

300 Madison Avenue  
Toledo, OH 43652-0001  
419-249-2300

John P. Stetz  
Vice President - Nuclear  
Davis-Besse

Docket Number 50-346

License Number NPF-3

Serial Number 1-1055

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United States Nuclear Regulatory Commission  
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Washington, D. C. 20555

Subject: Response to Inspection Report 50-346/94010 (DRSS)

Gentlemen:

Toledo Edison has (TE) received Inspection Report 94010 (Log Number 1-3109) and the enclosed Notices of Violation; the responses to which are provided below. As stated in the management meeting held in the Region III office on November 14, 1994, TE recognizes the significance of the two Radiation Protection (RP) violations and the potential for repeat occurrences without comprehensive corrective actions. Although overall RP controls were improved and total exposure was reduced during the ninth refueling outage, TE is committed to correct the weaknesses identified by these events to further improve performance in these areas.

Violation 1: 10 CFR 20.1501 requires that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present.

Pursuant to 10 CFR 20.1003, survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Operating Companies:  
Cleveland Electric Illuminating  
Toledo Edison

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Contrary to the above, on two occasions the licensee did not make surveys to comply with the regulations in Part 20. Specifically,

- a. On October 7, 1994, the licensee did not perform surveys to assure compliance with 10 CFR 20.1701, which requires that licensees use process or other engineering controls to control the concentration of radioactive material in air. Specifically, an evaluation of the contamination levels underneath insulation on the east once through steam generator hot leg was not performed to determine if engineering controls were required to control the concentration of radioactive material in air.
- b. On October 23, 1994, the licensee did not make surveys to assure compliance with 10 CFR 20.1201, which requires that licensees control the occupational total effective dose equivalent of adults to 5 rem annually. Specifically, a survey was not performed before workers entered the incore instrumentation tank drain line area on the 565' elevation of the Containment Building, which had radiation dose rate levels up to 12 rem/hour (0.12 Sv/hour) at 30 centimeters.

This is a Severity Level IV violation (Supplement IV).

Response: Acceptance or Denial of the Alleged Violation

Toledo Edison accepts the alleged violation.

Reason for the Violation

The two examples identified in the violation were caused by failure to adequately evaluate and plan for changed or unexpected radiological conditions. Prior to the October 7, 1994 event, the potential for increased contamination under the insulation was not properly considered when the decontamination and mirror insulation removal plan was developed. As a result, the Radiation Work Permit (RWP) for mirror insulation removal inside containment did not provide specific guidance with respect to additional surveys under the insulation, application of process or engineering controls, or proper respirator use designation during the course of insulation removal. Lack of detailed surveys for the specific area and deficiencies in RP personnel performance allowed the actual conditions to become the source of internal contaminations.

During the October 23, 1994 event, inadequate performance of the incore instrument cutting tool produced a potential for changed radiological conditions. Planning for final draining of the incore instrument tank (IIT) did not consider the impact of irradiated pieces of incore instrument cable entering the drain line. Since the potential for increased radiation fields was not recognized, adequate surveys of the IIT drain line area were not performed.

#### Corrective Actions Taken and Results Achieved

Immediate corrective actions for the October 7 event were initiated by providing instructions in containment building RP logs. These instructions required additional personal dosimetry, increased RP technician coverage, additional surveys and additional engineering controls for control of airborne activity produced by the insulation removal activity. The RWPs for insulation removal were subsequently terminated and reissued with additional requirements. These requirements included additional assessment of radiological conditions, additional RP coverage, improved protective clothing requirements and increased contamination control requirements. A key change to the RWP was to change the respiratory protection requirement to conditional, dependent on the results of radiological surveys. Dose assessment was completed for the individuals involved. Meetings were held with the insulator personnel to reassure them of TEs commitment to their personal safety. Finally, RP personnel involved were counseled. As a result of immediate corrective action implementation, further unanticipated intakes did not occur.

Immediate corrective action for the October 23 event was taken by temporarily excluding two Operations personnel from access to the Radiological Restricted Area (RRA) until preliminary dose assessment was completed. The IIT drain line area was re-established as a Locked High Radiation Area. A plan was developed and implemented for retrieval and storage of the incore fragment. Interviews of all personnel involved were conducted for the event which included a time/motion re-enactment study, after which dose assignments were calculated for each worker involved. Actions upon receipt of an Electronic Dosimeter (ED) alarm were reinforced to all site personnel entering the RRA by signs posted at the RRA entrance. As a result of immediate corrective actions taken for this event, doses to individuals were maintained well within regulatory limits.

Corrective Actions to Prevent Recurrence

Toledo Edison believes the overall RP program is sound, and includes guidance on completion of surveys before and during work activities involving radiological hazards. However, a more conservative philosophy and approach to planning for potentially changing radiological conditions must be established at DBNPS. Procedures that facilitate this planning will be reviewed and modified as necessary, specifically with regard to potentially changing conditions and conditions that may transcend the boundary of proposed work activities.

