

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/85023(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 Plant, Unit 1

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

Inspection Conducted: June 24 through July 3, 1985

Inspector: *T. Ploski*
T. Ploski

7/29/85

Date

Approved By: *T. Ploski for*
M. P. Phillips, Chief
Emergency Preparedness Section

7/29/85

Date

Inspection Summary

Inspection on June 24 through July 3, 1985 (Report No. 50-346/85023(DRSS))

Areas Inspected: Special, announced inspection regarding the emergency preparedness aspects of the licensee's response to the loss of feedwater event of June 9, 1985. The inspection involved 15 inspector-hours onsite by one NRC inspector.

Results: One violation with NRC requirements was identified related to notification timeliness.

DETAILS

1. Persons Contacted

a. Toledo Edison Personnel

*T. Murray, Assistant Vice President, Nuclear Operations
S. Queenoz, Plant Manager
*R. Klein, Nuclear Services Director
*J. Scott-Wasilk, Emergency Preparedness Manager
*W. Frazer, Emergency Planning Supervisor
*S. Wideman, Senior Licensing Specialist
*J. Lietzow, Licensing Specialist
*M. Findlay, Emergency Planner
*D. Gordon, Emergency Planner
*B. Geddes, Associate Quality Assurance Auditor
T. Lehman, Shift Supervisor
T. Lang, Shift Technical Advisor
S. Feasel, Assistant Shift Supervisor
J. Lingenfelter, Technical Engineer
L. Simon, Operations Supervisor
D. Burkett, Associate Engineer

b. Non-Toledo Edison Personnel

J. Greer, Ottawa County Disaster Services Agency
L. Grove, Ohio Disaster Services Agency
G. Kudlinski, Ohio Disaster Services Agency

*Indicates those who attended the July 3, 1985 exit interview.

2. Emergency Classification and Declaration

The following is a summary of "system response operator actions" information relative to the emergency preparedness activities described in this paragraph. This brief summary was taken from the detailed Sequence of Events compiled by the NRC Fact Finding Team as of June 24, 1985. Time data is expressed in hours/minutes/seconds.

<u>Time</u>	<u>Events</u>
01:35:00	No. 1 Main Feed Pump (MFP) tripped.
01:35:30	Reactor trip, turbine trip.
01:37:37	Source of steam for No. 2 MFP turbine is isolated. Steam from main steam line and moisture separator/reheaters continued to drive No. 2 MFP for awhile.
01:41:31	No. 1 Auxiliary Feed Pump (AFP) tripped.
01:41:44	No. 2 AFP tripped.
01:44:00 to	Assistant Shift Supervisor (SS) and

01:52:00	Equipment Operators were dispatched from the Control Room to perform various tasks. The Assistant SS placed the startup feedpump in service at 01:51:23.
01:51:30	Flow obtained from startup feedpump to No. 1 steam generator.
01:53:22	No. 2 AFP has significant flow.
01:54:46	No. 1 AFP has significant flow.
02:04:00	Plant conditions are essentially stable.

The inspector interviewed personnel involved in the emergency classification decisionmaking and reviewed relevant records. The Shift Technical Advisor (STA) was summoned from the Davis-Besse Administration Building (DBAB) to the Control Room after the reactor trip. The STA stated that, while enroute to the Control Room, he recognized the need to determine whether plant conditions had satisfied an Emergency Action Level (EAL). The STA stated that he arrived in the Control Room just prior to activation of the startup feedpump. He tried to assess Control Room activities and began to help the Assistant Shift Supervisor (SS) in an ongoing search for a relevant EAL. Their EAL review was affected somewhat by the need to also remain aware of other Control Room activities. Meanwhile, the Shift Supervisor (SS) focused his attention on restoring feedwater, although he also realized that loss of feedwater satisfied some EAL condition. Those interviewed estimated that the specific EAL for loss of all feedwater had been identified a minute or two before the startup feedwater pump was placed in operation. This EAL warranted declaration of a Site Area Emergency. However, the pump was placed in service before the declaration could be made and offsite notifications initiated. Once the EAL condition was no longer satisfied, the SS (interim Emergency Duty Officer (EDO)) correctly decided not to declare a Site Area Emergency.

While restoration of feedwater to both steam generators continued, the STA and Assistant SS searched for another applicable EAL, due to their correct concern for informing State and local officials of the abnormal plant conditions. At about 0200 hour, they recommended that the SS declare an Alert and activate the Technical Support Center (TSC), based on the definition of an Alert and their own uncertainty regarding continued operation of the startup and auxiliary feedwater pumps. The SS disagreed with this recommendation.

