

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-456/84-10(DRMSP); 50-457/84-10(DRMSP)

Docket No. 50-456; 50-457

License No. CPPR-132; CPPR-133

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

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

Inspection At: Braidwood Site, Braidwood, IL

Inspection Conducted: May 7-9, 1984

Inspectors: W. B. Grant *LR Greger for*

5/21/84
Date

Approved By: *LR Greger*
L. R. Greger, Chief
Facilities Radiation Protection Section

5/21/84
Date

Inspection Summary:

Inspection on May 7-9, 1984 (Report No. 50-456/84-10(DRMSP);
50-457/84-10(DRMSP))

Areas Inspected: Routine unannounced inspection of preoperational radiation protection program for Units 1 and 2. The inspection included organization and management control, training and qualifications, radiation protection procedures, and facilities and equipment. The inspection involved 29 inspector-hours onsite by one NRC inspector.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

- *W. Betounne, QA Braidwood
- T. Chubb, Instructor, Production Training Center
- *J. Johnson, Health Physics Engineering Assistant
- *T. Keith, Station Health Physicist
- *R. Lemke, Technical Staff Supervisor
- J. McIntyre, Chemistry Foreman
- *C. Schroeder, Licensing and Compliance Superintendent

- L. McGregor, NRC Senior Resident Inspector

*Denotes those present at the exit meeting.

2. General

This preoperational inspection, which began at 9:30 a.m. on May 7, 1984, was conducted to examine the radiation protection and radwaste programs. It included tours of Unit 1 and Unit 2 containment, radwaste/services building, auxiliary building, turbine building, and CECo production training center.

3. Organization and Management Controls

The inspector reviewed the licensee's organization and management controls for the radiation protection and radwaste programs including: responsibilities, authorities, and staffing. The licensee has filled an additional 16 Radiation/Chemistry Technician (RCT) positions; three are experienced RCTs transferred from other CECo nuclear stations. The remainder have some power plant experience but none have had radiation protection experience. Three of the original five RCTs have been promoted; two to health physics foreman and one to a chemistry engineering assistant position. One other experienced RCT was hired and promoted to health physics foreman. The Rad/Chem staff currently consists of the rad/chem supervisor, the station health physicist, the station chemist, two chemists, one health physicist, one health physics engineering assistant (EA) four health physics foremen, one chemistry EA, one chemistry foreman, and 15 RCTs. The licensee is currently interviewing to fill an additional health physicist (HP) position during the summer of 1984 and plans to add two more HPs at six month intervals. These promotions and staffing additions represent a significant step toward adequately staffing the rad/chem department. No problems were noted.

4. Training and Qualifications

The inspector reviewed the training and qualifications 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.

Six RCTs are currently enrolled in a 14-week RCT training course at the CECo production training center on the Braidwood site. The other nine RCTs are involved in on-the-job training activities and are scheduled to attend the RCT training course. The licensee is developing a rad/chem technician qualification card program which will require adequate training and sign-offs before RCTs are allowed to perform tasks unsupervised. The implementation of the qualification card program was discussed at the exit meeting and will be reviewed during future inspections. (456/84-10-01; 457/84-10-01)

The station health physicist and the station chemist are currently attending a two-week PWR Systems training course. The course is intended to familiarize nonoperations personnel with PWR systems. The licensee intends to have as many of the rad/chem staff as time and work load will permit attend this course.

The inspector attended a portion of a training session concerning operation of the Hitachi Model 110A Spectrophotometer. The training was conducted at the CECo Production training center. The classroom and laboratory were of adequate size and well equipped. The class size was small, allowing for individual attention and student participation. The presentations were well prepared and of good quality. No problems were noted.

5. Radiation Protection Procedures

The inspector reviewed the following rad/chem procedures to determine if they are consistent with 10 CFR, FSAR commitments, and good health physics practices

