

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/88020(DRSS)

Docket No. 50-346

License No. NPF-3

Licensee: Toledo Edison Company
Edison Plaza
300 Madison Avenue
Toledo, OH 43652

Facility Name: Davis-Besse Nuclear Power Station, Unit 1

Inspection At: Davis-Besse Site, Oak Harbor, Ohio

Inspection Conducted: July 11-15 and 18, 1988

Inspector: T. Ploski *W. Snell for*

8/1/88
Date

Approved By: *W. Snell*
W. Snell, Chief
Emergency Preparedness Section

8/1/88
Date

Inspection Summary

Inspection on July 11-15, 1988 (Report No. 50-346/88020(DRSS))

Areas Inspected: Routine, announced inspection of the following areas of the emergency preparedness program: followup on actual emergency plan activations (IP 9270C), licensee action on previously identified items; and operational status of the emergency preparedness program (IP 82701). Section 5 of this report includes a summary of the current status of relevant TMI Safety Issues Management System (SIMS) items related to emergency preparedness. The inspection involved one NRC inspector.

Results: No violations, deviations, or deficiencies were identified.

DETAILS

1. Persons Contacted

- *B. DeMaison, Emergency Preparedness Manager
- *B. Cope, Onsite Emergency Planning Supervisor
- *P. Seniun, Operations Department
- *K. Brewster, Licensing Programs Supervisor
- J. Scott-Wasilk, Nuclear Health and Safety Director
- L. Ramsett, Quality Assurance Director
- R. Rinderman, Quality Assurance Supervisor
- K. Browning, Document Control Supervisor
- D. Stevens, Document Control Clerk
- J. Dillich, Technical Support Manager
- S. Martin, Shift Supervisor
- P. Braswell, Procedures Coordinator
- I. Borland, Onsite Emergency Planner
- C. Upchurch, Onsite Emergency Planner
- D. Ruff, Onsite Emergency Planner
- G. Anderson, Onsite Emergency Planner
- S. Gerhardstein, Offsite Emergency Planner
- J. Saggese, Offsite Emergency Planner
- J. Vetter, Offsite Emergency Planner
- J. Kalmbach, Secretary

*Indicates those who attended the July 15, 1988 exit interview.

2. Licensee Action on Previously Identified Items (92701)

(Closed) Open Item No. 346/87900-01: Followup on IE Information Notice 87-58: This notice is addressed to all nuclear power reactor facilities having an operating license, and emphasizes the requirement that the licensee must maintain adequate personnel on shift to permit continuous communications with the NRC following an emergency declaration without diminishing the capability to place the reactor in a safe shutdown condition.

Control Room Administrative Procedures DB-OP-00002 and DB-TS-00004 state that onshift personnel must maintain continuous communications with the NRC Operations Center upon NRC request. The former further states that the licensee's caller should be knowledgeable of current plant status and NRC notification requirements. The licensee has also proceduralized a version of the NRC's Event Notification Worksheet, and requires that this worksheet be filled out to facilitate information transfer to NRC Duty Officers.

By internal memorandum dated January 29, 1988, the Nuclear Licensing Department was informed that the Nuclear Operations Training Department had routed the Information Notice to all onsite licensed personnel, all personnel then in licensing training, and all Shift Technical Advisors

(STAs). An internal memorandum dated January 7, 1988, stated that three Operations Department management personnel (Shift Supervisor, Assistant Shift Supervisor and STA) are onshift at all times and are all capable of functioning as knowledgeable communicators for NRC notifications.

This item is closed.

3. Emergency Plan Activations (92700)

NRC and licensee records associated with all emergency plan activations between July 1, 1987 and June 30, 1988 were reviewed. These records included: Licensee Event Reports (LERs); records generated by NRC Duty Officers; Control Room logs; initial notification forms; and thorough internal evaluations of each activation that were performed by the licensee's Emergency Preparedness Department.

During this time period, onshift personnel activated the Station's emergency plan on four occasions. Based on the LER review, there were no other classifiable events during the period. Three of the four activations were correctly classified as Unusual Events. The December 15, 1987 and January 1, 1988 Unusual Events were declared due to abnormally low lake level, as measured at the Station's intake structure. The April 6, 1988 Unusual Event declaration was due to the transporting of a potentially contaminated injured worker to a local hospital. The individual was later determined not to have been contaminated.

