U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-266/86004(DRSS); 50-301/86004(DRSS)

Docket Nos. 50-266; 50-301 Licenses No. DPR-24; DPR-27

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

Facility Name: Point Beach Nuclear Plant (PBNP)

Inspection At: PBNP, Units 1 and 2, Two Rivers, WI

Inspection Conducted: February 18-21, 1986

Inspector: R. A. Paul for 3/27/86
Date

Approved By: L. R. Greger, Chief 3/27/86
Facilities Radiation Protection Section Date

Inspection Summary

Inspection on February 18-21, 1986 (Reports No. 50-266/86004(DRSS); No. 50-301/86004(DRSS))
Areas Inspected: Routine, unannounced inspection of the radiation protection program, including: organization and management controls, internal and external exposure controls, posting and access controls, contamination control, training; previous inspection findings, and certain IE Information Notices. The inspection involved 32 onsite hours by one NRC inspector.
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

*D. Bredvad, Plant Health Physicist
R. Bruno, Superintendent, Training
C. Gates, Transportation Coordinator
*J. Knorr, Regulatory Engineer
*J. Reisenbuechler, Superintendent EQRS
*J. Zack, Plant Manager

*R. Hague, NRC Senior Resident Inspector
*R. Leeman, NRC Resident Inspector

The inspector also contacted other plant staff during this inspection.

*Denotes those present at the exit meeting.

2. General

The onsite inspection, which began at 9:30 a.m. on February 18, 1986, was conducted to examine aspects of the licensee's radiation protection program. The inspection included several plant tours, review of posting and labeling, review of personal internal and external exposures, review of general radiation control operator training, and independent inspection efforts by the inspector. Also reviewed were corrective actions for selected previous open items.

3. Licensee Action On Previous Inspection Findings

(Closed) Open Item (266/84022-03; 301/84020-03): Installation of a new solidification system. The licensee has purchased a new solidification system, which is onsite, that will only be used as a back up to the currently used contractor system. An ALARA review of the new system is scheduled.

(Closed) Open Item (266/85017-02; 301/85017-02): Review of steps taken to strengthen respirator issue and collection aspects of the respiratory protection program. The licensee now uses a sign out form for distribution of respirators, and ensures that all respirators are collected and returned without being reused.

(Closed) Open Item (266/85022-02; 301/85021-02): Actions taken to prevent a recurrence of the bottoms loop filter radiological event. The licensee's corrective actions include: installation of a shielded instrument storage rack at the BDE feed filter and bottom loop filter; development and implementation of a training program which addresses deficiencies related to performing accurate beta surveys, instrument operation, beta survey techniques and posting/control requirements; clarifying drum ordering, storage and handling responsibilities; revision of procedures and standing orders to provide more guidance concerning RWP exempt work activities and to ensure that shift supervision will review turnover sheets; installation

of permanent operator aids near the evaporator feed and bottoms loop filter; review of filter changeout facilities and mechanics of typical filter changeouts; review of locations of the present filters with respect to changeout efficiency and ALARA; possible installation of an additional filter in the BDE feed line; and installation of two drums to be placed at each filter station. Some of these corrective actions have been completed, others are in process of being completed.

4. Organization and Management Controls

The inspector reviewed the licensee's organization and management controls for radiation protection, including changes in the organizational structure and staffing, effectiveness of procedures and other management techniques used to implement the program, experience concerning self-identification and correction of program implementation weaknesses, and effectiveness of program audits.

The Plant Health Physicist acts as the RPM and reports to the General Superintendent. The current health physics staff consists of the RPM, two Nuclear Specialists, three Health Physics Supervisors, six Radiation Control Operators (RCOs) and seven RCO Trainees, and two Record Clerks. It appears the RPM continues to have direct access to, and communications with, the Plant Manager when either person considers it necessary.

No violations or deviations were identified.

