December 9, 1996

Mr. E. Watzl
Vice President, Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORTS NO. 50-282/96011(DRS); 50-306/96011(DRS)

Dear Mr. Watzl:

This will acknowledge receipt of your letter dated November 25, 1996, in response to our letter dated October 25, 1996, transmitting a Notice of Violation associated with the failure to make an adequate evaluation of radiological conditions within the 121 Spent Resin Tank room. We have reviewed your corrective actions and have no further questions at this time. These corrective actions will be examined during future inspections.

Sincerely,

Original Signed by Brent Clayton (for)

Geoffrey E. Grant, Director
Division of Reactor Safety

Dockets No. 50-282; 50-306

Enclosure: Ltr dtd 11/25/96

cc w/o encl: Plant Manager, Prairie Island
John W. Ferman, Ph.D.
Nuclear Engineer, MPCA

cc w/encl: State Liaison Officer, State of Minnesota
State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community

DOCUMENT NAME: G:DRS\PRA12096.DRS

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Northern States Power Company
Prairie Island Nuclear Generating Plant
1717 Wakonade Dr. East
Welch, Minnesota 55089

November 25, 1996

10 CFR Part 2

U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos.50-282 License Nos. DPR-42
50-306 DPR-60

Reply to a Notice of Violation (Inspection Report 96011), Failure to Make an Adequate Radiological Survey

Your letter of October 25, 1996, which transmitted Inspection Report No. 96011, required a response to a Notice of Violation. Our response to the violation is contained in the attachment to this letter.

In this letter, we have made no new NRC commitments.

Please contact Jack Leveille (612-388-1121, Ext. 4662) if you have any questions related to this letter.

Michael D Wadley

Michael D Wadley
Plant Manager
Prairie Island Nuclear Generating Plant

c: Regional Administrator – Region III, NRC
Senior Resident Inspector, NRC
NRR Project Manager, NRC
J E Silberg

Attachment: REPLY TO A NOTICE OF VIOLATION

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NOV 29

REPLY TO A NOTICE OF VIOLATION

10 CFR 20.1501(a) requires that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present.

Pursuant to 10 CFR 20.1003, survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Contrary to the above, as of September 18, 1996, the licensee did not make an adequate survey to assure compliance with 10 CFR 20.1701, which requires licensees to use, to the extent practical, process or other engineering controls to control the concentrations of radioactive material in air. Specifically, a contamination survey in the spent resin tank room inaccurately determined levels to be 45,000 disintegrations per minute (dpm) when actual levels were 450,000 dpm. Due to the inadequate evaluation of the contamination survey, the licensee did not use, to the extent practical, process or other engineering controls to control the concentrations of radioactive material in air for work in the spent resin tank room.

This is a Severity Level IV violation (Supplement IV).

RESPONSE TO VIOLATION

Background

Two laborers and a radiation protection specialist (RPS) entered the Waste Gas Decay Tank (WGDT) room to remove the loose cement blocks for entry into 121 Spent Resin Tank (SRT) room. They took Polaroid pictures of the outer layer of blocks to the SRT room. This was done to assist whoever would replace the block wall at the end of the job. They then removed the small amount of grout surrounding the outer layer of block.

The outer layer was then removed; each cement block was wiped with a wet cloth and laid on the floor. The RPS then surveyed the opening. The survey was for radiation only and revealed < 1 mRem/hr gamma. This sequence was continued until the last of five layers was removed. As each successive layer of blocks was removed they were placed on top of the previously removed blocks in the WGDT room.

Once all the blocks were removed the RPS reached in and conducted a quick radiation survey within 121 SRT room. The survey showed only 10 mRem/hr gamma. He then reached in and grabbed a smear of the floor within the SRT room. He then smeared the floor within the opening to the SRT room and on his way out of the WGDT room he

smeared 5 other locations. He informed the laborers not to go into the SRT room until he returned with the results. The laborers were allowed to clean up some of the dust on tanks and pipes within the WGDT Room. The RPS returned to the access control station and counted the smears on the smear counter. When the counter was through, he quickly looked at the printout. At this time the access control station lead RPS asked him what he had for results. The RPS covering the job misread the small print on the report as 45000 dpm/100 cm^2 instead of the actual 450000 dpm/100 cm^2 printed on the printout, and reported this to the lead RPS. He then asked the lead RPS to place the printout on the table and he would complete the paper work later. The lead RPS placed the printout on the table.

The RPS returned to the work site and informed the workers of the results. The RPS entered 121 SRT room to conduct a more extensive radiation and contamination survey. The second laborer left the area to get a clean mop, mop bucket and new light bulbs. The first laborer then mopped the reachable areas of the SRT room using mop water previously used in the WGDT room.

The second laborer returned to 121 SRT room with another mop bucket of clean water, mop and light bulbs. The first laborer then mopped the reachable areas of the SRT room using clean water. The RPS went from the SRT room to the WGDT room to allow both laborers space to clean. The second laborer entered the SRT room to assist in placing a 6 foot ladder in the room for replacing the light bulbs.

All individuals returned to the access control station. As the laborers walked near the Gamma 10 Radiation monitor, it alarmed. The access control station lead RPS then surveyed the laborers and discovered contamination on their clothing, skin, and nasal passages. All individuals involved with the work in 121 SRT room required decontamination.

Reason for the Violation

After counting smears used for surveying the SRT room, the RPS mis-read the printout. The printout design used a small font size with no commas and no programmed warnings were used other than the common low level contamination warning. The small font made it difficult for the RPS to read the difference between 45000 dpm/100 cm^2 and 450000 dpm/100cm^2.

Corrective Steps Taken and Results Achieved

All individuals involved were successfully decontaminated. Conservative dose assessments based on the contamination showed a dose of less than 25 mRem.

Corrective Steps to Avoid Further Violation

The computer programming for the smear counter results was changed to include warnings for levels above the current station action levels. These warnings significantly change the survey result printouts' appearance from the routine printouts. In addition, the programming will be changed to eliminate unnecessary data. The elimination of this data will allow room to use a larger font size.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

Program Enhancements

Following this event, an internal assessment of this violation was done. Weaknesses identified in the areas of Work Order ALARA Review checklist and pre-job briefings for infrequently performed tests and evolutions may have prevented management expectations from being fully met for entering the SRT room. The following actions address the identified weaknesses.

1. A step was added to the Work Order ALARA Review checklist reminding writers to review the Lessons Learned Radiation Protection Implementing Procedure (RPIP). Reminders of the potential that infrequently entered spaces may have high radiation, contamination, and high airborne were added to the Work Order ALARA Review checklist. This event was added to the Lessons Learned RPIP.

2. The Radiation Protection group decided to have the group discuss ALARA reviews prior to work performance. Existing ALARA reviews are being revised to address the revision of the Work Order ALARA Review checklists.

3. The Radiation Protection group evaluated other methods for looking up past problems for infrequently entered areas and determined to maintain the work history files of radiologically significant work in a manner to provide easy reference.

4. The plant will review and update as necessary its definition of Infrequently Performed Tests and Evolutions to ensure that they receive additional management attention prior to their performance.

5. Radiation Protection management has reinforced expectations concerning job planning, communications, pre-job briefings, questioning attitudes and conservatism.