At 6:45 p.m. on March 4, 1988, onshift personnel declared an Unusual Event, per Emergency Action Level (EAL) 9.1.1 for a plant shutdown required by Technical Specification 3.0.3 due to both trains of the decay heat removal system being briefly declared inoperable. However, plant shutdown had not begun when the Unusual Event was declared. There was a concern that a suspected common mode failure might result in component cooling water outlet valves and heat exchanger service water outlet valves not failing open as designed in the event of a Safety Features Actuation System signal. Between the 6:45 p.m. Unusual Event declaration and about 6:55 p.m., personnel verified that the valves in question were manually operable, which meant that the Unusual Event could be terminated. The result of these actions and determinations was that State and County officials were informed at about 6:55 p.m. that an Unusual Event was being declared and terminated. Meanwhile, the licensee discovered that, declaring both trains inoperable satisfied Alert EAL 3.D.1. Another call was made at about 7:05 p.m. to inform the State and county officials that the terminated situation had also satisfied an Alert EAL's criteria. The NRC Operations Center was adequately informed of the situation at about 9:26 p.m.

The licensee's internal investigation of the March 4 situation identified 23 items requiring some corrective actions. Included in these items were the needs to: revise the wording of the relevant Unusual Event EAL so that the declaration would not be made until reactor power reduction commences; increase training emphasis on the importance of a thorough EAL review prior to declaring any emergency; and improve recordskeeping

regarding initial offsite notification forms. A review of the licensee's Emergency Planning Activity Scheduling System (EPASS) indicated that acceptable progress was being made on the action items resulting from the licensee's evaluation of the March 4 emergency plan activation.

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

By letter dated November 12, 1987, NRC staff approved the current Revision 11 to the Davis-Besse Emergency Plan. The next revision was expected to be relatively minor, and should be submitted for NRC review by the Fall of 1988. The licensee also planned to voluntarily submit an update to the Evacuation Time Estimate Study for the Emergency Planning Zone later in 1988. Future voluntary updates to this study will likely be biennial.

The Procedures Coordinator described the Nuclear Health and Safety Division's methodology for preparing, reviewing, and approving an Emergency Plan Implementing Procedure (EPIP). The designated "qualified reviewer" has a number of responsibilities, including identifying all affected procedures and selecting persons outside the Division for any needed cross-discipline review. If the EPIP revision is safety-related, the other departments' reviewers must also be "qualified reviewers." Non safety-related EPIPs can be reviewed by technical staff who may not be fully trained as "qualified reviewers." Once training on a new or revised EPIP has been completed, the Division Director will assign an effective date for the procedure. The Records Management Department would then distribute the EPIP to all authorized persons and locations. A review of documentation associated with Procedure HS-EP-00100, "Emergency Planning Training Program," indicated that it was being processed in accordance with the Division's approved methodology.

A spotcheck of recent transmittal records maintained in the Document Control Department indicated that new or revised EPIPs had been mailed to NRC Region III and the Headquarters Document Control Desk well within the 30 day time limit specified in the regulations.

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

b. Emergency Response Facilities, Equipment, and Supplies

In response to an April 1988 onsite meeting involving several Regional and Headquarters personnel, the licensee is reevaluating the feasibility of its proposed unshielded Technical Support Center (TSC), called the Plant Control Center (PCC), which would be built on the Turbine Deck. The PCC concept has already been described

in Inspection Report No. 50-346/87016(DRSS). The licensee has been advised that the NRC has approved several other shielded TSCs located beyond other plants' Protected Area boundaries. The licensee was also advised to contact other licensees who had previously considered and/or implemented similar concepts to the proposed PPC. The licensee indicated that reevaluation of the PCC concept should be completed in August 1988.

The inspector toured the TSC and the Emergency Control Center (ECC), which is the licensee's Emergency Operations Facility. The TSC and ECC were as described in the Emergency Plan and were being maintained in an adequate state of operational readiness. Records review indicated that periodic communications and other equipment tests for all Emergency Response Facilities (ERFs) had been successfully conducted in accordance with Procedures HS-EP-4000, 4010, and 4020 during 1988. Quarterly inventories of emergency supplies maintained within the licensee's ERFs, four local hospitals, and specified onsite assembly areas had also been conducted per procedures during 1988. Periodic communications test and supplies inventory records also encompassed three dedicated vehicles that would be utilized by the Station's Radiation Monitoring Teams (RMTs). Inventory procedures included provisions for conducting inventories after use of the supplies or upon discovering a broken seal on a storage location.

