

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-282/84-17(DRSS); 50-306/84-18(DRSS)

Dockets No. 50-282; 50-306

License Nos. DPR-42; DPR-60

Licensee: Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

Facility Name: Prairie Island Nuclear Generating Plant, Units 1 & 2

Inspection At: Prairie Island Site, Redwing, MN

Inspection Conducted: December 11-14, 1984

Inspectors: *W.B. Grant*
W. B. Grant

1/8/85
Date

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

1/8/85
Date

Inspection Summary

Inspection on December 11-14, 1984 (Report Nos. 50-282/84-17(DRSS);
50-306/84-18(DRSS))

Areas Inspected: Routine unannounced inspection of the operational radiation protection program and transportation activities, including: organization and management controls; training and qualifications; external and internal exposure control; control of radioactive material and contamination; survey and monitoring; maintaining exposures ALARA; radiation protection procedures; implementation of the transportation program; open items; and I & E information notices. The inspection involved 31 inspector-hours on site by one NRC inspector.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

- M. Gruber, Production Engineer
- *A. Hunstad, Staff Engineer
- G. Kolle, Training Department
- A. Johnson, Radiation Protection Supervisor
- *D. Mendele, Plant Superintendent, Engineering and Radiation Protection
- *D. Schuelke, Superintendent, Radiation Protection
- *D. Stember, Lead Production Engineer

A. Grella, NRC/IE Headquarters

The inspector also contacted other licensee employees including technicians and technical and engineering staff members.

*Denotes those present at the exit meeting.

2. General

This inspection, which began at 8:00 a.m. on December 11, 1984, was conducted to examine the operational radiation protection program, transportation activities, open items, and IE Information notices. During facility tours the inspector noted access to radiation areas was well-controlled, and posting and labelling were conspicuous. Housekeeping was good.

3. Organization and Management Controls

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

The current radiation protection/chemistry organization consists of a superintendent, two supervisors (radiation protection and radiochemistry), a chemist, four engineers, and 18 technicians including two coordinators. No problems were noted.

The inspector reviewed Radiation Occurrence Reports (RORs) written during 1984 to date. RORs are written for RWP violations, personnel contamination incidents, lost TLDs, and pocket dosimeters off-scale. It appears that adequate management review is performed and corrective actions taken. No problems were noted.

No violations or deviations were identified.

4. Training and Qualifications

The inspector reviewed the training and qualification aspects of the licensee's radiation protection and transportation programs, including: changes in responsibilities, policies, goals, programs, and methods; qualifications of newly hired or promoted radiation protection personnel; and provision of appropriate radiation protection and transportation training for station personnel. Also reviewed was management techniques used to implement these programs and experience concerning self-identification and correction of program implementation weaknesses.

The licensee has a formal radiation protection specialist (RPS) refresher training program which consists of approximately 21 days refresher training per year. The training is organized into six sessions each covering a six week period to accommodate shift work schedule. The refresher training program includes general employee training (GET) and training sessions on: emergency plan and procedures; radioactivity and decay; steam generator chemistry; radiation protection implementing procedures; medical support and casualty care; CPR; interaction of radiation and matter; radiation detection and measurement; radiation dosimetry; and plant systems.

In addition to the formal refresher training, monthly safety meetings and periodic section meetings continue to be held.

No violations or deviations were identified.

5. External Exposure Control and Personal Dosimetry

The inspector reviewed the licensee's external exposure control and personal dosimetry programs, including: changes in facilities, equipment, personnel, and procedures; adequacy of the dosimetry program to meet routine and emergency needs; planning and preparation for maintenance and refueling tasks including ALARA considerations; required records, reports, and notifications; effectiveness of management techniques used to implement these programs and experience concerning self-identification and correction of program implementation weaknesses.

There have been no significant changes in the licensee's personal monitoring program. The inspector reviewed exposure records for 1984 to date. Good exposure control is evidenced by a total exposure in 1984 to date of 136 person-rem with both units undergoing a refueling outage and two short outages to repair steam generator tube leaks. No regulatory limits were exceeded.

The licensee spikes ten TLDs twice yearly and sends them to the vendor for processing. On the average, the spiked TLDs show good agreement, reading slightly high which is conservative.

No violations or deviations were identified.

6. Internal Exposure Control and Assessment

The inspector reviewed the licensee's internal exposure control and assessment programs, including: changes in facilities, equipment, personnel, respiratory protection training, and procedures affecting internal exposure control and personal assessment; determination whether engineering controls, respiratory equipment, and assessment of individual intakes meet regulatory requirements; planning and preparation for maintenance and refueling tasks including ALARA considerations; required records, reports, and notifications, and effectiveness of management techniques used to implement these programs and experience concerning self-identification and correction of program implementation weaknesses.

Whole body count data for about 430 counts from September 1, 1984, to date, as well as selected respiratory protection training records, MPC-hour determinations, and air activity surveys were reviewed. No exposures greater than the 40 MPC-hour control measure were indicated. Several followup counts were performed on persons who showed elevated initial counts. Followup counting was adequate to verify that the 40 MPC-hour control measure was not exceeded.

The inspector reviewed the monthly and the quarterly respirator surveillance checks, and toured the respirator testing, maintenance and issue area at access control. A listing of personnel currently qualified to wear respirators and the type of respirator they are qualified to wear is posted at the issue station. A nasal smear is routinely taken of each respirator user when the respirator is returned. No problems were noted.