5. Staffing

During a previous inspection (50/266-85007; 50/301-85007), it was noted that the Radiation Protection Department staff, which had lost two supervisors and several RCO/RCO trainees to other departments, lacked stability. The lack of stability was primarily attributable to the licensee's RCO trainee selection system and to salary differential between RCOs and other plant workers. It was further noted that the high turnover rate affected the qualifications and experience level of the RCO staff, and diminished the effectiveness of the radiation protection organization. Since then, the licensee has authorized the hiring of two additional RCO trainees and one full time supervisor. Also, licensee management has committed to upgrading the RCO position, is taking steps to stabilize the RCO staff, and is trying to create a professional oriented radiation protection department which will encourage RCO retention. This matter was discussed at the exit meeting and will continue to be reviewed during future inspections (266/85007-01; 301/85007-01).

No violations or deviations were identified.

6. RCO Training

The inspector reviewed the training and qualification aspects of the licensee's radiation protection and RCO training programs. Currently there are six RCO's and seven RCO trainee's. The RCO training program

has been upgraded to include comprehensive task oriented training tailored to meet the needs of the RCO staff. The licensee intends to submit the new training program for INPO accreditation in the near future. Inspector review of the program (Training Procedure TR PR 1.0, Revision 4) indicates a substantial improvement in course material and selection. If the course is implemented as designed, it should be effective in developing and strengthening RCO skills. The effectiveness of the program will be reviewed at a future inspection (266/85017-01; 301/85017-01).

No violations or deviations were identified.

7. ALARA

The inspector reviewed the licensee's program for maintaining occupational exposures ALARA, including: changes in ALARA policy and procedures; worker awareness and involvement in the ALARA program; establishment of goals and objectives; and effectiveness in meeting them. Also reviewed were management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

The licensee's ALARA program is described in Inspection Reports No. 50-266/85007 and 50-301/85007. Since that inspection, the licensee has completed the draft of the exposure reduction program. In addition, a program has been developed which tracks radiation dose for individual station tasks, work groups, and persons by implementing a dose accountability system. The station exceeded its 1985 goal of 392 person-rems by about 50 person-rems; however, the total exposure for 1985 was approximately 300 person-rems less than 1984.

No violations or deviations were identified.

8. External Exposure Control

The inspector reviewed the licensee's external exposure control and personnel dosimetry programs, including: changes in program to meet outage needs; use of dosimetry; planning and preparation for maintenance and refueling tasks including ALARA considerations; and required records, reports, and notifications.

The licensee's external exposure measurement and control program is as described in Inspection Reports No. 50-266/85017 and 50-301/85017. The only significant change in the program began on February 1, 1986, when the licensee stopped issuing personal dosimeters to certain employee's who work in the protected area but not in the Radiologically Controlled Area (RCA). Area TLD's have been positioned in the protected areas where persons are not monitored to ensure licensee awareness of radiation field changes. Also, the licensee began a five year personnel radiation exposure trending program designed to identify those persons and groups who consistently receive the highest exposures, and to investigate possible methods to reduce the exposures.

The inspector selectively reviewed exposure records for the period January 1 through December 31, 1985. The total whole body doses for station and contractor workers in 1985 was 444 person-rems and the highest individual exposure was 3.15 rems. No regulatory limits were exceeded.

No violations or deviations were identified.

9. Internal Exposure Control and Assessment

The inspector reviewed the licensee's internal exposure control and assessment programs, including: changes in facilities, equipment, personnel, and procedures affecting internal exposure control and personal assessments; determination whether engineering controls, respiratory equipment, and assessment of individual intakes meets regulatory requirements; required records, reports, and notifications; and effectiveness of management techniques used to implement these programs.

The licensee's programs for controlling internal exposures include the use of protective clothing, respirators and equipment, and control of surface and airborne radioactivity. A selected review of air samples and smear survey results was made. No significant problems were noted.

The inspector selectively reviewed the results of Whole Body Counts (WBC) performed on station and contract employees during 1985. It appears no person exceeded the 40 MPC-hour control measure during this period.

The Helgeson contracted whole body counter was calibrated by Helgeson Scientific Services on December 16, 1985. The counter meets the contractor's tolerance of plus or minus 15 percent. The sources used for calibration are traceable by direct/indirect comparison with NBS standard reference sources.

No violations or deviations were identified.

10. Contamination Control

The licensee's personal and area contamination control program is described in Inspection Reports No. 50-266/85017 and 50-301/85017. The inspector reviewed reports of personal contamination for 1985. Personnel contaminations are summarized quarterly; most occurrences involved clothing contamination. Increases of contamination events were observed during outage periods; the number of personnel contamination events averaged less than four per week. Most of the contamination events were detected by the portal monitor; the remainder by personal frisking.