The SS, STA, and Assistant SS then agreed that the "miscellaneous" condition EALs were the only applicable EALs once at least one feedwater pump was in service. The Unusual Event EAL for this condition was as follows: "Other plant conditions exist that warrant increased awareness on the part of the plant operating staff or State and/or local offsite authorities which are not covered under any other existing station procedure." The Alert EAL for the "miscellaneous" condition was: "Other plant conditions exist that warrant precautionary activation of the TSC and Emergency Control Center (ECC) and placing other key emergency personnel on standby." The SS had decided not to activate the TSC.

He knew that the Plant Manager, Operations Engineer, and Operations Supervisor had been contacted after the reactor trip and were enroute to the Control Room, per procedures. In his opinion, therefore, an Alert declaration was not warranted.

The STA correctly remained firm in his belief that an emergency declaration and associated notifications to offsite authorities had to be made. By about 0212 hours, he believed he had convinced the SS to declare an Unusual Event per the "miscellaneous" EAL condition. He proceeded to inform the NRC Headquarters Duty Officer of that declaration, but stopped upon learning that the SS still wanted several minutes to consider the situation before declaring the Unusual Event. At 0225 hour, the SS declared the Unusual Event. The inspector reviewed the SS's and reactor operator's logs to ascertain the specific reason for the Unusual Event declaration. Both records only stated that the event was declared at 0225.

The licensee's emergency classification thought process was also described to the NRC Headquarters operations officer at the time that that individual received the initial notification for the Unusual Event declaration. The licensee told the operations officer that a Site Area Emergency would have been declared based on loss of all feedwater, but that feedwater had been restored before "we could get into the emergency plan." The licensee's caller then stated that the SS wanted some emergency plan activation due his uneasiness regarding the cause of the temporary loss of the auxiliary feedwater pumps and the continuing loss of the main feedwater pumps.

The declaration was not made by the SS for about 34 minutes after restoration of feedwater began. As indicated earlier in this paragraph, the SS, STA, and Assistant SS were aware of their need to review the EALs. Based on other interviews, the Plant Manager and Operations Engineer were also aware of the SS's responsibility to review the EALs and respond accordingly. It was apparent from the interviews that the SS made the ultimate classification decision. When asked why a declaration was not made for about 34 minutes after feedwater restoration, various interviewees gave one or more of the following reasons:

- . Since the loss of feedwater EAL was no longer applicable, it was unclear for a time whether an emergency plan activation was still warranted;
- . Time was needed to review the EALs to ascertain if other EAL(s) might be applicable after feedwater was being restored;
- . The "miscellaneous" condition EALs are nonspecific regarding plant parameters, versus many other EALs;
- . It was difficult for several minutes to get the SS to devote his attention to discussing EALs or emergency class definitions;

- . The need to determine what emergency response personnel and facilities should be activated impacted the classification decision. These needs had to be evaluated when making the classification decision; and
- . The loss of feedwater EAL is an "all or nothing" EAL. Either a Site Area Emergency declaration is clearly warranted if no feedwater is available, or no EAL is readily apparent once even one means of providing feedwater is in operation.

The inspector concluded that the aforementioned personnel were adequately aware of their Emergency Plan responsibilities once they became aware of abnormal plant conditions. A correct decision was made not to declare a Site Area Emergency once feedwater was being restored. There was insufficient time to make that declaration and begin offsite notifications between the time that the applicable EAL had been identified and the time that feedwater again became available. The need to declare an emergency remained apparent after restoration of feedwater, as correctly recognized by the STA and Assistant SS. While a number of reasons, each having some merit, have been given to explain why about 34 minutes elapsed from the restoration of feedwater to the Unusual Event declaration, the inspector concluded that the Unusual Event should have been declared about 10 minutes sooner, at the time the STA felt he had convinced the SS to make the declaration and had, in fact, begun so informing the NRC. At that time, Control Room personnel were certainly already at an "increased state of awareness" and the situation was of enough significance so that the Plant Manager and two senior operations personnel were enroute to the plant. Whether or not the situation warranted activation of the TSC and ECC could have been decided upon after declaring the Unusual Event. The emergency class could then have been upgraded to an Alert, if deemed necessary.

While the Code of Federal Regulations requires that State and local authorities be initially notified within about 15 minutes after any emergency declaration, it does not specify a time limit for initially classifying an emergency. Guidance on timeliness for emergency classification is found in Appendix 1 of NUREG 0654, Revision 1, which states, in part, that "prompt notification of offsite authorities is intended to indicate within about 15 minutes for the unusual event class and sooner (consistent with the need for other emergency actions) for other classes. The time is measured from the time at which operators recognize that events have occurred which make declaration of an emergency class appropriate." This has been interpreted to mean that a classification decision should normally be made within about fifteen minutes after the recognition that abnormal conditions exist. Since the criterion for classification timeliness is found in regulatory guidance and not in the Code of Federal Regulations, however, the licensee was not in violation of the regulations for not making a classification decision in a more timely manner than that which occurred following activation of the startup feedwater pump, since this pump was providing flow within 10 minutes of first entering the loss of all feedwater EAL.

