



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

December 23, 2008

Mr. Michael D. Wadley
Site Vice President
Prairie Island Nuclear Generating Plant
Northern States Power Company-Minnesota
1717 Wakonade Drive East
Welch, MN 55089

**SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2,
EVALUATION OF CHANGES, TESTS, OR EXPERIMENTS AND PERMANENT
PLANT MODIFICATIONS BASELINE INSPECTION REPORT
05000282/2008007; 05000306/2008007(DRS)**

Dear Mr. Wadley:

On December 5, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications at the Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed report documents the results of the inspection, which were discussed with you and other members of your staff at the completion of the inspection on December 5, 2008.

The inspectors examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of the inspection, one NRC identified finding of very low safety significance was identified, which involved a violation of NRC requirements. However, because this violation was of very low safety significance and because it was entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation (NCV) in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of an NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission – Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Prairie Island Nuclear Generating Plant, Units 1 and 2.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of

D. Wadley

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NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Robert Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-282; 50-306
License Nos. DPR-42, DPR-60

Enclosure: Inspection Report 05000282/2008007; 05000306/2008007(DRS)
w/Attachment: Supplemental Information

cc w/encl: D. Koehl, Chief Nuclear Officer
Regulatory Affairs Manager
P. Glass, Assistant General Counsel
Nuclear Asset Manager
J. Stine, State Liaison Officer, Minnesota Department of Health
Tribal Council, Prairie Island Indian Community
Administrator, Goodhue County Courthouse
Commissioner, Minnesota Department
of Commerce
Manager, Environmental Protection Division
Office of the Attorney General of Minnesota
Emergency Preparedness Coordinator, Dakota
County Law Enforcement Center

D. Wadley

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of Commerce
Manager, Environmental Protection Division
Office of the Attorney General of Minnesota
Emergency Preparedness Coordinator, Dakota
County Law Enforcement Center

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DATE	12/18/08		12/23/08					

OFFICIAL RECORD COPY

Letter to Mr. Michael Wadley from Mr. Robert Daley dated December 23, 2008.

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2,
EVALUATION OF CHANGES, TESTS, OR EXPERIMENTS AND PERMANENT
PLANT MODIFICATIONS BASELINE INSPECTION REPORT
05000282/2008007; 05000306/2008007(DRS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-282, 50-306
License Nos. DPR-42, DPR-60

Report No: 05000306/2008007; 05000306/2008007(DRS)

Licensee: Nuclear Management Company, LLC

Facility: Prairie Island Nuclear Generating Plant, Units 1 and 2

Location: Welch, MN

Dates: November 17, 2008 through December 05, 2008

Inspectors: M. Holmberg, Reactor Inspector
M. Munir, Reactor Inspector
V. Meghani, Reactor Inspector

Approved by: R. Daley, Chief
Engineering Branch 3
Division of Reactor Safety (DRS)

Enclosure

SUMMARY OF FINDINGS

IR 05000282/2008007, 05000306/2008007; 11/17/2008 – 12/05/2008; Prairie Island Nuclear Generating Plant, Units 1 & 2; Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications.

The inspection covered a two-week announced baseline inspection on evaluations of changes, tests, or experiments and permanent plant modifications. The inspection was conducted by three Region based engineering inspectors. One Severity Level IV Non-Cited Violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red), using Inspection Manual Chapter 0609, "Significance Determination Process (SDP)." Findings for which the SDP does not apply, may be Green, or may be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. Inspector-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

- Severity Level IV. The inspectors identified a Severity Level IV NCV, having very low safety significance, of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to perform a safety evaluation associated with installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water System from a postulated hydrogen tank explosion in the bulk storage facility located directly above buried Circulating Water System return lines. The licensee stopped work on the installation of the bulk hydrogen facility and documented the NRC identified issues in the corrective action system. The inspectors' concerns also prompted the licensee to identify above ground Cooling Water System pipe in the nearby Turbine Building, which had not been evaluated in the hydrogen blast analysis.