- BWRP-1120-1, Revision 0, Controlled Area Access
- BWRP-1200A-1, Revision 0, Altitude Correction Factors for Ion Chambers Vented to Atmosphere
- BWRP-1200A-2, Revision 0, Temperature Correction Factors for Ion Chambers Vented to Atmosphere
- BWRP-1200A-3, Revision 0, Dose Calculation Table
- BWRP-1200A-4, Revision 1, CECo Personnel Work Groups
- BWRP-1200A-5, Revision 1, Quality Assurance Specification for Self-reading Dosimeters
- BWRP-1200A-6, Revision 0, Dosimeter Retrieval Schedule
- BWRP-1200A-7, Revision 0, Ratemeter Functions for the Eberline Model PRS-2/NRD
- BWRP-1200A-8, Revision 0, Mdh Ion Chamber Specification
- BWRP-1200T-5, Revision , Radiation Exposure Investigation Report
- BWRP-1210-1, Revision 0, Personnel Monitoring for External Exposures
- BWRP-1210-2, Revision 0, Exposure Review and Authorization
- BWRP-1210-5, Revision 0, Notification and Reports to Individual
- BWRP-1230-1, Revision 0, Lost/Damaged Personnel Dosimetry
- BWRP-1250-1, Revision 0, Exposure Rate Surveys
- BWRP-1300A-1, Revision 1, Whole Body Count Computer Setup
- BWRP-1300A-4, Revision 1, Whole Body Count Personnel Count Instruction
- BWRP-1300A-9, Revision 1, Respiratory Requirements for Airborne Radioactivity Areas

BWRP-1300A-14, Revision 1, MPC-Hour Evaluation Sequence
 BWRP-1310-1, Revision 0, Selection, Control and Issuance of Radiological
 Respiratory Protection Equipment
 BWRP-1310-2, Revision 0, Maintenance and Care of Respiratory Protection
 Equipment
 BWRP-1340-1, Revision 0, Personnel Monitoring for Internal Radioactive
 Contamination
 BWRP-1340-2, Revision 0, Whole Body Counting, Routine Operation
 BWRP-1380-1, Revision 0, Assessment of Exposure to Radioactive Materials.
 BWRP-1400T-1, Revision 0, Personnel Contamination Report
 BWRP-1400T-3, Revision 0, Radiation-Contamination Survey
 BWRP-1410-1, Revision 0, Protective Clothing
 BWRP-1460-1, Revision 0, Use of GM type Instruments for Contamination
 Control
 BWRP-1460-2, Revision 0, Alpha Particle Detecting Instruments
 BWRP-1470-1, Revision 0, Personnel Decontamination
 BWRP-1470-2, Revision 0, Area and Equipment Decontamination
 *BWRP-1500A-1, Revision 0, Transport Grouping of Radionuclides
 *BWRP-1500T-4, Revision 0, Radioactive Shipment Departure Survey Form
 *BWRP-1520-4, Revision 0, Surveying Radioactive Shipments
 *BWRP-1530-1, Revision 0, Receipt of Radioactive Materials
 BWRP-1610-2, Revision 0, Radiological Monitoring for Fuel Rack Work and
 Other Diving Activities in the Plant
 BWRP-1740-1, Revision 0, Radiation Protection Procedures during Accident
 Conditions
 BWRP-1900A-1, Revision 0, Radiation Protection Training for Escorted
 Visitors

 BWRP-1900T-1, Revision 0, Radiation Protection Training Checklist

It was noted that recent changes in 10 CFR 71 (NRC) and 49 CFR 173 (DOT) which list individual type A quantities and limit the radiation from any package surface to 1000 mem/hr have not been incorporated into the licensee's procedures*. According to the licensee, they are aware of the changes and the procedures will be revised in accordance with the regulations prior to shipments of radioactive materials. This was discussed at the exit meeting and will be reviewed during a future inspection. (456/84-10-02; 457/84-10-02)

One hundred twenty-two of an estimated 150 rad/chem procedures (about 80%) have been written and approved. No other problems were identified with the procedures reviewed.

6. 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 construction modification of the chemistry lab counting room and rad/chem office space described previously, ^{1/} has been completed and these areas are being occupied. No problems were identified.

The area designated for the respirator cleaning and issuing facility was judged by the licensee to be inadequate due to its lack of accessibility. An acceptable area has been located and a Follow Up Engineering Instruction (FUEI) for the change has been submitted but not yet approved. This change was discussed at the exit meeting and will be reviewed during a future inspection. (456/84-10-03; 457/84-10-03)

No additional space inadequacies were identified.

7. Materials License No. 12-5650-17

The inspector attempted to review the licensee's activities under NRC Byproduct Materials License No. 12-5650-17. However, since no licensed material has been received, the initial inspection data has been rescheduled.

8. Exit Meeting

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on May 9, 1984. The inspector summarized the scope and findings of the inspection. In response to certain matters discussed by the inspector, the licensee:

- a. Stated that an RCT qualification card program would be developed and implemented. (Section 4)
- b. Stated that procedures for shipment of radioactive materials would be revised to meet current NRC and DOT regulations. (Section 5)
- c. Stated that the respirator issue and cleaning facility will be installed in an acceptable location. (Section 6)

^{1/} Inspection Report No. 50-456/83-19; 50-457/83-18