U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/89023(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

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

Inspector: D. E. Miller D. E. Miller 11-13-89
Date

Approved By: M. C. Schumacher, Chief M. C. Schumacher 11-14-89
Radiological Controls and Date
Chemistry Section

Inspection Summary:

Inspection on October 16-20, 1989 (Report No. 50-346/89023(DRSS))
Areas Inspected: Routine unannounced inspection of the licensee's radwaste/transportation program, including: gaseous, liquid, and solid radwaste (IP 84750); transportation activities (IP 83750); effluent reports (IP 84750); and an effluent incident (IP 93702).
Results: Overall, the licensee's radwaste management program is adequate. Solid radwaste volumes remain low. Two violations were identified (failure to sample and analyze a condensate demineralizer backwash before release to the settling basis - Section 8), and (failure to report the backwash release as a LER - Section 8).

DETAILS

1. Persons Contacted

*R. Coad, Supervisor, Radiological Protection
*E. Delicate, Assistant Environmental Compliance Technologist
*R. Edwards, Associate Chemistry Analyst
*R. Gaston, Licensing Engineer
B. Geddes, Senior Health Physicist
*R. Holliday, Acting Compliance Supervisor
G. Honma, Compliance Supervisor, Nuclear Licensing
T. O'Dou, Health Physicist
J. Polyak, Manager, Radiological Control
*R. Scott, Superintendent, Chemistry
*J. Stotz, Planning Engineer
L. Storz, Plant Manager
*P. Strahm, Radwaste/Decon General Supervisor
W. Wiedenheft, Master Radiation Control Tester

*P. Byron, NRC Senior Resident Inspector
*K. Walton, NRC Resident Inspector

The inspector also contacted other licensee employees.

*Denotes those present at the exit meeting.

2. General

This inspection was conducted to review the licensee's radwaste/transportation program including gaseous, liquid, and solid radwaste; radioactive material transportation; and effluent reports. Also reviewed was an effluent release incident. No significant problems were noted during tours of licensee facilities. During review of the effluent release incident, a violation of a technical specification sampling and analysis requirement, and a violation of a reporting requirement, were identified (Section 8).

3. Gaseous Radioactive Waste (IP 84750)

The inspector reviewed the licensee's gaseous radwaste management program, including changes in equipment and procedures; gaseous radioactive waste effluents for compliance with regulatory requirements; adequacy of required records, reports, and notifications; process and effluent monitors for compliance with calibration and operational requirements; and experience concerning identification and correction of programmatic weaknesses.

The inspector selectively reviewed gaseous radioactive batch release permit documentation for 1989. Also selectively reviewed were associated sampling, analysis, and calculational methods for batch and continuous gaseous released. No problems were noted. An apparent problem with presentation of less than numbers in semiannual reports is discussed in Section 7.

No violations or deviations were identified.

4. Liquid Radioactive Waste (IP 84750)

The inspector reviewed the licensee's liquid radwaste management program, including changes in equipment and procedures; liquid radioactive waste effluents for compliance with regulatory requirements; adequacy of required records, reports, and notifications; process and effluent monitors for compliance with calibration and operational requirements; and experience concerning identification and correction of programmatic weaknesses.

The inspector selectively reviewed liquid radioactive batch release permit documentation for 1989. Also reviewed were associated sampling, analysis, and calculational methods procedures and records. No problems were noted other than as discussed in Sections 7 and 8.

No violations or deviations were identified.

5. Solid Radwaste (IP 84750)

The inspector reviewed the licensee's solid radwaste management program, including changes to equipment and procedures; processing, control, and storage of solid wastes; adequacy of required records, reports, and notifications; implementation of procedures to properly classify and characterize waste, prepare manifests, and mark packages; and experience concerning identification and correction of programmatic weaknesses. The inspector reviewed selected portions of the licensee's documented solid radwaste processing, storage, and shipping program for 1989. Also reviewed was the licensee's compliance with their process control program. The licensee generated 736 cubic feet of solid waste in 1989 through August. The waste is mainly DAW compacted in 90 cubic foot steel boxes, condensate polisher resins dewatered in steel liners, and reactor water cleanup system resins dewatered in high integrity containers. Also, the inspector briefly reviewed the licensee's method of compliance with 10 CFR 61 requirements. No problems were noted during the inspector's review except for an incident described in Section 8.

No violations or deviations were identified other than as discussed in Section 8.