3. Notification to Offsite Authorities

The inspector interviewed licensee personnel and representatives of the Ohio and Ottawa County Disaster Services Agencies (DSAs). The inspector also reviewed relevant licensee and County records, and listened to a recording of telephone conversations between the Ottawa County Sheriff's dispatcher and persons contacted by this individual, including the licensee. County records were made available through the licensee's emergency planning staff.

Per station procedure, the County Sheriff's Office was notified at about 0152 hours of a noise condition by the licensee's onshift Administrative Assistant. The noise, which could be heard in offsite areas near the plant, was due to an open relief valve which allowed steam from the secondary side to be vented into the environment. The dispatcher was correctly told that this notification did not constitute an activation of the licensee's emergency plan. The County Sheriff and County DSA Coordinator were both then contacted by the dispatcher. The dispatcher's records (Complaint Report No. 82499) indicated that the next call from the station was received at 0229 hour, at which time the onshift STA called to initially notify the county that an Unusual Event had been declared at 0225 hour. The inspector reviewed the licensee's copy of procedure EI 1300.02, which contained the Unusual Event Checklist that included the initial notification message form, and the dispatcher's Emergency Nuclear Information Initial Notification Information form, which duplicated the message format in the licensee's checklist. These records indicated that the initial notification message was timely after the declaration and was adequately transmitted and recorded, with the exception that the form's item "g", which is intended to provide a brief description of the event, was not properly completed. The licensee's message form contained a "NA" entry for item "g", while the corresponding entry was blank on the dispatcher's form. The STA explained to the inspector that he had difficulty when trying to express the reason for the event declaration on the initial notification message. He was concerned about becoming overly technical in the description and about having the dispatcher prolong the conversation by asking for too many clarifications. After listening to the tape of the dispatcher's subsequent calls, it was apparent that some local officials wanted to know the reason for the Unusual Event and that the dispatcher had difficulty when trying to provide an explanation. Some persons were told that the declaration was related to the earlier noise notification, while others were told that the declaration reason was not known by the dispatcher. Regarding verification callbacks to the station, the inspector concluded that these could have been completed in a more timely manner had the dispatcher initially stated her official capacity.

The dispatcher's log indicated that an attempt was made at 0241 hour to fulfill the regulatory requirement to notify the State of Ohio by contacting the local representative (Resident Radiological Analyst) of the Ohio DSA. This individual was then responsible for notifying the agency's officials in Columbus, Ohio. Both the log and the recording indicated that the analyst was not at home and could not be personally

reached by the dispatcher. The dispatcher told the person who answered the telephone that an Unusual Event had been declared at Davis-Besse and that the resident analyst should call his office. The dispatcher's log and the recording indicated that no further attempt was made to contact the Ohio DSA prior to 0840 hour, when the Sheriff's Office was informed of the Unusual Event's termination.

From telephone interviews with representatives of the Ottawa County and Ohio DSAs, the inspector learned that the State agency was finally informed of the Unusual Event sometime between about 0900 and 1100 hours on the morning of June 9. At that time, the County DSA Coordinator telephoned the State's Nuclear Response Officer in Columbus to request a clarification of the event termination message. The local resident analyst was finally notified of the Unusual Event later in the afternoon of June 9th.

From the interviews with the State and County DSA representatives, the inspector also learned that the sheriff's dispatcher correctly followed notification procedures then in effect when attempting to contact only the State's resident analyst following the Unusual Event declaration. Had the event been classified as an Alert, Site Area Emergency, or General Emergency, the dispatcher would have been procedurally instructed to contact the State agency's 24-hour telephone number in the event that the analyst was unavailable. The inspector was assured that the county's plan and the dispatcher's notification procedures had been promptly revised so that the dispatcher would be required to contact the Ohio DSA's 24-hour telephone number following any emergency declaration. The agency's Columbus office would then be responsible for contacting the local analyst. Copies of the plan and notification procedure approved revisions were not available for the inspector's review.

The inspector reviewed the June 19, 1985 interim revisions to the licensee's procedures EI 1300.02 through 1300.05. These procedures contain the actions to be taken, including initial offsite notifications, following the declaration of an Unusual Event through General Emergency, respectively. The revisions require the implementer to directly notify the Ohio DSA via 24-hour telephone number following any emergency declaration and to provide the same initial notification message as is given to the Ottawa County Sheriff's Office. The Temporary Modification Request forms associated with these procedures indicated that the procedural changes were made at the request of the Governor of Ohio.

