U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/87015(DRP)

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: May 29, 1987

Inspectors: Leonard G. McGregor

Robert DeFayette

Approved By: W. G. Guldemond, Chief
Reactor Projects Branch 2

6/19/87
Date

Inspection Summary

Inspection on May 29, 1987 (Report No. 50-346/87015(DRP))
Areas Inspected: This was a special inspection to determine the circumstances surrounding a reported incident of a shift supervisor sleeping on duty.
Results: The inspectors concluded that the shift supervisor had been dozing or sleeping at his desk for a short period of time on May 24, 1987; that this was an isolated event; and that it was not deliberate. They also concluded that a major cause of the incident was the excessive use of overtime resulting from the failure of the licensee to assign sufficient numbers of senior licensed operators as shift supervisors, and that medication taken by the shift supervisor to control an asthma condition may have contributed to the problem.

DETAILS

1. Persons Contacted

Toledo Edison Company

*D. Shelton, Vice President, Nuclear
*G. Grime, Director, Industrial Security
*L. Storz, Plant Manager
*J. Waddell, Security Investigator, Industrial Security
*G. Honma, Compliance Supervisor
*T. Meyer, Licensing Director
*R. Flood, Assistant Plant Manager Operations

USNRC

*P. Byron, Senior Resident Inspector
*D. Kosloff, Resident Inspector

The inspectors also interviewed persons who were directly involved in the incident and several other licensee personnel with no direct involvement.

*Denotes those personnel attending the exit meeting.

2. Discussion

a. Background

On Sunday, May 24, 1987, the Senior Resident Inspector was informed by licensee personnel that a shift supervisor on duty the previous night had been observed by security personnel to be sleeping. The Senior Resident Inspector notified Region III management of the alleged incident the same day. The reactor was in cold shutdown at the time for maintenance activities with restart not scheduled for about two weeks. On Thursday, May 28, 1987, Region III sent two inspectors to Davis-Besse to conduct an independent investigation.

On Friday, May 29, 1987, the inspectors interviewed 11 individuals directly involved with the incident. This included four security personnel, an assistant shift supervisor, an administrative assistant, an assistant shift technical advisor, three equipment operators, and the shift supervisor. Only one other person was directly involved, but he was not on duty that day and therefore was not interviewed. In two cases, the interviewees chose to have a union steward present during the interview (all interviewees were offered that option). All interviews involving the principal parties were conducted jointly by the two inspectors. From these interviews, the inspectors obtained the following information about the incident.

b. Incident

The shift supervisor alleged to have been sleeping was assigned to a 12 hour rotating shift. On May 24, he was on his second backshift (from 8:00 p.m. May 23 to 8:00 a.m. May 24) of that rotation. Early in the shift he had mentioned to the assistant shift supervisor that he had had trouble sleeping the previous day and only had about three or four hours of sleep during the previous 12 hours, and was very tired. Around 1:00 a.m. on May 24, it was noted by the assistant shift supervisor that the shift supervisor's head was occasionally "bouncing" so he talked to him on several occasions to assure himself that the shift supervisor was awake. Other plant personnel had also entered the shift supervisor's office on official business during this general time frame and noticed his head nodding down with his chin on his chest. Some of these people asked the shift supervisor questions and in one instance a locked valve log was given to him for initialing. In every case, the shift supervisor responded to the questions or requests for initials.

At about 2:38 a.m. on May 24, a security officer observed the shift supervisor sitting at his desk with his head tilted down and his chin on his chest apparently sleeping. He notified his supervisor of the situation. Prior to the supervisor's arrival, two other security officers also observed the nodding position of the shift supervisor. At about 3:10 a.m., the security supervisor entered the shift supervisor's office area. By that time the shift supervisor appeared to be awake and alert. An administrative assistant who has an office adjacent to the shift supervisor's office with a window between the two offices also noted the shift supervisor sitting in his chair with his head down and his chin on his chest. The shift supervisor himself acknowledged to the inspectors that he had been extremely tired that night and probably dozed in his chair as alleged, although he could not remember any details.

Prior to the incident, he said he had performed routine duties in the plant and at about 1:00 a.m. had returned to his office to perform routine administrative chores. At the time of the incident, he had been reading the "required reading" file.

All parties interviewed agreed that the shift supervisor was awake and alert for the remainder of the shift.

c. Conclusion

The inspectors conclude that the shift supervisor was inattentive to duty (sleeping or dozing) for a period of at least one half hour, on the morning of May 24, 1987, but that it was not a deliberate act, but rather was the result of fatigue. The plant was staffed adequately throughout the incident because the licensee is required to have at least one senior reactor operator licensed person on shift while the reactor is shutdown and this condition was satisfied by the assistant

shift supervisor, who is a senior licensed person and also was on shift. Furthermore, because the reactor was shutdown there were minimal safety implications.