The finding was more than minor because the inspectors could not reasonably determine that this change would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situation." Specifically, the inspectors answered "No" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. The cause of the finding is related to the cross-cutting element of Human Performance Decision Making, because the licensee failed to make conservative assumptions in decision making associated with the effects of a postulated hydrogen tank explosion (IMC 305, Section 06.07.c, Item H.1(b)). (Section 1R17.1.b)

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

.1 Title 10 CFR 50.59 Evaluations and Screenings

a. Inspection Scope

From November 17 through December 5, 2008, the inspectors reviewed six safety evaluations performed pursuant to 10 CFR 50.59 to determine if the evaluations were adequate and that prior NRC approval was obtained as appropriate. The inspectors also reviewed 17 screenings and 2 equivalency evaluations where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. The inspectors reviewed these documents to determine if:

- the changes, tests, or experiments performed were evaluated in accordance with 10 CFR 50.59 and that sufficient documentation existed to confirm that a license amendment was not required;
- the safety issue requiring the change, test or experiment was resolved;
- the licensee conclusions for evaluations of changes, tests, or experiments were correct and consistent with 10 CFR 50.59; and
- the design and licensing basis documentation was updated to reflect the change.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, to determine acceptability of the completed evaluations, and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000. The inspectors also consulted Part 9900 of the NRC Inspection Manual, "10 CFR Guidance for 10 CFR 50.59, Changes, Tests, and Experiments."

This inspection constitutes six samples of evaluations and nineteen samples of changes as defined in Inspection Procedure 71111.17-05.

b. Findings

Failure to Perform a 10 CFR 50.59 Evaluation for Bulk Hydrogen Storage Facility

Introduction: The inspectors identified a Severity Level IV Non-Cited Violation (NCV) of 10 CFR 50.59 having very low safety significance (Green) for the failure to perform a safety evaluation for installation of a bulk hydrogen storage facility. Specifically, the licensee had not evaluated the adverse affects on the Circulating Water (CW) System

from a postulated hydrogen tank explosion in the bulk storage facility located directly above buried CW return lines.

Description: On December 4, 2008, the licensee had mostly installed, (but not filled), a bulk hydrogen storage facility. The inspectors identified that the licensee had not considered the effects of a postulated hydrogen tank explosion on the buried CW return header pipes running directly under this facility.

The Updated Final Safety Analysis Report (UFSAR) Section 11.5.1 describes the design basis functions for the CW system and states that the CW system provides the heat sink for the generating plant. Specifically, excess heat from the steam leaving the turbine is transferred to circulating water flowing through the condenser tubes. The CW system also supplies the water for the Cooling Water System and Fire Protection Systems. Water flows from the Intake Bay into the Plant Screenhouse. The Cooling Water pumps draw water from the screenhouse, pump it through the system and discharge to the warm circulating water leaving the condensers. Thus, the CW System indirectly cools the plant auxiliary equipment.

Hydrogen gas is used as the heat transfer medium to cool the main generators and for reducing the oxygen concentration in the volume control tank to less than 5 percent by volume. As described in the UFSAR Section 9.3.2.1.5, this hydrogen gas was supplied by ten portable banks of gas cylinders. In accordance with Engineering Change (EC) 12191 "Hydrogen Storage Replacement Modification," the licensee changed the original storage configuration and located the new bulk hydrogen tank storage facility directly over the Unit 1 and Unit 2 buried CW header pipes. The new bulk storage facility was comprised of three (non-portable) banks of cylindrical tanks that were designed to contain approximately twice the volume of hydrogen of the original storage facility. These banks of tanks were attached to a metal framework supported by concrete piers, which allowed for distribution of the tank weight around the buried circulating water pipes located beneath this facility. The buried CW return headers for each unit running beneath this facility were large diameter concrete pipes located several feet below the slab elevation. The licensee had completed calculation 2008-11997 "Hydrogen Blast Analysis" to evaluate the affect of a postulated hydrogen explosion on structures identified within a the predicted blast radius that could affect plant operation. However, the inspectors identified the following concerns with this calculation:

- 1) The effect of a blast induced shockwave on the buried CW pipes directly beneath the facility was not evaluated. If the blast shock wave was sufficient to collapse and block the buried headers, the station would experience a loss of CW, which could also disrupt the normal operation of the safety-related Cooling Water System.
- 2) The calculation evaluated the blast effects from only one individual tank explosion within a given bank based on a hydrogen explosion event which occurred on a portable hydrogen trailer bank at Los Alamos National Laboratory. The licensee had not compared their storage configuration with that involved in the Los Alamos event to ensure that multiple tanks would not explode. Because, the licensee's bulk storage tanks were larger than those used on the portable trailer tanks, they would generate a larger explosive force which may be sufficient to trigger additional tank explosions.

On August 11, 2008, the licensee approved screening 3015 "Hydrogen Tank Farm" which evaluated and determined that a 10 CFR 50.59 evaluation was not required to install EC 12191. This screening was inadequate, because, it failed to identify the need for a full safety evaluation to evaluate the impact of a postulated tank farm blast on the CW System and Cooling Water System functions. Specifically, a postulated hydrogen tank explosion would create a shock wave into the ground which could damage the buried CW piping and adversely affect the functions of this system. Further, if sufficient blockage occurred in the CW System, it would disrupt the normal flow of the Cooling Water System that discharges into the CW return header piping.

The inspectors concluded that location of the bulk hydrogen storage facility directly over the circulating water lines without a demonstrated analysis to assess the effect on these lines would not have been acceptable under 10 CFR 50.59 and would have required approval from the NRC (e.g., license amendment). Specifically, NEI 96-07 Section 4.3.6 identifies that a new or common cause failure not bounded by previous analysis would not meet the 10 CFR 50.59 screening criteria and hence would require a license amendment. As a corrective action, the licensee stopped work on the installation of the bulk hydrogen facility and documented the NRC identified issues in Assignment Report (AR) 01161382 and AR 01161364. The inspectors' concerns subsequently prompted the licensee to identify above ground Cooling Water System piping in the nearby Turbine Building which had also not been evaluated in the hydrogen tank blast analysis (AR 01161373).

Analysis: The inspectors determined that the licensee's failure to perform a safety evaluation in accordance with 10 CFR 50.59 for changes to their design basis associated with bulk hydrogen storage was a performance deficiency warranting a significance determination. Specifically, the licensee had installed a bulk hydrogen storage system at a location that could adversely affect the design basis function of the CW System.

Because violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the significance determination process (SDP). The finding was determined to be more than minor because the inspectors could not reasonably determine that the changes to the licensee's design basis would not have ultimately required NRC prior approval.

The inspectors completed a significance determination of the underlying technical issue using NRC's inspection manual chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and answered "No" to the Mitigating Systems screening questions in the Phase 1 Screening Worksheet (Table 4a). The inspectors answered "No," because the licensee had not yet filled the bulk storage facility with hydrogen, so no possibility of explosion and damage to plant equipment existed. Based upon this Phase 1 screening, the inspectors concluded that the issue was of very low safety significance (Green).

In accordance with IMC 305 "Operating Reactor Assessment Process," the inspectors identified a cross-cutting aspect for this finding, using available causal information. The cause of this finding was related to the cross-cutting element of "Human Performance, Decision Making," because the licensee failed to make conservative assumptions in decision making. In accordance with IMC 305, Section 06.07.c, "Components Within the

Cross-Cutting Areas,” the inspectors identified Item H.1.b as applicable for this finding. Specifically, the licensee’s decision to ignore the effect of a blast induced shock wave on CW piping was not conservative, and the assumption that only one cylinder in a bank of hydrogen cylinders could explode without establishing an adequate basis was non-conservative.

Enforcement: Title 10 CFR 50.59(d)(1) states, in part, that the licensee shall maintain records of changes in the facility, of changes in procedures, and of tests and experiments. These records must include a written evaluation which provides a basis for the determination that the change, test, or experiment does not require a license amendment.