Records review indicated that the Emergency Planning Zone's (EPZ) Prompt Notification (siren) System (PNS) had been successfully tested on a monthly basis since the last routine inspection. However, occasional unintended activations of individual sirens, located primarily in the western portion of the EPZ, began occurring on some mornings in late June and early July 1988. The false activations typically happened between about 2:00 and 10:00 a.m. Over a dozen sirens were reported to have sounded on some mornings. The PNS's vendor and the Federal Communications Commission (FCC) became involved in attempts to eliminate the problem.

The FCC soon determined that the siren initiation signals were coming from a firm in Michigan which had recently been given approval to modify its transmission capability and had been conducting morning tests of the equipment being installed. The Michigan firm was contacted and agreed to suspend testing activities until the PNS was electronically modified to prevent further false siren activations. System modifications were performed by July 12, and various adjustments and tests were completed on July 18.

The reactor vessel was completely defueled during the period of false siren activations as part of an ongoing, scheduled outage. The licensee kept Region III staff adequately informed of its, the vendor's, and the FCC's efforts to resolve the false activation problem. State and county officials were also kept apprised of the situation. The licensee clearly understood the State's position, which was shared by NRC Region III and FEMA Region V staffs, that

no fuel should be placed back into the reactor vessel until there was adequate assurance that the PNS would be fully capable of performing its intended function.

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

c. Organization and Management Control

An EP Manager, who had left the licensee's organization in June 1987, was replaced by another employee who resigned in late 1987. The licensee promptly appointed an internal candidate who remains the EP Manager. The EP Manager still reports to the Vice President Nuclear through the Nuclear Health and Safety Division Director.

The EP Department has been reorganized into two main groups (onsite and offsite) versus the three groups existent a year ago. Responsibilities for maintaining onsite and offsite ERFs and equipment are no longer assigned to a separate work group. The Onsite EP Supervisor's staff has numerous areas of responsibility, including: the training program for the licensee's emergency response organization (ERO); the licensee's ERFs and related equipment and supplies; maintaining the Emergency Plan and EPIPs; the automated system used to activate the ERO; maintaining the PNS and dedicated vehicles for the RMTs; and the EP Department's action item tracking system. The Offsite EP Supervisor's group has expanded, such that a different planner is assigned to each county within the EPZ and to each host county (Erie and Sandusky Counties).

Responsibilities of the offsite EP staff included: interfacing with the Citizen's Advisory Committee; working with State and County officials to maintain the offsite emergency plans and related procedures; assisting offsite officials in providing annual training to a variety of offsite support organizations; and assisting county staff in performing periodic inventories of offsite emergency supplies. Several planners were also responsible for the public information brochure program, done in coordination with county and State officials, and for training the corporate emergency support organization. The 1988 public information program has been expanded, in coordination with offsite officials, by making shirt pocket-sized emergency planning/local events information booklets available at a number of recreation areas in the EPZ.

The EP Department was maintaining about 175 pagers for approximately 40 day positions in the licensee's ERO. Primary on-call responsibility has been rotated on a weekly basis among essentially three sets of personnel. The bulk of the ERO positions were staffed by three currently trained individuals, with the remainder of the positions typically having more than three qualified persons. An administrative system was in use that required an on-call person to notify the EP Department and alternates in writing in the event that he/she would be out of pager range during the week. ERO organization charts,

depicting those individuals on-call for the current and upcoming weeks, were prominently displayed in the corridor between the TSC and ECC.

Since the last routine inspection, the licensee has assigned primary responsibility for filling vacancies in the ERO roster to the appropriate Division Directors rather than to the EP Department. The EP Department was in the latter stages of adding color-coded identifiers to employee badges to facilitate ERO members gaining entry to their assigned ERFs. The EP Department was responsible for maintaining a current ERO Telephone Directory. The directory was procedurally required to be updated upon receipt of a "sufficient" number of personnel and/or telephone number changes. The directory had been updated eight times during 1987, and was being updated for the third time in 1988 during this inspection.

The Emergency Planning Activity Scheduling System (EPASS) was being effectively utilized to track one-time corrective action items while the Recurring Activity Tracking System (RATS) was used for tracking routine tasks. Monthly lists of items on both systems have been generated and distributed in accordance with Procedure HS-EP-0300.

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

d. Training

The EP Department continued to be responsible for the ERO training program, including the development of lesson plans, handouts, self-study materials, and examinations. The Chemistry Department conducted training on the post-accident sampling system. The Industrial Safety Department provided training on medical emergency response to designated onsite personnel and to offsite support organizations (hospital and ambulance services). The Nuclear Training Division was responsible for Fire Brigade Training. The EP Manager or Onsite EP Supervisor and the Nuclear Training Division Director were responsible for reviewing and approving all ERO training packages prior to use. The Training Division had primary responsibility for maintaining ERO training records, although 1988 records were also available in the EP Department's offices.

