U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-237/92031(DRSS); 50-249/92031(DRSS)

Docket Nos. 50-237; 50-249 Licenses No. DPR-19; DPR-25

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place
Downers Grove, IL 60515

Facility Name: Dresden Nuclear Station, Units 2 and 3

Inspection At: Dresden Site, Morris, Illinois

Inspection Conducted: October 29 - November 24, 1992

Inspectors: M. Schumacher for 12/9/92
S. Orth Date

M. Schumacher for 12/9/92
M. Kunowski Date

Approved By: M. Schumacher 12/9/92
M. C. Schumacher, Chief Date
Radiological Controls Section 1

Inspection Summary

Inspection on October 29 - November 24, 1992 (Reports No. 50-237/92031(DRSS); 50-249/92031(DRSS))
Areas Inspected: Routine announced inspection of the radiological controls (Inspection Procedure (IP) 83750), radioactive materials shipping (IP 86750), and solid radioactive waste (IP 86750) programs. Several previous inspection items were also reviewed.
Results: No violations were identified. Station exposure for 1992 is trending toward the lowest total in almost twenty years. An example of the kind of effort contributing to this was the good coordination of work groups seen for the ongoing cleanup of the reactor building equipment drain tanks. Also, the station's performance in radioactive waste shipping continued to be excellent. A weakness, however, was seen in the use of Nuclear General Employee training instructors with little or no plant experience.

DETAILS

1. Persons Contacted

*D. F. Ambler, Health Physics Services Supervisor
T. Britt, Radioactive Waste (Radwaste) Shipping Supervisor
*R. Coen, Safety and Quality Verification
*R. Flahive, Technical Superintendent
*M. Hayworth, Lead Health Physicist-Operations
*L. Jordan, Lead Health Physicist-Technical
*J. Kinsella, Safety and Quality Verification
*D. Lowenstein, Regulatory Assurance
J. McGowan, Radwaste Special Projects
M. Mikota, Radwaste Shipping Supervisor
*R. Radtke, Regulatory Assurance Supervisor
*R. Stobert, Operating Engineer
*S. Tulley, Technical Training Group Lead
*R. Weidner, Training Supervisor
*R. Winslow, Lead Health Physicist-Operations (Incumbent)

M. Peck, NRC Resident Inspector
*W. Rogers, NRC Senior Resident Inspector
A. M. Stone, NRC Resident Inspector

*Denotes those attending the exit meeting on November 24, 1992.

The inspectors also spoke with other licensee employees during the inspection.

2. Previously Identified Inspection Findings (IP 83750)

(Closed) Inspection Followup Item (IFI) No. 50-237/92011-01(DRSS); 50-249/92011-01(DRSS): Licensee to retrieve documentation of health physics staff (HP) qualifications. Pertinent information has been compiled for the staff health physicists and first-line supervisors. A review of selected records by the inspector identified no problem with staff qualifications.

(Closed) IFI No. 50-237/92011-02(DRSS); 50-249/92011-02(DRSS): Licensee to retrieve information on the technical basis for requiring respirator use at various procedurally defined contamination levels. The licensee evaluated recent Dresden air sample and contamination data, and respirator use criteria for several other stations. Based on this evaluation, the licensee stated that the respirator use procedure will be revised to raise the contamination level that requires respirator use from 22,000 disintegrations per minute (dpm) per 100 centimeters squared (cm^2) to 100,000 dpm/100 cm^2.

(Closed) Violation No. 50-237/90026-01A(DRSS); 50-249/90025-01A(DRSS): This violation was written for a continuing weakness in high radiation area job exposure control. The last of five specific corrective actions

committed to by the licensee was recently completed with a revision of the Nuclear General Employee Training program (NGET). The effectiveness of these actions and other related enhancements and of changes to NGET made in response to recent NRC concerns discussed in Inspection Report Nos. 50-237/92019(DRSS); 50-249/92019(DRSS) will be reviewed during future, routine inspections.

3. Staffing (IPs 83750 and 86750)

Recent vacancies in the lead health physicist-operations and lead health physicist-technical positions were filled with qualified personnel. One was filled from the neighboring LaSalle County Station and one from the Dresden staff. Efforts are continuing to fill two vacancies in the radiation protection supervisor (foreman) group and two vacancies in the RP Improvement Team (made up of consultants). Ten of approximately 50 contract RP technicians hired for the Unit 2 refueling outage scheduled to begin in mid-January 1993 were onsite receiving training. The remaining technicians were expected shortly. In the operations group responsible for radwaste shipping, there have been no significant changes in staffing.

No violations of NRC requirements were identified.