Contrary to the above, as of December 5, 2008, the licensee failed to perform a written safety evaluation for installation of the bulk hydrogen storage facility (EC 12191). In accordance with the Enforcement Policy, this violation of the requirements of 10 CFR 50.59 was classified as a Severity Level IV Violation because the underlying technical issue was of very low safety significance. Because this violation was of very low safety significance, was not repetitive or willful, and it was entered into the licensee’s corrective action program (AR 01161382 and AR 01161364), this violation is being treated as an NCV consistent with VI.A.1 of the NRC Enforcement Policy (NCV). (NCV 05000282/2008007-01; 05000306/2008007-01).

.2 Review of Permanent Plant Modifications

a. Inspection Scope

From November 17, 2008 through December 5, 2008, the inspectors reviewed ten permanent plant modifications that had been installed in the plant during the last three years. This review included in-plant walkdowns for portions of the modified Turbine Generator Control Systems, Emergency Diesel Generator Ventilation Systems, Bulk Hydrogen Storage System and the Condensate Storage Tank Freeze Protection System. The modifications were selected based upon risk significance, safety significance, and complexity. The inspectors reviewed the modifications selected to determine if:

- the supporting design and licensing basis documentation was updated;
- the changes were in accordance with the specified design requirements;
- the procedures and training affected by the modification have been updated;
- the test documentation as required by applicable test programs has been updated; and
- post-modification testing specified was sufficient to ensure functionality of the component modified, its associated system, and any support systems.

This inspection constitutes ten samples as defined in Inspection Procedure 71111.17-05.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

.1 Routine Review of Condition Reports

a. Inspection Scope

From November 17, 2008 through December 5, 2008, the inspectors reviewed Corrective Action Process documents that identified or were related to 10 CFR 50.59 evaluations and permanent plant modifications. The inspectors reviewed these documents to evaluate the effectiveness of corrective actions related to permanent plant modifications and evaluations for changes, tests, or experiments issues. In addition, corrective action documents written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problems into the corrective action system. The specific corrective action documents that were sampled and reviewed by the inspectors are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Management Meeting(s)

.1 Exit Meeting

The inspectors presented the inspection results to Mr. M. Wadley and others of the licensee's staff, on December 5, 2008. Licensee personnel acknowledged the inspection results presented and did not identify any proprietary content. The inspectors returned proprietary material reviewed during the inspection to the licensee staff.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Wadley, Site Vice President
S. Myers, Design Engineering Manager,
M. Hopman, Engineering Supervisor
J. Connors, Mechanical Design Engineer
C. Sansome, Design Engineer
J. Kivi, Regulatory Compliance Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000282/2008007-01; 05000306/2008007-01	NCV	Failure to Perform a 10 CFR 50.59 Evaluation for Bulk Hydrogen Storage Facility (Section 1R17.1.b)
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Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
ENG-EE-018	Diesel Generator Sequence Loading for an SI Event Concurrent with Loss of Offsite Power (LOOP) for D1 D2 D3 D5 D6	Revision 5
ENG-EE-021	Diesel Generator Steady State Loading for an SI Event Concurrent with Loss of Offsite Power (LOOP) for D1 D2 D3 D5 D6	Revision 3
ENG-EE-045	Diesel Generator Steady State Loading for a LOOP Coincident with a SBO	Revision 4
ENG-EE-169	Charging Pump Motor & Power Cable Sizing for EC 9451	Revision 0
P003994	Charging Pump Gland Retainer Plate Assembly Brackets	Revision 0
PI-996-7-P01	#11 and 12 Accumulator Nozzle Replacement Evaluation	Revision 0
GEN-PI-076	Control Room Habitability Analyses for Offsite Hazardous Chemical Releases	December 15, 2006
2008-11973-039-1	Hydrogen Blast Analysis	August 22, 2008
PI-P602232-400	Revised Auxiliary Building HELB Analysis	Revision 1
PI-S-031	Addendum 3 Structural Evaluation of HELB Steam Exclusion Block Walls and Doors	December 27, 2004
996-22-M01	Mod 06D101-D1/D2 Diesel Generator Cold Weather Operation	Revision 1
ENG-ME-046	Motor Operated Valve Torque / Thrust Design Requirements	Revision 4