Annual training of the ERO was being conducted on a calendar year basis, rather than at a frequency based on the Technical Specification definition of "annual." The 1988 training cycle began in May with some classroom training expected to continue into September. The 1988 training effort was planned for completion prior to the November exercise. By memorandum dated July 11, 1988, the Vice President Nuclear approved an ERF walkthrough and drill schedule for the entire ERO, plus a tentative list of key players who will demonstrate their capabilities in the exercise.

In accordance with the approved "Emergency Plan Training Program" procedure, the 1988 training program was a mixture of classroom, walkthrough, drill, required reading, and "self-paced" (self-study) activities. Classroom training was required for new ERO members and in situations where "hands-on" training with equipment was deemed appropriate. The self-paced training option was only permitted for experienced ERO members, particularly for cases where no major changes to the lesson plan had occurred since the previous year. Due to the outage which began in March 1988, approximately 30 veteran members of the ERO were working on self-paced study packages prior to an August 1 deadline. These packages included question and answer worksheets. Persons completing the self-paced packages were still required to pass an examination, as were those who attended classroom training.

Training materials associated with the upgraded offsite Radiation Monitoring Team (RMT) training program were reviewed. Training materials had the required approvals. The licensee was in the midst of the 1988 RMT training effort, as four sessions had been held in late June and other sessions were scheduled in July. The sessions typically involved about four field survey team members, a Radiological Testing Laboratory (RTL) Coordinator, an RMT Coordinator, and offsite dose assessment personnel. The licensee has elected not to utilize Health Physics Department staff on its RMTs, as such personnel were considered more valuable for use with implant teams. Thus, the Station's RMTs are drawn from a pool of about 25 technicians who have been specially trained for RMT duties.

Records of 36 members of the ERO were checked. All had completed the required training in 1987. Some had already completed their 1988 training requirements, while the remainder had been given self-paced study packages which were to be completed by August 1.

The following drills had been successfully conducted and critiqued since the July 1987 inspection in order to satisfy Emergency Plan commitments: off-hours augmentation (December 1987), and post-accident sampling (March 1988). An off-hours augmentation drill was scheduled for later in July, while several medical drills were tentatively planned for October. The 1988 annual assembly/accountability drill has not yet been conducted.

Separate walkthroughs were conducted with a Shift Supervisor and another individual who had been trained to fulfill Emergency Director responsibilities. The interviewees were asked questions regarding their general knowledge of the EP program; their undellegable responsibilities as Emergency Director; and notification requirements involving County, State, and NRC officials following any emergency declaration. The interviewees were also asked to classify several abnormal situations in accordance with the Station's EALs, and to make several onsite and offsite protective action decisions. Both individuals exhibited no difficulties in correctly responding to interview questions.

Offsite emergency planners summarized their involvement in training efforts for offsite emergency support organizations during 1987. The Ottawa and Lucas County planners assisted State and County personnel in conducting training sessions on relevant Standard Operating Procedures (SOPs), fundamentals of radiation, and an introductory emergency planning course. They had also assisted in conducting walkthrough training sessions for county Emergency Operations Center staffs. The licensee has funded an offsite emergency preparedness instructor position which has been recently filled. The individual was still in training, and was expected to begin working with offsite officials and the licensee's offsite planners later this Summer. A training program for Sandusky County emergency responders, involving instruction on relevant SOPs and an introduction to emergency planning, was also expected to begin later this Summer.

Annual training to offsite officials on the Station's EALs and EP Program was conducted on April 26, 1988. The agenda included: an overview of the onshift emergency organization; ERO activation for each emergency class; fission product barriers; ERFs; responsibilities of the Emergency Director; and the dedicated "white phone" system utilized to simultaneously notify County and State officials of any emergency declaration.

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

e. Independent Reviews/Audits

The Quality Assurance (QA) Department's provisions for conducting independent audits and surveillances of the Station's emergency preparedness program were reviewed and discussed with the QA Supervisor. The last audit of the program was conducted in July 1987. The 1988 audit, scheduled for later this Summer, was not discussed with the licensee.