No violations or deviations were identified.

7. Control of Radioactive Materials and Contamination

The inspector reviewed the licensee's program for control of radioactive materials and contamination, including: changes in instrumentation, equipment, and procedures; effectiveness of survey methods, practices, equipment and procedures; adequacy of review and dissemination of survey data; effectiveness of methods of control of radioactive and contaminated materials; and management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

The inspector reviewed routine area survey results. Radiation and contamination surveys are performed on a daily, weekly, and monthly basis. No problems were noted.

During controlled area tours, the inspector noted friskers were operable and located in low background areas. Posting, labelling, and housekeeping were adequate.

No violations or deviations were identified.

8. Radiation Protection Procedures

The inspector selectively reviewed the following radiation protection implementing procedures to determine if they are compatible with regulatory requirements and good health physics practices. No significant problems were identified.

RPIP	1103	Revision 0	Visitor TLD Issue
RPIP	1104	Revision 0	Neutron TLD Monitoring
RPIP	1106	Revision 0	Access Control Procedures
RPIP	1114	Revision 0	Dosimeter Offscale
RPIP	1217	Revision 0	NaCl Respirator Test Booth Operations
RPIP	1307	Revision 0	Radwaste Classification
RPIP	1309	Revision 0	Tracking Radwaste Shipment
RPIP	1310	Revision 0	Radwaste Stream/Scaling Factors
RPIP	1702	Revision 1	Steam Generator Primary Manway Removal and Installation

9. Maintaining Occupational Exposures 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 was management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

The licensee has held several pre-outage meetings for the Unit-1 outage scheduled to begin in January 1985. The meetings are held in part to identify and schedule high dose jobs and plan maintenance activities to reduce personal exposure. Two radiation protection specialists (RPS) are scheduled to attend the Westinghouse Eddy Current Tester (ECT) training in Pittsburgh prior to the outage. During the outage, the RPS's will be assigned to provide coverage for ECT activities and will have the advantage of knowing the Westinghouse workers and how they were trained.

The ALARA measures implemented during the recent Unit 2 outage (50-306/84-12) are also scheduled for the upcoming Unit 1 outage. Good management and worker support for this program is indicated. No problems were noted.

No violations or deviations were identified.

10. Transportation of Radioactive Materials

The inspector reviewed the Licensee's transportation of radioactive materials program, including: determination whether written implementing procedures are adequate, maintained current, properly approved, and

acceptably implemented; determination whether shipments are in compliance with NRC and DOT regulations, and the licensee's quality assurance program; determination if there were any transportation incidents involving licensee shipments; adequacy of required records, reports, shipment documentation, and notifications; and experience concerning identification and correction of programmatic weaknesses.

The licensee ships radioactive waste to the Barnwell, South Carolina and Richland, Washington burial sites. Radwaste shipped to the Barnwell site is normally limited to dewatered resins of greater than type A quantities shipped in high integrity containers (HIC). Shipments to the Richland site include compacted and noncompactd trash in 55-gallon drums, dewatered resins and filters containing less than type A quantities, and miscellaneous trash in metal LSA boxes.

The inspector verified that the licensee possessed current license requirements of the commercial burial sites, current copies of USNRC certificates of compliance for radioactive material packages, and current copies of the Department of Transportation and Nuclear Regulatory Commission regulations for transfer, packaging and transport of radioactive materials.

The following procedures related to the transfer, packaging, and transport of radioactive material were reviewed.

- D11.1 (Rev 3) Radioactive Materials Shipment - LSA - not exceeding type A quantities, in exclusive use vehicle to Richland, Washington.
- D11.2 (Rev 3) Radioactive Materials Shipment - LSA - greater than type A quantities, in exclusive use vehicle to Barnwell, South Carolina.

Procedure D11.1 has been revised (10/84) to include a provision for venting within 10 days of shipment of any package which contains water and/or organic substances such as resin that could radioanalytically generate combustible gases; this is in response to IE Information Notice 84-72. Procedure D11.2 does not include a provision for venting. However, the licensee has not shipped greater than type A quantities in 1984. According to the licensee, the procedure will be revised prior to shipment of greater than type A quantities. This matter was discussed at the exit meeting. No other procedural problems were noted.

The inspector reviewed records of radwaste shipments made during 1984 to date. Four shipments of less than type A quantities were made. No significant problems were noted.

10 CFR 71.105 and 10 CFR 71.137 require the establishment of a quality assurance (QA) program for transportation activities and periodic audits to verify compliance with the QA program. The licensee has a formal

QA program for transportation activities which includes verification of maintenance of packages and audits. However, an audit of the program has apparently not been performed since July 1983. The licensee has not shipped any greater than type A quantities in 1984. A licensee representative stated that an audit of the radiation protection program, which will include transportation QA, is scheduled for early 1985. This matter was discussed at the exit meeting and will be reviewed during a future inspection (282/84-17-01(DRSS); 306/84-18-01(DRSS)).

11. Exit Meeting

The inspector met with licensee representatives (Denoted in Section 1) at the conclusion of the inspection on December 14, 1984. The inspector summarized the scope and findings of the inspection. In response to certain items discussed by the inspector, the licensee:

- a. stated that procedure D11.2 would be revised prior to shipment of greater than type A quantities of radioactive materials (Section 10)
- b. audit of transportation including quality assurance would be performed early in 1985 (Section 10).