed proceduralizing a required position in the Technical Support Center; and the other item involved the development of training procedures to ensure the training program for onsite personnel is conducted and coordinated as required. Plant management commitments during the exit meeting to promptly respond to these identified concerns clearly demonstrated the high level of program support at Byron Station. The Emergency Preparedness Program remains strong and the licensee's capability to respond to an onsite emergency remains adequate. No violations of NRC requirements, deficiencies, or deviations were identified as a result of this inspection.

## DETAILS

### 1. Persons Contacted

- R. Pleniewicz, Station Manager
- \*R. Ward, Services Superintendent
- \*J. Golden, Supervisor, Emergency Planning
- D. Winchester, Quality Assurance Supervisor
- \*M. Snow, Regulatory Assurance Supervisor
- \*A. Chernick, Training Supervisor
- \*M. E. DiPonzio, TSEP Supervisor
- R. Lucas, Security Administrator
- \*M. Whitmore, GSEP Coordinator
- \*T. Macki, Training Instructor
- \*E. Title, Regulatory Assurance Staff
- \*W. Pirnat, Regulatory Assurance Staff
- \*S. Kraus, Quality Assurance Auditor
- \*W. J. Dean, Nuclear Safety, Onsite
- T. Gierich, Shift Engineer
- L. Wehner, Regulatory Assurance Engineer

### 2. Licensee Actions on Previously Identified Items (92701)

(Closed) Open Items 454-87031-01; 455-87029-01: A violation was issued for failure to adequately follow and implement the GSEP by classifying and declaring an emergency condition per EALs. EAL 16 had been revised as the licensee committed to in their response letter dated December 15, 1987. This item is closed.

(Closed) Open Items 454-87031-02; 455-87029-02: Staff designated as OSC Supervisors had not received training as required in procedures. Records reviewed during this inspection indicated annual training was being administered through the use of reading packages for 1988, and had been conducted in October 1987. The persons designated to this emergency position had been placed on the GSEP Coordinator's tracking system to receive annual requalification training. This item is closed.

### 3. Emergency Plan Activations

Licensee and NRC records of actual emergency plan activations were examined for the period beginning July 1, 1987. Records included: Control Room logs; Deviation Reports; message forms documenting verbal communications with State and NRC Duty Officers; evaluations of licensee records performed by the GSEP Coordinator; records generated by NRC Duty Officers; Licensee Event Reports (LERs); and records generated by Technical Support Center (TSC) staff during an October 1987 TSC activation.

The licensee correctly classified eight Unusual Events during the period. Records indicated that State, County, and NRC officials had been notified within regulatory time limits following each declaration. Based on a review of LERs, there were no other incidents through August 1988, that warranted an activation of the Emergency Plan. Records generated by plant personnel were well detailed. The licensee has continued a long-standing practice of proceduralizing a modified version of the NRC's Event Notification Worksheet. Personnel are required to complete this worksheet prior to contacting the NRC Duty Officer to ensure that the NRC will be adequately informed of abnormal plant conditions. Comparison of forms completed by licensee staff and NRC Duty Officers indicated that the licensee's proceduralized methodology has been effective in transmitting accurate information to the NRC.

The GSEP Coordinator's compilation and evaluation of licensee records associated with plan activations are thorough and complete.

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

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

a. Emergency Plan and Implementing Procedures

The licensee's plan and procedures related to onsite and offsite protective action decisionmaking were adequate. Any changes since the last inspection were adequately reviewed by licensee management and did not impact negatively on the overall state of onsite and offsite emergency preparedness. Changes to the plan were appropriately reflected in emergency plan implementing procedures with one exception.

Revision 6 of the Generating Stations Emergency Plan (GSEP) defines the position of "Station Director's Communicator" as a member of the onsite emergency organization. In addition to performing communicator tasks, responsibilities assigned to this position by the GSEP included assisting the Station Director in evaluating offsite Protective Action Recommendations (PARs) and Emergency Action Levels (EALs). However, the position of Station Director's Communicator had not been proceduralized in the Station's Emergency Plan Implementing Procedures (EPIPs).