CONDITION REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 1000779	Closeout of Modification 04AF02 Appendix R Fire Wrap of Cable	October 12 2005
AR 1003117	Outside Ambient Temperature and HVAC System Capabilities	November 8 2005
AR 1012225	Thermal Fatigue Life of Charging	June 8 2006

	Nozzles Nearing End	
AR 1022720	Fire Doors Potentially Inoperable	April 6 2006
AR 1030354	Cladding Cracking in 12 Accumulator	October 20 2006
AR 1043653	Alteration to Ch Pump Components without Repair Plan	August 9 2006
AR 1053669	Anchor bolt holes for Sump B not acceptable	November 25 2006
AR 1063531	Water seeping into Sump From Sump Walls	November 23 2006
AR 1063724	Fuel Assembly Z70 Could not be Reconstituted	January 10 2007
AR 1064513	Apparent Cause Evaluation	April 30 2006
AR 1065804	Sump B Hilti Bolt Lost Anchor Ability	December 6 2006
AR 1093150	12 SI Pump Oil Pressure Below Normal Band	May 17 2007
AR 1094473	CDBI 07-Inclusion of D5/D6 Building Fans in EDG Load Calc	May 30 2007
AR 1111307	12 SI Pump Oil Pressure Approaching Minimum to Support Ops	May 17 2007
AR 1123127	Revise USAR as Req'd. Including Tables 8.4-1 8.4-2 to be Consistent with Engineering Analysis ENG-EE-021 Revision 3	January 8 2008
AR 1123200	Revise USAR as Required Including Tables 8.4-3 & 8.4-4 to be Consistent with Engineering Calc ENG-EE-045 Revision 4	January 9 2008
AR 1132047	CV-31382 has a Thru Wall Leak on the Body	March 21 2008
AR 1132205	PI Fire Protection Review of Modifications is Being Missed	March 25 2008
AR 1159257	08MOD – HKB3's not discussed in EM section 3.2.1.8	November 14 2008

CONDITION REPORTS PROMPTED BY NRC REVIEW

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 1159491	Method Change Without 50.59 Evaluation	November 17, 2008
AR 1159965	Revise ENG-EE-045 Clarify Section 5.3	November 20, 2008
AR 1159988	Frequency Effects on EDG Loading Unaccounted for in EDG LOOP/SBO Condition Loading Calc	November 20, 2008
AR 1160064	Notation on Page 12 of ENG-EE-018 for Pump Speed is Inverted for All 3 Equations	November 21, 2008
AR 1160295	Screening 2887 missed items required to be screened	November 24, 2008
AR 1160590	CST Temperature Configuration Control	November 26, 2008
AR 1160610	A typo was Identified in OPR 01159988-	November 26, 2008

	01 for the Frequency Adjusted Total of D5 on Page 3 of 5	
AR 1160903	Change label of critical characteristic for the EC12146	December 1, 2008
AR 1160910	Revise Attachment 1 from vendor for EC12146	December 1, 2008
AR 1161021	08MOD: Nonconservative flow rate used in ENG-ME-026	December 2, 2008
AR 1161330	08 MOD – EC 12146 inadequate seismic qualification	December 4, 2008
AR 1161364	08 MOD EC 12191 Blast Analysis Question	December 4, 2008
AR 1161373	08 MOD EC 12191 Adverse Affect to SR CL Piping	December 4, 2008
AR 1161382	08 MOD EC 12191 NRC Response Question 159 for CW System	December 4, 2008