10 CFR 50.47(b)(5) states, in part that "procedures have been established for notification, by the licensee, of State and local response organizations..." 10 CFR Part 50, Appendix E, Paragraph IV.D.3 states, in part, that "a licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency." Contrary to the above, the State of Ohio's Disaster Services Agency was not initially notified of the June 9, 1985 Unusual Event declaration at the Davis-Besse Nuclear Generating Station until after the event had been terminated, which is a period of at least six hours after the emergency declaration. This is a violation of NRC requirements. (50-346/85023-01).

It is apparent that the licensee has already taken corrective actions to prevent a recurrence of the failure to initially notify the Ohio DSA in a timely manner following any emergency declaration at the Davis-Besse Station. It should be noted that licensee personnel onshift during the June 9th Unusual Event were not procedurally required to ascertain whether the Sheriff's dispatcher had been successful in contacting the Ohio DSA's local representative. Nor was the dispatcher then procedurally required to contact the Ohio DSA's 24-hour number following the inability to contact the State agency's local representative. Nevertheless, the breakdown in the initial notification process, which had been agreed to by the licensee, Ohio DSA, and Ottawa County DSA, constitutes a violation of NRC regulations.

The facts that both the licensee and Ottawa county DSA have already initiated corrective actions to prevent recurrence of such a breakdown does not prevent issuance of a Notice of Violation, as the need for corrective action was not recognized by the licensee prior to the actual breakdown of the initial notification procedure.

4. Augmentation of the Onsite Emergency Organization

The inspector reviewed licensee records and interviewed available personnel involved in the June 9, 1985 emergency response. As indicated in Paragraph 2 of this report, the Plant Manager, Operations Engineer, Operations Supervisor, and STA were all contacted and proceeded to the Control Room after the reactor trip and prior to any emergency declaration. The inspector was told that the Vice-President, Nuclear arrived in the Control Room later in the morning.

During the discussions between the SS, STA, and Assistant SS regarding event classification either as an Unusual Event or an Alert, the SS decided that TSC activation was not required. However, at about the same time that the Unusual Event was declared, the Technical Engineer was contacted by the Operations Engineer, who requested that he and several of his Technical Section staff report to the TSC to compile and analyze data on the transient. The Technical Engineer estimated that he arrived in the TSC at about 0315 hour. Later in the morning additional Technical Section personnel were called to assist in the historical data analysis task. Those interviewed were firm in their belief that the presence of only Technical Section staff in the TSC to perform historical data gathering and analyses tasks did not constitute a TSC activation.

Revision 8 to procedure EI 1300.02 required that all key emergency response personnel be paged following any Unusual Event declaration. This group included several persons who had already been contacted after the reactor trip, but prior to the declaration. Based on a review of the licensee's Emergency Call System Access List Checkoff Sheet and several interviews, the pagers were activated at about 0305 hour, which is about 30 minutes after the declaration. The Control Room's Administrative Assistant was responsible for activating the pager system. The Operations Supervisor informed the inspector that he reached the Control Room in time to review the recorded message prepared for those having pagers.

He also stated that the Administrative Assistant was diverted from activating the pagers, for an estimated 15 minutes, by being told to contact operations personnel scheduled to work the day shift. These personnel were told to report to augment the onshift crew, some of whom had been dispatched from the Control Room to more directly monitor operation of plant equipment. Once Control Room personnel realized that the pagers had not been activated this task was completed. The licensee did not consider the early call out of dayshift personnel as constituting an activation of the Operational Support Center (OSC).

The on-call Emergency Duty Officer (EDO) indicated that his pager activated at about 0300 hour. Since he heard static rather than a message and was aware of thunderstorm activity in the local area, he initially assumed that the pager activation was false. About 15 minutes later he was telephoned by the alternate Emergency Planning Supervisor who informed him of the declaration. The EDO then followed procedures and listened to the recorded message regarding the event before calling the SS (interim EDO) for a briefing at about 0325 hour. The EDO understood that the plant had recovered from the transient and that the situation was under control. When the EDO asked whether he should activate the ECC (licensee's Emergency Operations Facility located in the DBAB as is the TSC), the SS indicated that that was not necessary. The EDO elected to stand by at home. He did contact the alternate Emergency Planning Supervisor to relay the results of his conversation with the SS. Licensee records indicated that all on-duty, key emergency response personnel responded to the pager signal by about 0345 hour. All acknowledged the Unusual Event termination message by about 0916 hour.

It is evident that conscious decisions were made at separate times not to activate the TSC or ECC. The SS and other senior licensee personnel in the Control Room were apparently sufficiently confident that the transient would not recur so that activation of these emergency response facilities was not deemed necessary. All key emergency response personnel assigned pagers were notified, although not promptly, following the Unusual Event declaration.

5. Exit Interview

On July 3, 1985 the inspector met with those licensee personnel identified in Paragraph 1 to discuss the preliminary findings of this inspection. The licensee agreed to consider the items discussed. The licensee later agreed that none of the material discussed during the exit interview was proprietary in nature.