Based on discussions with the GSEP Coordinator and the Training Instructor, none of the individuals listed in the emergency organization's callout procedure as "TSC Communicators" had been trained to assist the Station Director in evaluating PARs and EALs for relevancy to abnormal plant conditions. Training of preselected individuals on EAL and PAR procedural guidance will better ensure adequate response to State official and NRC requests for further information regarding recommendations to protect public health and safety.

Proceduralization of the "Station Director's Communicator" position, as defined in the GSEP, and training of an adequate number of personnel to fill this position will be tracked as Open Item No. 454/88018-01.

Implementing Procedure BZP 400-2, "Role and Staffing of the OSC," indicated that emergency workers within the OSC would be evacuated to another location if dose rates approach 100 millirem per hour in or around the OSC. However, adequately detailed guidance on radiation levels which would require evacuation of non-essential personnel from onsite assembly areas was not addressed in emergency plan implementing procedures. Such personnel may have to be kept onsite for an indefinite period after accountability if greater hazards exist within the Owner Controlled Area.

Generic EALs for PWRs are developed; however the finalized version had not been approved or distributed at the time of this inspection. This project was in the development stage during the last routine inspection for Byron conducted in 1987.

In addition to the Open Item, the following item should be considered for improvement:

- The licensee should provide procedural guidance for determining whether onsite assembly areas for non-essential personnel are habitable from a radiological standpoint.

b. Emergency Facilities, Equipment, Instrumentation and Supplies

The Emergency Response Facilities (ERFs) were as described in the Byron Annex to the GSEP and relevant EIPs. Several equipment improvements were evident during a tour of the TSC. Safety Parameter Display System (SPDS) terminals were hung from the ceiling rather than being atop tables or carts. Control Room alarm printers had been installed and were operable for each unit. Two color graphic printers had been provided for the parameter trending system so that computerized trends of selected plant parameters could be generated in hardcopy, or in transparency form for use with an overhead projector. These improvements would make trended data more readily available to technical staff. A random sample of TSC telephones and computer terminals were checked and found to be operable. The Emergency Operations Facility (EOF), located in Dixon, Illinois, was not toured during this inspection.

Records of twelve proceduralized checklists, dating from either late 1987 or January 1988 through the third quarter of 1988, indicated that the GSEP Coordinator and an assistant had completed all periodic communication equipment checks, first aid supplies inventories, and inventories of Health Physics and office supplies reserved for use by emergency response personnel. Locations covered by these checklists included: onsite and offsite ERFs, the Control Room,

gatehouse, onsite assembly areas, onsite decontamination/first aid room, and a local hospital. Checklists required verification that equipment and kits were in their predesignated location and that kit contents were complete. Appropriate checklists included verification of periodic replacement of perishable items and that current calibration stickers were available on survey instruments. Review of the twelve types of checklists also clearly indicated that identified problems had been corrected in a timely manner and that inventories had been performed following the use of kit supplies.

The licensee was in the process of evaluating options for the modernization or relocation of the EOF and/or the Joint Public Information Center (JPIC) located in Dixon, Illinois. A final decision on this issue was expected later in 1988.

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

c. Organization and Management Control

The GSEP Coordinator's assigned responsibilities remained the same and included managing the onsite GSEP training program. During 1988, the coordinator also functioned as Rad Chem Supervisor for approximately one quarter of the year, which included participation in the budgeting process.

Excellent contact was maintained with local offsite authorities. Due to the coordinator's knowledge of the emergency preparedness program and his time in his position, he was able to overextend himself and function adequately in these extra duties. However, in the process, his ability to adequately document and maintain adequate records control has lessened. The primary example of this problem is the coordination of the GSEP training program. Administrative procedures for the development, tracking and overall coordination of a GSEP training program were unavailable for review. Approved lesson plans reflecting the approved training matrix were unavailable. A process to review, approve and update lesson plans and related documents was unavailable. Records for the training program were scattered between the GSEP Coordinator's office and the training center. The development of approved training procedures to ensure an adequate GSEP training program is in effect will be tracked as Open Item No. 50-454/88018-02.