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
X-HIAW-1146-11	5" D-1000-160-3 Valve	Revision 76
H1717X (XH-1-633)	SI Pump Outline	Revision E
NQ-161009-3	Unit 2 Loop A Nitrogen to Primary Side SG Tubes	Revision 76
XH-106-3620	Reactor Coolant System	Revision 76
NF-39837	Sheet 32 Chemical and Volume Control System Unit 2 ASME Code Classification	Revision G
NF-39220	Flow Diagram Condensate System	Revision BF
X-HIAW-1-44	Flow Diagram Unit 1 Safety Injection System	Revision T
NF-40022-1	Circuit Diagram 4 Kv & 480 V Safeguard Buses Unit 1	Revision 76
NE-4008	Sheet 35 Charging Pump As-built	Revision 71
NE-40406	Sheet 44 21 Fan Coil Unit Cooling Water Return Isolation Valve "A" MV-32147	Revision 76
NE-40406	Sheet 57 Cooling Water to 22 Aux. Feedwater Pump Valve MV-32030	Revision 76
NE-40406	Sheet 57 Cooling Water to 22 Aux. Feedwater Pump Valve MV-32030	Revision AJ
NF-40592-2	External Connections Motor Control Center 2A	Revision 76
NE-40004	Sheet 40 Generator Lockout Relaying	Revision AL 1-C
NX-62367-4	Internal Wiring Diagram E-H Governor Control Cabinet 1EH1	Revision 0
NX-62367-5	Internal Wiring Diagram E-H Governor Control Cabinet 1EH1	Revision 0
NX-62367-6,	Internal Wiring Diagram E-H Governor Control Cabinet 1EH1,	Revision 0

10 CFR 50.59 EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1012	Revise quality classification process to align with ANSI Standard 58.14	Revision 1
1039	Revised Auxiliary Building High Energy Line Break Analysis	May 13, 2006
1050	SBLOCA Analysis Using NOTRUMP Code	January 24, 2006
1055	Unit 2 Cycle 24 Core Reload	December 7, 2006
1058	Turbine EH Control System Upgrade Project	February 6, 2008
1056	Mode 4 LOCA TS Bases and Procedural Changes	January 31, 2007

10 CFR 50.59 SCREENINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2887	EC 11877 SP 2431 SP1431- Main Steam Safety Testing at Power	June 19, 2008
2765	ENG-ME-546 Determination of Minimum and Maximum RHR Pump Design Limits for Surveillance Flowrates	September 24, 2007
2909	Sulfur Additive for Fuel Oil	February 23, 2008
2704	Calc EC9074 to Evaluate Control Room Habitability for off-site Chemical Release	December 15, 2006
2270	TCN to C28.6 (Condensate Storage Tank Freeze Protection System)	February 10, 2006
2620	11 and 12 SI Accumulator Nozzle Replacement Modification	April 25, 2006
2945	Fermanite Repair CV-31382 T-Mod	April 3, 2008
3015	Hydrogen Tank Farm	August 11, 2008
2422	App R Hot Short Rewire Modification	July 18, 2005
2581	Revision to Tech Spec Bases B 3.7.8 and B 3.6.5, C35	September 11, 2006
2849	EC 9451 CVCS Charging Pump Drive Replacement	March 2, 2008
2891	Issue Revision 3 of ENG-EE-021 to Incorporate Addendums address proposed Charging Pump Modification	September 9, 2008
2910	Issue Rev 5 of ENG-EE-018 to Incorporate Addendums	February 7, 2008
2940	Revise SP 1378 to Test Reactor Trip Breakers Due to EH Project EC Changes	March 16, 2008
2709	Modification 06D101-EC7460 D1/D2 Cold Weather Operation	November 8, 2006
2662	MOV Target Thrust and Torque calculations	Revision 0
2614	Charging Nozzle Thermal Transient	Revision 0

	Change to SP 1173/ 2173	
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MODIFICATIONS AND CALCULATIONS (CREDITED FOR SAMPLES)

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Engineering Change 8020	D1000 Conversion for CV-31089 SG PORV	September 11, 2006
Engineering Change 11442	Reactor Coolant System Double Isolation Valve Installation	December 31, 2007
Engineering Change 7466	11 AND 12 SI Accumulator Nozzle Replacement	May 2, 2006
Engineering Change 12191	Hydrogen Storage Replacement Modification	August 18, 2008
Engineering Change 346	Turbine EH Control System Upgrade	Revision 0
Engineering Change 9451	CVCS Charging Pump Drive Replacement	Revision 0
Engineering Change 388	Appendix R Hot Short Issues	Revision 0
Engineering Change 12146	Replace SI Pump Lube Oil System Relief Valve	July 9, 2008
Engineering Change 7460	D1/D2 Cold Weather Operation	Revision 0