Date When Full Compliance Will Be Achieved

Full compliance was achieved upon completion of appropriate surveys for the insulation removal activity and the IIT drain line area. Surveys for the insulation removal activity on the east steam generator hot leg were completed on October 7, 1994. Surveys for the IIT drain line area were completed on October 23, 1994 and the area was redesignated and posted as a Locked High Radiation Area on October 23, 1994.

Procedures that facilitate planning for work activities that may involve potentially changing radiological conditions will be reviewed and modified, as necessary, by May 1, 1995.

Violation 2: Technical Specification 6.8.1 requires that written procedures shall be established and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972. Appendix A of this Regulatory Guide includes recommended procedures for limiting personnel exposures.

Procedure DB-HP-01109, Revision 3, "High Radiation Area Access Control," Step 4.1.3 states, in part, that personnel shall exit the area immediately if, a pre-set dose limit is reached as evidenced by alarming dosimetry, and/or if, a pre-set dose rate alarm is reached.

Procedure DB-HP-C1901, Revision 3, "Radiation Work Permits," Step 4.1.2 states, in part, that all entries into radiologically restricted areas require the use of an RWP. Step 6.5.3 states that workers shall be cognizant of the requirements of their RWP each time they use their RWP.

Procedure DB-HP-00208, Revision 2, "Radiation Protection Program," Step 5.6.8 states that workers obey posted, oral, and written Radiation Protection instructions and procedures including instructions on Radiation Work Permits.

Contrary to the above, the licensee failed to follow written procedures recommended by Appendix A of Regulatory Guide 1.33, November 1972. Specifically,

- a. On October 23, 1994, two workers entered the incore instrumentation tank drain line area of the 565' elevation in the Containment Building on three separate occasions and failed to exit the area when either their electronic dosimeters alarmed for a pre-set dose limit and/or a pre-set dose rate alarm.
- b. On October 23, 1994, one employee worked in the incore instrumentation tank drain line area of the 565' elevation in the Containment Building and was not cognizant of the RWP requirements in that he was signed on an RWP which was not for access into the Containment Building.
- c. On October 23, 1994, two workers entered the incore instrumentation tank drain line area of the 565' elevation in the Containment Building without following posted instructions to notify Radiation Protection before crossing a high radiation area boundary.

This is a Severity Level IV violation (Supplement IV).

Response: Acceptance or Denial of the Alleged Violation

Toledo Edison accepts the alleged violation.

Reason for the Violation

Each of the elements of this violation involved failure of personnel to follow written procedures for limiting radiation exposure to personnel. Overall, the performance of personnel did not demonstrate adequate discipline to ensure management expectations for radiation protection program procedural compliance were met. Contributing factors included lack of recognition of a potential radiation hazard and ineffective communication between Operations and RP personnel for entrance to the IIT drain line area. Conservative Electronic Dosimeter (ED) alarm

setpoints and the resultant frequent alarms caused a misperception of the significance of ED alarms. Coupled with this, confusion had developed among Operations personnel over when it is required to complete an operating evolution rather than exit the area in response to an alarming ED.

#### Corrective Actions Taken and Results Achieved

Corrective actions taken and results achieved are included in the response to Violation 1. In addition, personnel involved in these procedural violations were counseled.

#### Corrective Action to Prevent Recurrence

Management expectations and radiation worker practices for the use of EDs will be assessed to ensure all procedures and training are consistent. This review will focus on use of the ED, the philosophy behind establishment of the ED alarm setpoints and radiation worker response to ED alarms. Operator ED response will be tempered with additional guidance to address the importance of placing the plant in a safe operating condition to protect the health and safety of the public and plant personnel. Training on the use of EDs will be modified and provided through requalification and General Employee Training.

As stated in the response to Violation 1, procedures that facilitate planning for potentially changing radiological conditions will be reviewed and modified as necessary.

#### Date When Full Compliance Will Be Achieved

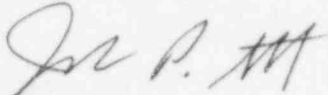
As a result of the immediate corrective actions implemented following the October 23, 1994 event, DBNPS has achieved compliance with the current procedures. Assessment of management expectations and radiation worker practices for the use of EDs will be completed by May 1, 1995. As stated in the response to Violation 1, procedures that facilitate planning for potentially changing radiological conditions will be reviewed and modified, as necessary, by May 1, 1995.



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Should you have any questions or require additional information,  
please contact Mr. William T. O'Connor, Manager - Regulatory Affairs,  
at (419) 249-2366.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. P. Martin".

DLM/eld

cc: L. L. Gundrum, NRC Project Manager  
J. B. Martin, Regional Administrator, NRC Region III  
S. Stasek, DB-1 NRC Senior Resident Inspector  
Utility Radiological Safety Board