

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

IE Inspection Report No. 050-346/76-21

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

Davis-Besse Nuclear Power Plant
Unit 1
Oak Harbor, Ohio

License No. CPPR-80
Category: B

Type of Licensee: PWR (B&W) 906 MWe

Type of Inspection: Routine, Announced

Dates of Inspection: November 1 - 3, 1976

Principal Inspector: *W. L. Fisher for*
L. R. Greger 11/24/76
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: *W. L. Fisher*
W. L. Fisher, Chief 11/24/76
Fuel Facility Projects and
Radiation Support Section (Date)

8002030152

SUMMARY OF FINDINGS

Inspection Summary

Inspection on November 1-3, 1976, (76-21): Reviewed status of radiation protection and radwaste programs, including organization, training, instrumentation, procedures, system construction, preoperational testing, and calibrations. No items of noncompliance identified.

Enforcement Items

No items of noncompliance with NRC requirements were identified during this inspection.

Licensee Action on Previously Identified Enforcement Items

None reviewed during this inspection.

Other Significant Findings

A. Systems and Components

Radwaste system turnover has been minimal; preoperational testing of radwaste and radiation protection related systems is just commencing.

B. Facility Items (Plans and Procedures)

Process monitor calibration procedures are essentially finalized. Additional information is required in order to verify vendor performed calibrations.

C. Managerial Items

None identified.

D. Deviations

None identified.

E. Status of Previously Reported Unresolved Items

None reviewed during this inspection.

Management Interview

A management interview was conducted with Mr. Evans and other members of the licensee's staff at the conclusion of the inspection on November 3, 1976. The following items were discussed:

- A. The inspector reviewed the scope of the inspection and stated that no items of noncompliance with regulatory requirements had been identified. (Paragraph 2, Report Details)
- B. The inspector noted that few of the radwaste related systems had been turned over from construction and that current estimates were for preoperational testing to be conducted through early February. (Paragraphs 7, 8, and 9, Report Details)
- C. The inspector stated that the licensee's General Orientation Training did not appear to satisfy the requirements of 10 CFR 19.12. The licensee stated that the training would be modified to include the required information and that those individuals who had already received orientation training would receive the additional information. (Paragraph 4, Report Details)
- D. The inspector cautioned the licensee to ensure that solidified waste containers will not contain significant quantities of free water. The licensee stated that the vendor had been requested to develop a method for determining the presence of free water in processed drums.
- E. The licensee stated that certain process and effluent monitor calibration information had not been received from the vendor, nor had the vendor supplied additional information regarding the cause of incorrect calibrator data. The inspector stated that additional calibration requirements would be necessary if the validity of the vendor's calibrations could not be substantiated. (Paragraphs 6 and 9, Report Details)
- F. The inspector requested that the licensee evaluate the process and effluent particulate sampling installations to ensure that representative samples will be collected. The licensee stated that modifications had been made to several sample lines to increase the bend radii and that the remaining samplers would be modified if necessary. The licensee further stated that the modification made to RE 2025 would be evaluated for its effect on the isokinetic characteristics of the sampler. (Paragraph 9, Report Details)

- G. The inspector stated that verification of the isokinetic properties of all ventilation particulate samplers would be necessary. The licensee stated the matter would be examined. (Paragraph 9, Report Details)

REPORT DETAILS

1. Persons Contacted

W. Alton, Assistant Engineer
D. Briden, Chemist and Health Physicist
B. Geddes, Assistant Health Physicist
J. Hickey, Training Coordinator
E. Michaud, Test Program Manager (B&W)
J. Orkins, Instrument and Controls Engineer
W. Packman, Auxiliaries Operator
R. Scott, Associate Technical Assistant (TECO)
J. Zell, Assistant Engineer

2. General

This inspection was conducted to examine the status of the licensee's radiation protection and radwaste programs. Areas examined included: the radioactive liquid, gaseous, and solid waste systems, including process and effluent monitors; preoperational test, calibration, and operating procedures; certain ventilation systems and associated monitors; and radiation protection related organization, training, procedures, and equipment. No discrepancies from regulatory requirements were identified during the inspection.

3. Radiation Protection Organization

The Chemistry and Health Physics Section organizational structure has been modified to include a Primary Group and a Secondary Group. Each Group is supervised by a foreman, who reports to the Chemist and Health Physicist. The Primary Group performs health physics and radiochemistry activities; the Secondary Group performs environmental and secondary plant chemistry activities.

