



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

March 3, 2010

Mr. Mark A. Schimmel  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Northern States Power Company, Minnesota  
1717 Wakonade Drive East  
Welch, MN 55089

**SUBJECT: ANNUAL ASSESSMENT LETTER – PRAIRIE ISLAND NUCLEAR  
GENERATING PLANT, UNITS 1 AND 2 (05000282/2010001;  
05000306/2010001)**

Dear Mr. Schimmel:

On February 11, 2010, the NRC staff completed its performance review of Prairie Island Generating Plant, Units 1 and 2. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2009. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only - Security Information" will include the Security Cornerstone review and resultant inspection plan.

Overall, Prairie Island Nuclear Generating Plant, Units 1 and 2, operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter at Prairie Island, Unit 1, was within the Regulatory Response Column of the NRC's Action Matrix based on one inspection finding in the Public Radiation Safety Cornerstone, from the first quarter of 2009, which involved a radioactive material shipment from your facility that did not conform to the applicable Department of Transportation (DOT) regulatory requirements when it arrived at the shipping destination. The supplemental inspection (95001) was successfully completed on December 4, 2009. Also, during this assessment period, the White finding in the Mitigating Systems Cornerstone (from the fourth quarter of 2008) involving the failure of the turbine driven auxiliary feedwater (TDAFW) pump to operate following a valid start signal was closed after the successful completion of a supplemental inspection (95001) on September 4, 2009. Based on the results of the two supplemental inspections performed during this assessment period, Unit 1 will move to the Licensee Response Column starting the first quarter of 2010.

Plant performance for Prairie Island Unit 2 for the most recent quarter was also within the Regulatory Response Column of the NRC's Action Matrix based on two inspection findings (one in the Mitigating Systems Cornerstone and one in the Public Radiation Safety Cornerstone) being classified as having low to moderate safety significance (White). The White finding in the Mitigating Systems Cornerstone, from the third quarter of 2009, is related to inadequate design of the component cooling water system. The inspection finding in the Public Radiation Safety Cornerstone being classified as having low to moderate safety significance (White) is the same as discussed above.

We plan to conduct a supplemental inspection (95001) in response to the White finding in the Mitigating Systems Cornerstone. Please notify us of your readiness to conduct this supplemental inspection. This supplemental inspection is in addition to Reactor Oversight Process (ROP) baseline inspections at your facility.

In the 2009 mid-cycle assessment letter, dated September 1, 2009 (ADAMS Ref. ML092440367), we advised you of a substantive cross-cutting issue (SCCI) in the area of human performance (HP) with cross-cutting themes in the aspects of systematic process (H.1(a)), conservative assumptions (H.1(b)), procedural adequacy (H.2(c)), and procedural compliance (H.4(b)). During this assessment period, there were 26 findings documented with cross-cutting aspects in the HP area. Of these 26 findings, four shared a common cross-cutting aspect of systematic process, four findings with conservative assumptions, six findings with procedural adequacy, and seven findings with procedural compliance. The number of findings in the SCCI themes increased during this assessment period in two out of the four themes. You discussed your actions to address the ongoing HP SCCI during a December 1, 2009, public meeting and some improvement has been observed. However, these actions have not yet proven effective in mitigating the cross-cutting themes. Therefore, the NRC has a concern with your progress in addressing this cross-cutting area and has concluded that the SCCI will remain open until all cross-cutting themes have been cleared in the area of HP. To clear each of the themes, we will assess whether your corrective actions have resulted in a positive sustainable improvement in the area and will consider the number of findings in the theme.

In addition, because you have a substantive cross-cutting issue in the area of HP for two consecutive assessment cycles, we are requesting you provide a written response to the issue to include discussion of your actions undertaken, those actions planned to address the concern, and a current assessment of performance. This response should be sent to the NRC within 30 days of receipt of this letter. Also, we will discuss the substantive cross-cutting issue during the upcoming end-of-cycle meeting.