A review of the organizational structure of plant staff indicated no changes were made that would affect the ability of plant personnel to protect the health and safety of the public.

The GSEP Coordinator had developed his own computer program to track several emergency planning programs under his control. These programs were implemented to track his annual responsibilities for program maintenance and emergency organization annual training requirements.

The Licensee's Letters of Agreement with local emergency support organizations are updated annually. This practice, along with meetings and telephone conversations at intermittent intervals to check on organizational changes and equipment needs, ensures adequate support from local offsite support groups.

With the exception of the Open Item regarding the development of training program administrative procedures, this portion of the licensee's program was acceptable.

d. Training

Training was administered through the use of reading packages for requalification; table tops for special areas of concern such as security and log keeping; and informational subjects, such as a video of the Federal Full Field exercise of 1987. Duplicate training sessions were scheduled each month. The plant manager issued a training schedule at the beginning of the year with instructions to all emergency organization personnel to attend one of the monthly scheduled training sessions.

Five members of the onsite emergency organization were interviewed regarding their emergency duties. These interviewees included two Station Directors; one Acting Station Director; one Security Director; and one TSC Communicator. All interviewees demonstrated adequate familiarity with their emergency responsibilities and relevant emergency plan implementing procedures.

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

e. Independent Reviews/Audits

Quality Assurance (QA) Department records of audits and surveillances of the Station's emergency preparedness program were reviewed for the period July 1987 through August 1988. All records were complete and readily available. The 1987 and 1988 audits satisfied the requirements of 10 CFR 50.54 (t). Records indicated that timely and adequate corrective actions had been completed and verified on identified problems for all but the most recent surveillance. Corporate emergency planning staff had a late September deadline to formally respond to several concerns identified during a recent surveillance of an annual environmental monitoring drill.

The annual audit program consisted of an onsite audit, performed by (QA) staff based at the Station, and an offsite audit performed by QA staff based at other locations. The annual onsite audits focused on the emergency preparedness program, while emergency preparedness was one of a number of topics addressed in the offsite audits. The



structure of the 1988 offsite audit was improved from former offsite audits and resulted in an audit that was more indepth and broader in scope.

QA Department guidelines required one surveillance of the program every six months. Increased interest in the program was demonstrated by the QA staff performing seven surveillances in the last half of 1987 and four surveillances so far in 1988. In addition to surveillances of drills and exercises, adequacy of the labeling of onsite sampling points and maintenance of current controlled documents in the EOF were also topics of program surveillances. The QA staff also observed offsite aspects of the 1988 medical drill. The nature of questions and findings in the onsite surveillance and audits also indicated that the auditors had a good understanding of the licensee's emergency preparedness program.

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

#### 5. TMI Safety Issues Management System (SIMS) Items

On October 31, 1980, the NRC issued NUREG-0737, which incorporated into one document all TMI-related items approved for implementation by the Commission at that time. On December 17, 1982, the NRC issued Supplement 1 to NUREG-0737 to provide additional clarification regarding Regulatory Guide 1.97 (Revision 2) - Application to Emergency Response Facilities, Emergency Response Facilities, and Meteorological Data, as well as other areas. The status of the completion of these TMI SIMS items are internally tracked by the NRC.

The below listing provides the status of the SIMS items related to emergency preparedness. The listing indicates how the item was tracked as of August 22, 1988, on SIMS, as well as what we have determined to be the correct and current status of the item. In some cases, the status of items tracked by SIMS are incorrect and/or should be updated based on recent inspection findings. The comments provide a background and basis for the current status.

III.A           SIMS Status:       Not Listed  
                  Current Status:   Open

This item refers to implementation of Chapter 8 of Supplement 1 to NUREG-0737, and should be closed upon completion of the yet to be scheduled ERF Appraisal.