The licensee's audit program for the Chemistry and Health Physics Section is described in approved procedures QAP 5110, QAP 5220, and QAP 2180.

4. Training

Radiation protection orientation and specialized training are described in the licensee's AD 1828 series procedures. These procedures include both initial and retraining requirements. General Orientation Training consists of GOT-1, required for

unescorted access to the site, and GOT-2, required for unescorted access to areas controlled by Radiation Exposure Permits. According to licensee personnel, the GOT-1 training is approximately 50% complete, while the GOT-2 training has just commenced. GOT-1 training is conducted with a synchronized cassette tape 35mm slide presentation. Discussion periods and written quizzes administered by the Training Coordinator accompany each of the five subparts of the GOT-1 training. GOT-2 training, which is conducted by the Chemistry and Health Physics Section, combines self-study, demonstrations, and discussion activities. A sign-off card is used to record completion of the GOT-2 training.

The inspector reviewed the radiation protection portion of the GOT-1 "sync-slide" presentation. The presentation was deficient, with respect to the requirements of 10 CFR 19.12, in the following areas: (1) treatment of airborne radiological hazards; (2) advice as to the radiation exposure reports which workers may request pursuant to 10 CFR 19.13; and (3) instructions pertaining to the responsibilities of workers to report promptly to the licensee any condition which may lead to or cause a violation of NRC regulations and licenses or unnecessary exposure to radiation or to radioactive material.

5. Procedures

Approximately twenty radiation protection related procedures remain to be completed. Included in the twenty outstanding procedures are five preoperational test procedures and the radioactive gaseous release procedure. Selected procedures were reviewed with licensee personnel during this inspection. Except as noted in this report, no significant discrepancies were noted.

6. Facilities and Equipment

According to licensee personnel, construction of radiation protection related facilities (e.g., radiochemistry laboratory, counting room, access control area, decontamination areas, etc.) and acquisition of health physics instruments and equipment are essentially complete. These items will be examined further during a subsequent inspection.

Calibration of the radiation monitors has been delayed by monitor problems and erroneous calibrator data.^{1/} Approximately 75% of the area radiation monitors have been calibrated.

^{1/} Ltr, Roe to Keppler, dtd 8/27/76.

7. Radwaste Systems

The clean liquid waste disposal system was turned over to the licensee in October. The gaseous, miscellaneous liquid, and solids waste disposal systems are presently scheduled for turnover in November, December, and January, respectively. No preoperational testing has been conducted as of the date of this inspection. According to licensee personnel, preoperational testing of the radwaste systems is expected to be completed by the end of January. No discrepancies from FSAR descriptions of the radwaste systems were noted. Preoperational test results will be reviewed during a subsequent inspection.

8. Ventilation Systems

Construction status of the following ventilation systems was reviewed: emergency ventilation, containment air cooling and purge, containment combustible gas control, auxiliary building ventilation, and control room ventilation. Other than the nonradioactive portion of the auxiliary building ventilation system, the above systems had not been turned over from construction. Turnover and preoperational testing are expected to take place over the next few months, according to licensee personnel. The preoperational tests are to include a determination of HEPA and charcoal filter testing. Preoperational test results will be reviewed during a subsequent inspection.

9. Process and Effluent Monitors

Approximately 25% of the process and effluent radiation monitors have been turned over from construction. The licensee has not commenced preoperational testing of the monitors. Preoperational test results will be reviewed during a subsequent inspection.

Questions raised during a previous inspection concerning vendor supplied calibration data for various process and effluent monitors have not been resolved by the licensee.^{2/}

One vent stack monitor (RE 2025) was modified since the previous inspection by installation of a fixed iodine and particulate sampling assembly. The monitor sample line was split, thereby dividing sample flow between the moving particulate iodine and gas monitor assembly and the newly installed fixed particulate and iodine

^{2/} IE Inspection Rpt No. 050-346/76-09.

filter assembly. Licensee personnel were not able to demonstrate that the fixed particulate filter would collect representative samples. Nor had the modification's effect on the representativeness of the moving particulate monitor been evaluated. The newly installed charcoal filter holder was noted to have been installed in a vertical orientation, (i.e., horizontal air flow), thereby introducing the possibility of charcoal compaction and subsequent bypass airflow. These items will be examined further during a subsequent inspection.

In addition to the variable isokinetic sampling requirements of the vent stack sampler, several ventilation monitoring systems incorporate fixed isokinetic probes. The preoperational procedures do not appear to require that these fixed isokinetic samplers be checked to verify the existence of isokinetic flow conditions.