4. Exposure Control (IP 83750)

Station dose, currently about 527 person-rem, was expected to be about 600 person-rem at the end of 1992. This would be the lowest since 1970. For 1993, the exposure estimate is 850 person-rem, with the upcoming 14-week Unit 2 outage accounting for 600 person-rem. Chemical decontamination of the reactor recirculation, reactor water cleanup, and shutdown cooling systems is expected to yield significant savings during the outage.

The inspectors reviewed progress on the cleanup of the Unit 2 and 3 reactor building equipment drain tanks (RBEDTs). This work involved dose rates in excess of 1 rem/hour and high contamination levels. There appeared to be good planning and coordination among the various work groups involved. A remote video camera and high powered vacuuming equipment were in use and should result in significant dose savings. The inspectors' review of RP records for the job indicated that complete answers had been provided for questions in the ALARA pre-job checklist. Lack of complete answers to checklist questions for other jobs was previously identified as a problem (Inspection Report Nos. 50-237/92019(DRSS); 50-249/92019(DRSS)). Completion of the RBEDT cleanup is expected by early 1993.

No violations of NRC requirements were identified.

5. Solid Radwaste and Transportation of Radioactive Materials (IP 86750)

The inspectors observed the loading and health physics surveillance of several radwaste shipments and interviewed involved personnel from the

radwaste operations, radwaste processing vendor, and RP groups. Personnel were knowledgeable and experienced. No problems were identified. Dose rates measured by the inspectors agreed with those made by the licensee, and shipping records reviewed met requirements in 10 CFR 20.311 and 49 CFR 172.202 and 172.203.

One item of note came from a review of licensee dose-to-curie calculations for classifying waste per 10 CFR 61.55. The calculations appeared to assume an effective density of about 0.6 for resins, although the resin is actually more dense than water. This was discussed with a licensee representative who agreed to obtain the technical basis for the density value used. This will be reviewed during a future inspection.

The inspectors also reviewed progress on the solidification of the Unit 1 chemical decontamination (NS-1) resin waste, being conducted by a vendor specifically hired to solidify NS-1 waste. An initial attempt to solidify resin in a liner was unsuccessful when only the top several inches solidified. The inspectors observed some of the ensuing troubleshooting of the vendor's process control program, which was also unsuccessful. Because of these problems, the licensee decided to dewater the resin using its normal onsite radwaste processing vendor. At the exit meeting (Section 7), the licensee agreed to submit a letter to the NRC describing the change from solidification to dewatering as a followup to an earlier letter (dated October 4, 1991), in which another change to the overall process of disposing of the NS-1 was described.

No violations of NRC requirements were identified.

6. Radiation Protection Program Concern (AMS No. RIII-92-A-0098)

Concern: An instructor who provided basic radiation protection training at one of the licensee's fossil power plants to enable workers to work at Dresden was not knowledgeable of the effects of ionizing radiation.

The training provided was the 1992 annual NGET requalification training for Commonwealth Edison fossil plant workers (so called "mobiles") who may perform work at Dresden, usually during outages. Prior to 1992, Dresden instructors gave the training at the fossil stations or the mobiles came to Dresden for training, but because of staffing constraints at Dresden, fossil plant instructors who met Dresden requirements gave the training. Included in the training were video tapes explaining basic radiation protection topics including the effects of ionizing radiation. These tapes were found to be adequate in previous NRC inspections. According to the licensee, as assurance that the mobiles were adequately trained, those who failed the tests given at the fossil plants were required to retake the training at Dresden and pass a test. A review by the inspectors of tests taken by the mobiles at the fossil plants or at Dresden identified no problems. Of approximately 200 mobiles who received NGET, 13 failed the test and re-

took the training and test at Dresden, where they passed. According to the licensee, despite the time spent on training, the mobiles will not be used during the upcoming outage because of needs at the fossil plants.

Although the concern could not be substantiated, it was noted that the failure rate (6.5%) of this group was at least twice that normally seen at the station. One weakness noted by the inspectors, however, was that two of the three instructors who gave the training did not have Dresden work experience. Because the mobiles generally spend little time throughout the year at Dresden and have been the subject of a number of radiological problem reports over the recent years, the use of NGET instructors with little or no recent work experience at Dresden is a weakness. This matter will be reviewed during future inspections.

No violations of NRC requirements were identified.

7. Exit Meeting

The scope and findings of the inspections were reviewed with licensee representatives (Section 1) at the conclusion of the inspection. Specifically, the inspector discussed the change in processing NS-1 resin for burial (Section 5) and the concern about offsite NGET instruction (Section 7). The licensee acknowledged the inspectors' findings and did not identify any likely inspection report material as proprietary.