III.A.1.1       SIMS Status:       Not Listed  
                  Current Status:   Closed

This item involved short term improvements to the emergency preparedness program and was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Reports No. 50-454/83-56; 50-455/83-39 dated February 3, 1984.

III.A.1.2.1    SIMS Status:    Closed  
                  Current Status: Closed

This item involved interim upgrades to the ERF's and was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Reports No. 50-454/83-56; 50-455/83-39 dated February 3, 1984.

III.A.1.2.2    SIMS Status:    Not Listed  
                  Current Status: N/A

This item involved design criteria for upgraded ERF's, but was subsequently determined to be not applicable (N/A).

III.A.1.2.3    SIMS Status:    Not Listed  
                  Current Status: Closed

Because this item involved ERF modifications that were incorporated into MPA-F-63, 64 and 65, this item was closed based on the Emergency Preparedness Implementation Appraisal: Reports No. 50-454/83-56; 50-455/83-39 dated February 3, 1984.

III.A.2.1       SIMS Status:    Not Listed  
                  Current Status: Closed

This item involved the submittal of upgraded emergency plans. This item was closed with the issuance of Supplement No. 4 to the SER dated May 1984 (NUREG-0876).

III.A.2.2       SIMS Status:    Not Listed  
                  Current Status: Closed

This item involved the submittal of emergency procedures. This item was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Reports No. 50-454/83-56; 50-455/83-39 dated February 3, 1984.

III.A.2.3       SIMS Status:    Not Listed  
                  Current Status: Closed

This item involved an acceptable interim meteorological program. This item was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Reports No. 50-454/83-56; 50-455/83-39 dated February 3, 1984.

III.A.2.4       SIMS Status:    Not Listed  
                  Current Status: Open

This item involves an acceptable final meteorological program and will not be closed until completion of the as yet unscheduled ERF Appraisal.



III.A.2.5       SIMS Status:     Not Listed  
                  Current Status:  Open

This item involves an acceptable Class A meteorological model and will not be closed until completion of the as yet unscheduled ERF Appraisal.

III.A.2.6       SIMS Status:     Not Listed  
                  Current Status:  Open

This item involves a licensee's review of their Class A meteorological model and will not be closed until completion of the as yet unscheduled ERF Appraisal.

III.A.2.7       SIMS Status:     Not Listed  
                  Current Status:  N/A

This item required the licensee to provide a description of the Class B meteorological model to the NRC. Based on the current structure of the ERF Appraisal program, the NRC is not reviewing submittals of the Class B model. Therefore this item is not applicable (N/A).

III.A.2.8       SIMS Status:     Not Listed  
                  Current Status:  Open

This item involves an acceptable Class B meteorological model and will not be closed until completion of the as yet unscheduled ERF Appraisal.

MPA-F-63        SIMS Status:     Not Listed  
                  Current Status:  Open

This item involves a review of the TSC during the ERF Appraisal and should be closed upon completion of the as yet unscheduled ERF Appraisal.

MPA-F-64        SIMS Status:     Not Listed  
                  Current Status:  Closed

This item involved a review of the OSC, which was completed during the October 14, 1987 exercise: Reports No. 50-454/87040(DRSS); 50-455/87034(DRSS) dated November 3, 1987.

MPA-F-65        SIMS Status:     Not Listed  
                  Current Status:  Open

This item involves a review of the EOF during the ERF Appraisal and should be closed upon completion of the as yet unscheduled ERF Appraisal.

MPA-F-66        SIMS Status:     Not Listed  
                  Current Status:  N/A

This item involved the Nuclear Data Link, which has been superseded by the Emergency Response Data System (ERDS). Therefore this item is not applicable (N/A).

6. Exit Interview

The inspectors met with licensee representatives denoted in Paragraph 1, on September 22, 1988. The inspectors summarized the scope and results of the inspection, and discussed the likely content of the inspection report. The licensee indicated that none of the information discussed was proprietary in nature.