

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-266/92013(DRSS); 50-301/92013(DRSS)

Docket Nos. 50-266; 50-301

License Nos. DPR-24; DPR-27

Licensee: Wisconsin Electric Power Company
231 West Michigan
Milwaukee, WI 53201

Facility Name: Point Beach Nuclear Plant

Inspection At: Two Rivers, Wisconsin

Inspection Conducted: May 11 - 15, 1992

Inspector: *J. Kozak*
J. Kozak

6/4/92
Date

Approved By: *William Snell*
William Snell, Chief
Radiological Controls Section

6/4/92
Date

Inspection Summary

Inspection on May 11-15, 1992 (Report Nos. 50-266/92013(DRSS); 50-301/92013(DRSS))

Areas Inspected: Routine unannounced inspection of the radiation protection program during a refueling and maintenance outage, including: concerns identified during previous inspections, organization and management controls, external exposure control, internal exposure control, control of radioactive materials, and maintaining occupational exposures as low as reasonably achievable (ALARA) (IP 83750).

Results: The licensee's radiation protection program appears to be very effective in controlling radiological work and in protecting the public health and safety. Strengths included strong contamination control practices as indicated by the low number of personnel contamination events, a continued downward trend in overall dose, and continued staff stability. Significant progress was made towards improving the general housekeeping in the auxiliary building. An area that can be improved is outage planning and scheduling by including a more detailed analysis of when non-critical path jobs will occur relative to plant conditions during outages. An Inspection Follow-Up Item was identified in the area of respirator fit testing.

DETAILS

1. Persons Contacted

- * M. Baumann, Project Engineer, Radiological Engineering
 - * J. Becka, Manager - Regulatory and Support Services
 - * J. Bevelacqua, Manager - Health Physics
 - R. Bredvad, Health Physics Specialist
 - W. Doolittle, Health Physics Specialist
 - * F. Flentjie, Administrative Specialist - Regulatory Services
 - T. Guay, Health Physics Supervisor
 - * G. Maxfield, Manager - Point Beach Nuclear Plant
 - * M. Smith, Maintenance Planner - Site Engineering and Construction
- J. Gadzala, Resident Inspector
K. Jury, Senior Resident Inspector

The inspector also interviewed other licensee and contractor personnel during the course of the inspection.

* Denotes those present at the exit meeting on May 15, 1992.

2. General

This inspection was conducted to review aspects of the licensee's radiation protection program during a Unit 1 refueling outage. Included in this inspection was a follow-up of outstanding items in the radiation protection area. The inspection included tours of radiologically controlled areas, the auxiliary building, Unit 1 containment, and radwaste facilities, observations of licensee activities, reviews of representative records and discussions with licensee personnel.

3. Licensee Action on Previous Inspection Findings (IP 83750)

(Closed) Inspection Follow-Up Item (50-266/92005-01; 50-266/92005-01): The licensee was not verifying oxygen percentages in breathing air. Further investigation by inspector and the licensee indicated that the Occupational Health and Safety Administration's position on this matter was that if the breathing air is being pulled from ambient air, as is the case at Point Beach, no verification of oxygen percentages was required. This matter is closed.

4. Organization and Management Controls (IP 83750)

The inspector reviewed the licensee's organization and management controls for the radiation protection program

including: organizational structure, staffing, delineation of authority, management techniques used to implement the program, and experience concerning self-identification and correction of program implementation weaknesses.

There was no change in the organizational structure at the station and the radiation protection staff continued to remain stable with no turnover since the last inspection. The licensee indicated that a new radiation technician supervisor was recently hired and was expected on site in the near future.

The radiation protection technician staff was augmented by approximately 50 contract technicians for the Unit 1 refueling outage. Approximately 60 percent of the contract technicians had previously worked at the station. The augmented staff was required to attend one week of training covering both general topics and site specific information. A challenging, comprehensive test requiring a score of 80 percent to pass was administered at the end of the class. Each technician was then required to complete an on-the-job qualification journal for the tasks that they would be covering. The augmented staff appeared to be sufficiently qualified to carry out the requirements of the radiation protection program.

No violations or deviations were identified.

5. External Exposure Control (83750)

The inspector reviewed the licensee's external exposure control and personal dosimetry program, including: changes in the program, use of dosimetry to determine whether requirements were met, planning and preparation for maintenance and refueling outage tasks including ALARA considerations, and required records, reports and notifications.

There did not appear to be any significant changes in the licensee's external exposure control program. Dosimetry use was consistent with procedural requirements and appeared to adequately measure the highest whole body dose to the workers. The licensee used electronic dosimeters for entry into high radiation areas. The dosimeters alarmed at a predetermined accumulated dose and it appeared that workers were adequately informed of proper actions to take in the case of an alarm.

The licensee continued to develop planning and preparation techniques prior to this refueling outage. It appeared that the schedule was adequately developed for critical path jobs. However, the schedule generally did not delineate

when and where non-critical path jobs would take place. This was particularly apparent in the case of inservice inspection work, insulation removal and installation, and the loop lighting modification. The licensee relied on the responsible engineers and trade supervisors to coordinate these jobs so that workers performed them in as low a radiation field as possible. While there did not appear to be any major exposure problems during this outage by relying on key personnel to ensure workers' dose remained ALARA, it appeared that coordinating these jobs with known plant condition changes created by critical path jobs would provide another barrier to prevent workers from receiving unnecessary dose while performing their work.