Additionally, on September 3, 2009, the staff issued a Severity Level III Notice of Violation in accordance with the NRC's Enforcement Policy. The violation was associated with a failure to provide complete and accurate information (10 CFR 50.9) regarding the medical condition of a senior reactor operator. In a letter dated September 30, 2009, you provided your response to this violation, as well as your corrective actions. The NRC plans to perform a follow up inspection on the actions taken during the first quarter of 2010.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2011. We also plan on performing several special and infrequently performed inspections that include: Inspection Procedure (IP) 92709, "Licensee Strike Contingency Plans," and IP 92702, "Follow up on Traditional Enforcement Actions, Including Violations, Deviations, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Action Letters." The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last 9 months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If circumstances arise which cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact John (Jack) B. Giessner at 630-829-9619 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/IRA/**

Steven West, Director  
Division of Reactor Projects

Docket Nos. 50-282; 50-306; 72-010  
License Nos. DPR-42; DPR-60; SNM-2506

Enclosure: Prairie Island Inspection/Activity Plan

cc w/encl: Distribution via ListServ

**Prairie Island  
Inspection / Activity Plan  
03/01/2010 - 06/30/2011**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>BI ENG - TRIENNIAL HEAT SINK INSPECTION</b>		<b>3</b>
02/01/2010	03/12/2010	IP 7111107T	Heat Sink Performance	
		<b>OL EXAM - PR. ISLAND INIT EXAM - APRIL 2010</b>		<b>3</b>
03/15/2010	03/26/2010	W90224	OL - INITIAL EXAM - APRIL 2010 - PRAI	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
03/22/2010	03/26/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
04/26/2010	04/30/2010	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
		<b>BI ENG - ENGINEERING INSERVICE INSPECTION</b>		<b>1</b>
04/26/2010	05/28/2010	IP 7111108P	Inservice Inspection Activities - PWR	
		<b>BI ENG - COMPONENT DESIGN BASES INSPECTION</b>		<b>6</b>
06/28/2010	07/30/2010	IP 7111121	Component Design Bases Inspection	
		<b>PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>4</b>
09/20/2010	10/08/2010	IP 71152B	Identification and Resolution of Problems	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
07/12/2010	07/16/2010	IP 71124.02	Occupational ALARA Planning and Controls	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
08/09/2010	08/13/2010	IP 2515/173	Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	
08/09/2010	08/13/2010	IP 71151-BI01	Reactor Coolant System Activity	
08/09/2010	08/13/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
08/09/2010	08/13/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		<b>STRIKE - STRIKE CONTINGENCY-OPS/MAINT/RP/ENGR/QC</b>		<b>2</b>
08/02/2010	12/31/2010	IP 92709	Licensee Strike Contingency Plans	
		<b>BI EP - EP EXERCISE / PI VERIFICATION</b>		<b>3</b>
08/23/2010	08/27/2010	IP 7111401	Exercise Evaluation	
08/23/2010	08/27/2010	IP 71151-EP01	Drill/Exercise Performance	
08/23/2010	08/27/2010	IP 71151-EP02	ERO Drill Participation	
08/23/2010	08/27/2010	IP 71151-EP03	Alert & Notification System	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
11/01/2010	11/05/2010	IP 71124.05	Radiation Monitoring Instrumentation	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
02/21/2011	02/25/2011	IP 2515/179	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	
02/21/2011	02/25/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
		<b>BI ENG - ENGINEERING INSERVICE INSPECTION - U1</b>		<b>1</b>
04/30/2011	06/04/2011	IP 7111108P	Inservice Inspection Activities - PWR	

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Inspection / Activity Plan  
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		<b>BI RP</b>	<b>- RADIATION PROTECTION BASELINE INSPECTION</b>	<b>1</b>
05/02/2011	05/06/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
05/02/2011	05/06/2011	IP 71124.04	Occupational Dose Assessment	
		<b>BI EP</b>	<b>- EP ROUTINE INSPECTION / PI VERIFICATION</b>	<b>2</b>
06/13/2011	06/17/2011	IP 7111402	Radiological Environmental Monitoring Program	
06/13/2011	06/17/2011	IP 7111403	Emergency Response Organization Augmentation Testing	
06/13/2011	06/17/2011	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
06/13/2011	06/17/2011	IP 71151-EP01	Drill/Exercise Performance	
06/13/2011	06/17/2011	IP 71151-EP02	ERO Drill Participation	
06/13/2011	06/17/2011	IP 71151-IE03	Unplanned Power Changes per 7000 Critical Hrs	

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**/RA/**

Steven West, Director  
Division of Reactor Projects

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Letter to M. Schimmel from S. West dated March 3, 2010.

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