3. Causes of the Event

The licensee at the time of the event had only four senior licensed operators assigned as shift supervisors and they were working 12 hour shifts routinely (from 3:00 to 8:00). This schedule had been implemented for several weeks and was contrary to NRC policy on overtime and was a violation of Davis-Besse procedures on the use of overtime. (For more discussion of this issue, see Inspection Report No. 50-346/87008.) A major cause of the incident appears to be excessive use of overtime resulting from the licensee's failure to assign adequate numbers of senior licensed personnel as shift supervisors. Medication taken by the shift supervisor for an asthma condition may have contributed to the problem. When informed of this conclusion during the exit meeting, the licensee informed the inspectors that as of that day it had corrected this problem temporarily by assigning staff personnel who hold senior reactor operator licenses to work as shift supervisors until such time that permanent shift supervisors can be licensed. With these new assignments, the shift supervisors will work eight hour shifts.

4. Other Discussion

a. Extent of the Incident

The inspectors were concerned whether this incident was indicative of a routine problem or whether it was an isolated event. Their conclusion is that it was isolated. This is based on the responses received from all of the interviewed personnel when they were asked if they had ever seen or had been aware of any personnel (licensed or unlicensed) sleeping on duty. Several of the interviewees recalled an instance within the last year where a contractor employee working as a fire watch (a compensatory measure when fire doors or fire detectors are inoperable) was found sleeping and immediately was escorted from the site and his employment terminated. The NRC was aware of that incident. Other than that incident, no one could recall seeing or having any specific knowledge of any licensed person sleeping on duty. This response was provided not only by the 11 people directly involved with this incident but by other licensee personnel who were interviewed. Furthermore, this also was verified by an NRC contractor person who spent greater than 50% of his time at Davis-Besse for almost a year in 1986 observing the System Review and Test Program tests. These tests were conducted at all hours of the day or night and therefore this person spent many hours on the back shifts.

The NRC also is aware of one other incident in early 1985 where an unlicensed operator (an equipment operator) was assigned to monitor for pipe leakage in the auxiliary feedpump room while the startup feedpump was being operated and was found sleeping by an NRC inspector. This person was given a one day suspension by the licensee and the NRC imposed a violation and civil penalty in the amount of $100,000 for the incident.

b. Failure to Wake Shift Supervisor

During the course of this inspection, the inspectors were puzzled that although several licensee personnel apparently observed the shift supervisor to be dozing or sleeping, some of them made little or no effort to wake him. When asked why, several of the interviewees stated that they were reluctant to do so because of his status as the highest member of plant management onsite during the back shifts. The inspectors pursued this issue with several of the interviewees to determine if there is friction between various work groups. In general, the responses were that there is no friction and that working relationships are cordial and helpful. A few of the respondents, however, stated that friction does exist. Some of the non-licensed personnel were of the opinion that the licensed Control Room staff considers themselves to be of a higher status, and that this occasionally causes friction between the licensed and non-licensed staff. The inspectors could not verify that this situation actually exists but they do recognize that a perception of a problem can be as bad as a problem itself. The licensee therefore should investigate this and take specific action to rectify it.

c. Status of Shift Supervisor

The shift supervisor involved has been removed from shift pending completion of the licensee's investigation of this event. Furthermore, he will be given a complete medical examination because he has a chronic asthma condition and routinely ingests several medications to control it. These medications will be evaluated by licensee-authorized medical personnel to determine if they can cause drowsiness or any other side effects.

d. Corrective Actions

Prior to the inspectors leaving the site, the licensee informed the inspectors of the preliminary results of its internal investigation of this event which essentially independently confirmed the facts as stated above. The licensee also informed the inspectors of some immediate corrective actions and documented these in a letter to the NRC Regional Administrator on May 29, 1987. These actions were:

(1) Initiate a 5-section, 8-hour shift rotation instead of the 12-hour shift schedule (see Paragraph 3 above).

(2) Initiate a random backshift tour by licensee management personnel.

(3) Initiate shift meetings to re-review the information surrounding this event.

(4) Shift supervisors have been directed to perform backshift administrative duties in the assistant shift supervisor's office or in the Control Room.

(5) Pending the final results of the investigation, the shift supervisor in question has been removed from all shift duties regarding plant operations (see Paragraph 4.c above).

The licensee committed to provide a final report of its investigation to the NRC when it is completed.

5. Exit Meeting

The inspectors met the licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on May 29, 1987. The inspectors discussed the purpose and scope of the inspection and the findings.

The inspectors subsequently discussed by telephone the likely information content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any document/processes as proprietary.