U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/85-01; 50-457/85-01

Docket Nos. 50-456; 50-457 Licenses No. CPPR-132; CPPR-133

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Facility Name: Braidwood Nuclear Power Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: January 14-17, 1985

Inspector: W. B. Grant for 2/1/85
Date

Approved By: L. R. Greger, Chief 2/1/85
Facilities Radiation Protection Section Date

Inspection Summary

Inspection on January 14-17, 1985 (Reports No. 50-456/85-01(DRSS); 50-457/85-01(DRSS))
Areas Inspected: Routine, unannounced inspection of the preoperational radiation protection program for Units 1 and 2 including: organization and management controls; training and qualifications; control of radioactive materials; survey and monitoring; facilities and equipment; and status of open items. The inspection involved 32 inspector-hours onsite by one NRC inspector.
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

*J. Gudac, Braidwood Station Superintendent
S. Holm, Health Physicist
J. Johnson, Engineering Assistant, Health Physics
*L. Kline, Project Licensing and Compliance Supervisor
*F. Krowzach, Radiation/Chemistry Supervisor
*D. O'Brien, Assistant Superintendent, Administrative and Support Services
D. Shamblin, Health Physics Foreman
*T. Simpkin, Technical Staff, Licensing
K. Skinner, Health Physics Foreman
D. Zimmermann, RCT Instructor

*L. McGregor, NRC Senior Resident Inspector

*Denotes those present at the exit meeting.

2. General

This inspection, which began at 8:30 a.m. on January 14, 1985, was conducted to examine the radiation protection and radwaste programs. It included tours of Unit 1 and Unit 2 containment buildings, radwaste/service building, auxiliary building, fuel handling building and turbine building.

3. Licensee Actions on Previous Inspection Findings

(Closed) Open Item (456/84-10-03; 457/84-10-03): Concerning moving the respirator issue and decon facility to a more acceptable area. An area acceptable to the Rad/Chem Department has been located and approved. The respirator facility will be built there when the construction schedule permits.

4. Organization and Management Controls

The inspector reviewed the licensee's organization and management controls for the radiation protection and radwaste program including: responsibilities, authorities, and staffing.

The licensee's Rad/Chem Department organization is unchanged from that described in Inspection Report No. 50-456/84-10. A recent reduction in the staff occurred when an RCT was promoted to Stationman Foreman at Dresden. The licensee plans to replace the RCT and to add a health physicist, an ALARA coordinator, and a health physics engineering assistant early in 1985. The station health physicist, who is also the radiation protection manager (RPM) designee, was hospitalized January 7, 1985. The effect, if any, of his hospitalization on his progress toward RPM qualification will be reviewed during a future inspection. (456/85-01-01; 457/85-01-01)

No violations or deviations were identified.

5. Training and Qualifications

The inspector reviewed the training and qualification aspects of the licensee's radiation protection and radwaste programs, including training responsibilities, policies, goals, programs and methods; qualifications of radiation protection/chemistry personnel; and the adequacy of the training for employees.

The pool of 17 RCTs have completed the generic RCT training program at the CECo production training center. Groups of RCTs are currently involved in on-the-job training (OJT) at Braidwood or at other CECo nuclear plants as scheduled. The RCT qualification card program has been developed and is scheduled to start in May 1985. The program is designed to be approximately 10 weeks in length depending upon the experience level of the individual RCT. The certification/qualification course includes approximately 50% classroom training and 50% practical factors and demonstration of ability to operate equipment and perform procedures. Written and oral exams are scheduled for each phase of the course with a comprehensive final exam requiring an 80% passing grade. The inspector will review the progress made during a future inspection.

No violations or deviations were identified.

6. Radiation Protection Procedures

The inspectors reviewed the following radiation protection procedures to determine if they are consistent with 10 CFR, FSAR commitments and good health physics practice.