The 1987 audit was adequate in scope and depth, and satisfied the requirements of 10 CFR 50.54(t). The audit checklist included about 90 items. The Station's interface with offsite support organizations was evaluated in a variety of ways. For example, several State and County officials were contacted by the auditors. The auditors examined some records of training provided to offsite support organizations prior to the 1987 exercise. The auditors also determined whether callout lists had been periodically updated for licensee, State, and some county emergency responders. The auditors also toured the Emergency Operations Centers of Ottawa and Lucas Counties.

Records of the 1987 audit and four surveillances conducted since the last routine inspection were complete and readily available. The three findings resulting from the 1987 audit were closed in November. Surveillance topics included the emergency planning

staff's use of their action item tracking system, testing of a modified offsite dose calculation program, and several tests of the Computerized Automated Notification System (CANS) which is utilized to inform key members of the ERO of an emergency declaration. By letters dated August 1987, the Nuclear Health and Safety Division Director informed appropriate State and county officials that the annual audit had been completed with no negative findings regarding the Station's interface with offsite support groups. The inspector understood that offsite officials would be allowed to review the audit document upon request.

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-related items are internally tracked by the NRC as SIMS Items. The current status as tracked by SIMS for each of the items related to emergency preparedness is listed below. In some cases, the SIMS status is incorrect, and is so identified under the comments.

<u>Item No.</u>	<u>SIMS Status</u>	<u>Comments</u>
III.A	Open	This item refers to implementation of Chapter 8 of Supplement 1 to NUREG-0737, and should be closed upon completion of the as yet unscheduled ERF Appraisal.
III.A.1.1	N/A	The SIMS status for this item is incorrect. This item involved short term improvements to the emergency preparedness program and was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Report No. 50-346/82-01(OEPOS) dated March 23, 1982.
III.A.1.2.1	Closed	This item involved interim upgrades to the ERF's.
III.A.1.2.2	Not Listed	This item involved design criteria for upgraded ERF's, but was subsequently determined to be not applicable (N/A). This item should be added to the tracking system with a SIMS status of N/A.

<u>Item No.</u>	<u>SIMS Status</u>	<u>Comments</u>
III.A.1.2.3	Open	The SIMS status for this item is incorrect. Because this item involved ERF modifications that were incorporated into MPA-F-63, 64, and 65, this item was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Report No. 50-346/82-01(DEPOS) dated March 23, 1982.
III.A.2.1	N/A	The SIMS status for this item is incorrect. This item involved the submittal of upgraded emergency plans. This item was closed with the issuance of the emergency preparedness input to the SER: Report No. 50-346/82-26(DEPOS) dated October 7, 1982.
III.A.2.2	N/A	The SIMS status for this item is incorrect. This item involved the submittal of emergency procedures. This item was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Report No. 50-346/82-01(DEPOS) dated March 23, 1982.
III.A.2.3	Not Listed	This item involved an acceptable interim meteorological program. This item was closed at the conclusion of the Emergency Preparedness Implementation Appraisal: Report No. 50-346/82-01(DEPOS) dated March 23, 1982. This item should be added to the tracking system with a SIMS status of closed.
III.A.2.4	Closed	The SIMS status for this item is incorrect. This item involves an acceptable final meteorological program. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.

<u>Item No.</u>	<u>SIMS Status</u>	<u>Comments</u>
III.A.2.5	Open	This item involves an acceptable Class A meteorological model. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.
III.A.2.6	Open	This item involves a licensee's review of their Class A meteorological model. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.
III.A.2.7	Not Listed	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 should be added to the tracking system with a SIMS status of N/A
III.A.2.8	Open	This item involves an acceptable Class B meteorological model. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.
MPA-F-63	Open	This item involves a review of the TSC during the ERF Appraisal. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.
MPA-F-64	Open	The SIMS status for this item is incorrect. This item involved a review of the OSC, which was completed during the March 31, 1987 exercise: Report No. 50-346/87008(DRSS) dated April 15, 1987.
MPA-F-65	Open	This item involves a review of the EOF during the ERF Appraisal. This item will be closed at the conclusion of the as yet unscheduled ERF Appraisal.

<u>Item No.</u>	<u>SIMS Status</u>	<u>Comments</u>
MPA-F-66	Open	The SIMS status for this item is incorrect. This item involved the Nuclear Data Link, which has been superseded by the Emergency Response Data System (ERDS). This item should have a SIMS status of N/A.

6. Exit Interview

On July 15, 1988, the inspector met with those individuals identified in Paragraph 1 to present the preliminary inspection findings. The licensee agreed to consider the items discussed and indicated that none were proprietary in nature.