OPERABILITY EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
OPR 01049042-26	Changes in EDG Frequency will affect the Performance of the Components that are Powered from the EDG	May 25, 2007
OPR 01094473-01	EDG Loading Analyses of Record Neglected to Consider a Load that May be Running during Diesel Operation	June 4, 2007
OPR 01159988-01	Frequency Variations on Motor Loads were Unaccounted for on the EDGs in Calculations ENG-EE-045 Revision 4 ENG-EE-021	Revision 3

OTHER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Equivalency evaluation	Engineering Change 12146	Revision 0
Equivalency Evaluation 1630	Replacement of Beach and Bromine Pumps	June 2, 2005
Apparent Cause Evaluation No. 1	AR 1063724	September 27, 2007

Evaluation Model Using the NOTRUMP Code	Safety Injection into the Broken Loop and COSI Condensation Model	July 1997
Letter L-P- 06-006	Withdrawal of License Amendment Request to Incorporate Revisions to Small Break Loss of Coolant Accident Methodology into the Prairie Island Nuclear Generating Plant Licensing Basis	February 2, 2006
Letter L-PI-05-014	License Amendment Request to Incorporate Revisions to Small Break Loss of Coolant Accident Methodology into the Prairie Island Nuclear Generating Plant Licensing Basis	February 28, 2005
Liquid Penetrant Examination Report	BOP PT- 06- 064	May 16, 2006
Liquid Penetrant Examination Report	BOP PT- 06- 058	May 15, 2006
NRC Letter	Prairie Island Nuclear Generating Plant Unit 1 and 2 Withdrawal of an Amendment Request	February 16, 2006
Technical Manual XH 577 33	Foxboro Model 43a Pneumatic Controller	June 1965
TCN 12A	Condensate Storage Tank Freeze Protection System	February 10, 2008
Weld Map	99801 05 4	May 3, 2006
Westinghouse Letter NSP 05 5	Response to NMC Questions Regarding SI Configuration	January 10, 2005
Weld Control Record	304390 03 01	February 16, 2008
Work Order 00055697	EC 346 Pre OP Test	March 21, 2008
Work Order 00055697 02	EH System Startup Testing Control System Power Checks for EH Modification	March 18, 2008
Work Order 00055697 03	EH System Start-up Testing Channel Check Alarm Checklists	March 20, 2008
Work Order 00055703	Startup Testing on EHC System ECT Function Checks	March 18, 2008
Work Order 00055698	Startup Testing on EHC System Power Ascension Testing	July 18, 2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1C20.7	D1/D2 Diesel Generators	Revision 25
TP 1459	OPC/ET Trip Block Test	Revision 0
SP 1378	Test of reactor Trip and Bypass Breakers Auxiliary Contacts	Revision 6
SP 1371	Cold Shutdown Test of RHR Pumps and Check Valves	March 3
SP 1431	Main Steam Safety Valve Test (Power Operation)	Revision 0

SP 1431	Main Steam Safety Valve Test (Power Operation)	Revision 0.
SP 2371	Cold Shutdown Test of RHR Pumps and Check Valves	October 17, 2008.
SP-2046	Multiple Rod Drop Test	December 13, 2006
SP1596	Outage Maintenance Testing Table 1	June 1, 2006
C28.6	Condensate Storage Tank Freeze Protection System	Revision 13
H1	Quality List Classification Criteria	Revision 13
SP 1173	Stress Cycle Record	Revision 28
5AWI 6.2.0	Equivalent Engineering Change and Minor Modification Evaluation	Revision 12
D56.3	Kwik Bolt 3 Concrete Expansion Anchor Installation	Revision 2
EM 3.2.1.8	Specification for Concrete Expansion Anchors	Revision 2

LIST OF ACRONYMS USED

AR	Assignment Report
CW	Circulating Water
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
EC	Engineering Change
IMC	Inspection Manual Chapter
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
SDP	Significance Determination Process
UFSAR	Updated Final Safety Analysis Report