BWCP-600-1, Revision 0, General Sampling Procedures
BWCP-603-1, Revision 0, Smear Sampling of Stainless Steel Surfaces
BWRP-1100-T1, Revision 0, Daily Shift Routine Checklist
BWRP-1100-T2, Revision 0, Weekly Shift Routine Checklist
BWRP-1100-T3, Revision 0, Monthly/Quarterly Shift Routine Checklist
BWRP-1110-1, Revision 0, Radiation and Contamination Limits
BWRP-1120-2, Revision 0, Routine Plant Survey Surveillance Scheduled for Unit One Operation
BWRP-1150-1, Revision 0, Compilation of Radiation Reporting Requirements
BWRP-1210-5, Revision 1, Dose Equivalent Report Upon Termination
BWRP-1210-6, Revision 0, Personnel Neutron Monitoring
BWRP-1210-8, Revision 0, Procedure for Generating the Reg. Guide 1.16 Report
BWRP-1210-9, Revision 0, Request for Radiation Dose History
BWRP-1210-10, Revision 0, Issuance of Medical Qualification Whole Body Count and Approved Mask Type Stickers
BWRP-1220-1, Revision 0, Film/TLD Badge Issuance and Completion of Occupational External Radiation Exposure Listing (NRC-4)
BWRP-1220-5, Revision 0, Comparison of Personnel Dosimetry Results
BWRP-1230-1, Revision 1, Radiation Exposure Investigation Report
BWRP-1250-2, Revision 0, Film Badge Spiking
BWRP-1250-3, Revision 0, Radiation Base Point Surveys
BWRP-1280-4, Revision 0, Yellow Diamond and Westinghouse/EPRI Surveys

BWRP-1200-A4, Revision 0, CECo Personnel Work Groups
BWRP-1200-A11, Revision 0, Routine Radiation Base Point Surveys
BWRP-1200-A12, Revision 0, Refueling Outage Radiation Base Point Survey
BWRP-1200-A13, Revision 0, Yellow Diamond Survey Map
BWRP-1200-A16, Revision 0, Dosimetry Comparison Investigation List
BWRP-1310-11, Revision 0, Containment Air Sampling During a Refueling Outage
BWRP-1350-6, Revision 0, Calibration and Operation of the Gas Tech GX-82 Portable Gas Detector
BWRP-1350-8, Revision 2, Operation and Calibration of CGS-100 Portable Gas Detector
BWRP-1380-2, Revision 0, MPC-hour Record
BWRP-1470-1, Revision 1, Routine Personnel Decontamination
BWRP-1470-3, Revision 0, Trending of Personnel Contamination Events
BWRP-1400-T1, Revision 1, Personnel External Contamination Record
BWRP-1500-T3, Revision 1, Radiological Shipment Survey Form
BWRP-1620-2, Revision 0, Radiological Controls for Steam Generator Work
BWRP-1600-A1, Revision 0, Steam Generator Entrance Floor Plan

About 196 of an estimated 200 radiation protection procedures have been written and about 163 have been approved and are on the books. No problems were identified with the procedures reviewed.

7. Control of Radioactive Materials and Contamination, Surveys, and Monitoring

The inspector reviewed the licensee's program for control of radioactive material and contamination, including: installation of monitors in accordance with FSAR commitments; adequacy of supply of portable survey and sampling instruments; adequacy of procedures for calibration and maintenance; and adequacy of supply of protective clothing and equipment.

The licensee will have 25 area radiation monitors (ARMs) including two high range containment monitors, serving Unit 1. Another 37 monitors will be common to both units. The monitors are General Atomic units having G-M detectors for monitoring lower range fields and ion chamber detectors for monitoring high range fields. The monitors are in varying stages of installation; much work remains to complete installation and calibration of the units.

A total of about 1000 dosimeters were received onsite of which about 550 have the range of 0-200 mR. Five hundred of these 0-200 mR dosimeters were sent to the Byron Station to support startup. These dosimeters will be replaced. Quality testing of dosimeters has not started.

The onsite inventory of health physics instrumentation includes: a Shepard gamma calibration unit containing a 400 curie cesium-137 source; about 50 portable survey meters; two teletector gamma dose rate meters, one PRS-2 NRD Rascal portable neutron Rem counter; and various detector probes for the instruments. Most of the instruments are in storage and will remain there until the instrument calibration room becomes operational sometime early in 1985.

8. Facilities and Equipment

The inspector reviewed the facilities and equipment used by the licensee for radiation protection activities to determine whether they are as described in the FSAR and are adequate to support the radiation protection program.

The instrument calibration room, located on the unit 1 side of the auxiliary building on the 401-foot level, has been vacated by construction personnel and is being modified to accommodate the calibration, service, and storage of survey instruments.

An acceptable area for the respirator cleaning and issue facility, which was judged by the licensee to be inadequate (456/84-10-03; 457/84-10-03), has been located and approved. No other space inadequacies were identified.

9. Exit Meeting

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on January 17, 1985. The inspector summarized the scope and findings of the inspection.