It was noted, with a few exceptions, that general housekeeping in the plant was good; there appeared to be less areas controlled for contamination than during previous inspections. During the last quarter of 1985, decontamination efforts were directed at ten components and small areas where significant levels of contamination had built up. Efforts have been made at cleaning dust and dirt accumulated on piping, equipment, and other

horizontal surfaces of the auxiliary building; however, the licensee still experiences problems with work areas not being cleared up after job completion. Also, more effort apparently needs to be made in reducing leaking components which cause area recontamination.

No violations or deviations were identified.

11. Incident Reports

Selected Radiological Incident Reports for 1985 were reviewed. Upper management, including the Plant Manager, routinely review these incidents for matters of generic significance and appropriate corrective action. The most significant problem noted during the review of the incidents were repeated incidents of high radiation area rope barrier violations for those areas where dose rates between 100 and 1,000 millrem per hour requires a barricade. The licensee formed a committee to develop corrective actions for these repeated violations. Other licensee corrective actions consisted of discussing the incident with the personnel who failed to secure the rope barrier (when identified), and stressing to all workers the seriousness of not following health physics procedures.

Based on review of these incidents, it appears to the inspector that an underlying cause for the repetitive nature of the violations is worker attitude concerning procedural adherence. It appears there were no other significant incident repetitions; each incident was investigated; and appropriate corrective actions were taken. These matters were discussed at the exit meeting and will be reviewed at a future inspection (266/86004-01; 301/86004-01).

No violations or deviations were identified.

12. Steam Generator Tube Specimen Removal Phase II

The purpose of the steam generator tube specimen removal project is described in Inspection Reports No. 50-266/85017 and 50-310/85017. Since the last inspection, the licensee has removed several tube samples which are boxed, stored onsite, and ready for shipment to Westinghouse Corporation. The tube specimen cutting occurred without significant incident; sufficient radiological controls were apparently implemented by the licensee. There are no plans to remove a second tube sample. The steam generator will remain indefinitely in the Steam Generator Storage Facility, which is locked and controlled as a high radiation area.

No violations or deviations were identified.

13. Fuel Assembly Inspection

During visual inspections of fuel assemblies removed from the core in November 1985, the licensee identified at least two instances of fuel erosion and one instance in which a fuel rodlet was severed, which resulted in loose fuel pellets. An inspection of the upper core support plate disclosed no trapped pellets. However, pellets and pieces of pellets were found in the lower core support plate; they were subsequently removed. The licensee's reactor coolant sample

analysis results did not indicate the presence of any loose fuel. The fuel damage was due to baffle jetting similar to that previously experienced on Unit 1. Modifications to correct the problem have been proposed, and will be implemented in the future.

The licensee's air sampling and smear survey program have not identified any changes in alpha activity for several years. The radiation protection and chemistry departments continue to monitor to identify any significant and unexplained changes in radioactive buildup.

No violations or deviations were identified.

14. IE Information Notices

No. 85-06: Contaminated Breathing Air Systems. Actions taken in response to the notice include revision of HPIP 4.56 to include radiological analysis of the service air system prior to connection of the supplied air regulator, and development of a service air system procedure to provide controls, precautions, and health physics interfaces when service air is connected to potentially contaminated systems. The actions appear adequate.

No. 85-43: Radiography Events at Power Reactors. Health physics procedure 9.1, "Monitoring of Radiography," appears adequate to prevent accidental exposure of personnel during radiography.

15. Exit Meeting

The inspector met licensee representatives (denoted in Section 1) at the conclusion of the inspection on February 21, 1986. Discussed were the findings and scope of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify such documents/processes as proprietary. In response to certain matters discussed, the licensee:

a. Acknowledged the inspector's comments concerning the upgrading of the RCO training program. (Section 4)

b. Acknowledged the inspector's comments concerning upgrading and stabilizing the RCO staff. (Section 5)

c. Stated that actions will be taken to prevent the recurrence of repetitive high radiation area barrier violations. (Section 11)