6. Transportation Activities (IP 83750)

The inspector reviewed the licensee's transportation of radioactive materials program, including determination whether written implementing procedures are adequate, maintained current, properly approved, and acceptably implemented; determination whether shipments are in compliance with NRC and DOT regulations and the licensee's quality assurance program; determination if there were any transportation incidents involving licensee shipments; adequacy of required records, reports, shipment documentation, and notifications; and experience concerning identification and correction of programmatic weaknesses.

The inspector selectively reviewed portions of the licensee's radwaste shipment records for 1989 as of September 22, 1989. The information on the shipping papers appears to satisfy appropriate NRC, DOT, and burial site requirements. Shipment classification and manifest preparation is aided by a computer software program (RADMAN). No problems were noted.

The licensee made five radwaste shipments in 1989 through September 22; one was a steel box shipment, two were steel liner shipments, and two were high integrity container shipments. There were no transportation incidents.

No violations or deviations were identified.

7. Effluent Reports (IP 84750)

The inspector selectively reviewed radiological effluent analysis results to determine accuracy of data reported in the Semiannual Radioactive Radiation Effluent Release Report for the first half of 1989. Technical Specification 6.9.1.11 states that the format and content of these reports shall be in accordance with Regulatory Guide 1.21 (Revision 1) dated June 1974. Section 12.c. of the regulatory guide states that the term "not detected" should not be used. Instead, a lower limit of detection (LLD) should be reported if the radioactivity in the sample is below the sensitivity of measurement (for isotopes that have a high probability of being present).

The inspector noted that the licensee reported nondetected probably present isotopes in liquid and gaseous releases as N/A, and no references were made to the sensitivities of measurement. This matter was discussed with the licensee during the inspection and at the exit meeting. (Open Item No. 346/89023-01)

No violations were identified.

8. Effluent Incident (IP 93702)

On September 17, 1989, secondary system chemistry results indicated that backwash of one condensate polishing demineralizer was necessary. Because there now is primary to secondary leakage, polisher backwash is directed to a condensate polishing demineralizer holdup tank instead of the settling basin (outdoor pond that decants to the lake).

After being notified by the chemistry department that a backwash was needed, an operations supervisor assigned an operator to perform the proper valve lineup; the operator was then to contact a chemistry tester (technician) to perform the backwash operation. The operator, who had not performed this operation before, did not perform a correct valve lineup; consequently, instead of the backwash being directed to a specific holdup tank, the backwash was directed to the settling basin. Failure of the operator to follow the procedure was a violation of Technical Specification 6.8.1.a which requires that written procedures be established, implemented, and maintained; no Notice of Violation will

be issued because the violation meets the requirements of 10 CFR 2, Section V.G.1. However, the licensee did not write a Licensee Event Report (LER) for failure to perform the Technical Specification 4.11.1.1.1 sampling and analysis requirements; failure to write the LER is a violation of 10 CFR 50.73(a)(2)(i)(B) (Violation No. 346/89023-03).

Because there was no intent to backwash the polisher resins to the settling basin, no samples of the backwash materials were collected and analyzed. Failure to sample and analyze the condensate demineralizer contents before release is a violation of Technical Specification 4.11.1.1.1 (Violation No. 346/89023-02).

In response to the event, the licensee initiated Potential Condition Adverse to Quality Report (PCACR) No. 89-0453. The report concludes that procedure DB-CH-0617 "Condensate Polishing Demineralizers - Backwash Operations," which specifies valve lineups and backwash operations for both operations and chemistry personnel, was unnecessarily complex and not specific enough to assure that a proper valve lineup would be performed. The licensee revised the procedure by eliminating unnecessary information, designating which steps operators are to perform, simplifying valve lineup verification lists, and requiring that the procedure be in hand.

After it was recognized that the resins were inadvertently directed to the settling pond, the licensee sampled the setting basin outfall; no activity was detected. The licensee assumes that most of the resin remained in the settling basin. The licensee estimated that the ingestion dose commitment to members of the public from the tritium content of the backwash liquid was 1.68 E-6 mrem.

The licensee's internal investigation and followup for this event was good except for failure to submit an LER. The violations were discussed at the exit meeting.

Two violations were identified.

9. Exit Meeting (IP 30703)

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the onsite inspection on October 20, 1989, and by telephone on October 25 and October 31, 1989. The inspector summarized the scope and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents and processes reviewed by the inspector during the inspection. The licensee did not identify any such documents or processes as proprietary. The following matters were discussed specifically by the inspector:

a. The use of N/A designations on semiannual effluent reports. The licensee stated that they would alter their reporting method to those recommended in Regulatory Guide 1.21 (Section 7).

b. The two items of noncompliance concerning failure to perform sampling and analysis prior to discharge of a condensate polishing demineralizer to the settling pond, and failure to write an LER for the incident (Section 8).