Personnel exposure records for current and past licensee and contractor employees were selectively reviewed for completeness, accuracies and inconsistencies. In addition, reporting of exposure information was reviewed for timeliness. No exposures above 10CFR20.101 limits were noted. There did not appear to be any significant hot particle events requiring dose calculations since the last inspection.

No violations or deviations were identified.

6. Internal Exposure Control (IP 83750)

The inspector reviewed the licensee's internal exposure control and assessment programs, including: changes to facilities, equipment, and procedures affecting internal exposure control and personal exposure assessment; determination whether respiratory equipment and assessment of individual intakes met regulatory requirements; and required records, reports, and notifications.

There did not appear to be any significant changes in the licensee's facilities or procedures used for internal exposure control. The licensee had not yet implemented the use of the recently purchased PORTACOUNT fit testing device. The licensee continued to use a fit testing booth to determine fit factors for respirators. Fit factors were recorded for several worker actions such as deep breathing, loud talking, facial expressions, and up and down head movement. Licensee procedures considered workers to have passed the test provided that for all actions, a fit factor greater than the respirator's allowed protection factor listed in 10 CFR Part 20, Appendix A was achieved. NRC guidelines state that fit factors are not protection factors and that acceptance criteria for fit factors should be set at least ten times the protection factor of the mask being fit. A selective review of fit factor test results revealed that most personnel achieved fit factors which exceeded ten

times the acceptable respirator protection factor. The licensee indicated that they would review the NRC guidance and change appropriate procedures as necessary. This matter will be reviewed during a future inspection (Inspection Follow-Up Item 50-266/92013-01; 50-301/92013-01).

The inspector selectively reviewed the results of the licensee's whole body counting and internal dose assessment efforts. The licensee's engineering controls to prevent the generation and spread of airborne radioactive contamination appear to be effective as there have been no indications of intakes of radioactive materials since the last inspection. The licensee was especially effective in controlling airborne contamination through the use of tents and decontamination techniques during the safety injection system's (SI) full flow modification job. This modification required entry into the highly contaminated refueling water storage tank and piping modifications to the SI system. This job was accomplished without any radiological problems.

No violations or deviations were identified. One Inspection Follow-Up Item was identified.

7. Control of Radioactive Material (IP 63750)

The inspector reviewed the licensee's program for control of radioactive materials and contamination, including: adequacy of supply, maintenance and calibration of contamination survey and monitoring equipment; effectiveness of survey methods, practices, equipment and procedures; adequacy of review and dissemination of survey data; effectiveness of radioactive and contaminated material controls.

The inspector verified by a review of records, discussions, with licensee personnel, and tours of operational areas that the supply, maintenance, and performance checks of survey monitoring instruments were accurate.

Construction in the controlled area access point was recently completed and the area was released from radiological controls. Coveralls and plastic booties were still required for entry into the auxiliary building. However, in an effort to reduce radioactive waste, personnel did not discard the plastic shoe covers upon exit from the auxiliary building. Rather, they were worn into the whole body frisking booth and surveyed for release. Only a few were found to be contaminated during the outage. This was another step in the direction of eliminating the requirement to wear anti-contamination clothing for entry into the auxiliary building.

Control of contamination during the outage was exceptional as there were only ten personnel contamination events above 100 counts per minute to date in the outage. Contributing to this performance were very low levels of contamination in normally highly contaminated areas in containment and vastly improved material conditions in the auxiliary building. The licensee utilized four contract technicians throughout the outage to decontaminate and improve general housekeeping conditions in the building. A contaminated square footage report was generated to track progress in reducing contaminated areas. Twelve percent of the total area outside of containment was contaminated. The report included a description of each contaminated area and a decontamination plan for each area. The responsibility for maintaining the auxiliary building will be transferred to an on site group after the outage. The effectiveness of the new group in maintaining acceptable conditions in the auxiliary building will be reviewed during future inspections.

No violations or deviations were identified.

3. Maintaining Occupational Exposures ALARA (IP 83750)

The inspector reviewed the licensee's program for maintaining occupational exposures ALARA, including: ALARA group staffing and qualification; changes in ALARA policy and procedures, and their implementation; ALARA considerations for planned maintenance and refueling outages; worker awareness and involvement in the ALARA program; establishment of goals and objectives, and effectiveness in meeting them.

The ALARA group staffing remained the same with a permanently assigned coordinator and two technicians temporarily assigned to ALARA duties for the outage. The technicians were responsible for items such as pre-job ALARA reviews, dose tracking, and video recording of jobs. Several areas where dose was saved through ALARA initiatives were identified during the outage. Video taping of the regenerative heat exchanger room was especially effective in reducing dose as some inspection jobs were accomplished using the tape rather than entering this locked, high radiation area.

Total dose for 1991 was 264.9 person-rem. The goal for 1992, during which the expected work scope is greater than that of 1991, is 317 person-rem. Personnel dose to date was tracking approximately 15 person-rem behind the total at the same time last year. This represented a continued downward trend in accumulated dose and, although it does not appear to be a large reduction, it is significant considering that

the outage work scope increased this year over that during last year's Unit 1 outage. It appeared that continued implementation of ALARA initiatives would enable the licensee to stay under its goal for this year.

No violations or deviations were identified.

9. Exit Interview

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on May 15, 1992, to discuss the scope and findings of the inspection.

During the exit interview, the inspector discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. Licensee representatives did not identify any such documents or processes as proprietary. The following matters were specifically discussed by the inspector:

- a. Procedural requirements concerning respirator fit testing.
- b. The significantly improved material condition in the auxiliary building.