May 4, 1999

Mr. M. Wadley
President, Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: PRAIRIE ISLAND INSPECTION REPORT 50-282/99002(DRP);
50-306/99002(DRP)

Dear Mr. Wadley:

On April 6, 1999, the NRC completed an inspection at your Prairie Island Nuclear Generating Plant. The enclosed report presents the results of that inspection.

No violations of NRC requirements were noted in the areas reviewed. The inspection period was characterized by generally good operations, conservative decision-making, and safe maintenance and surveillance testing activities which demonstrated good interdepartmental coordination and communication. During this 6-week inspection period, spent fuel Casks 08 and 09 were successfully loaded and Cask 08 was transported and placed in the Independent Spent Fuel Storage Installation.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

Original signed by

Roger Lanksbury, Chief
Reactor Projects Branch 5

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

Enclosure: Inspection Report 50-282/99002(DRP);
50-306/90002(DRP)

cc w/encl: Site General Manager, Prairie Island
Plant Manager, Prairie Island
Steve Minn, Commissioner, Minnesota
Department of Public Service
State Liaison Officer, State of Minnesota
State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community

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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:	50-282/99002(DRP); 50-306/99002(DRP)
Licensee:	Northern States Power Company
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Drive East Welch, MN 55089
Dates:	February 26 through April 6, 1999
Inspectors:	S. Ray, Senior Resident Inspector P. Krohn, Resident Inspector S.Thomas, Resident Inspector D. Wrona, Resident Inspector, Monticello
Approved by:	Roger Lanksbury, Chief Reactor Projects Branch 5 Division of Reactor Projects

EXECUTIVE SUMMARY

Prairie Island Nuclear Generating Plant, Units 1 & 2
NRC Inspection Report 50-282/99002(DRP); 50-306/99002(DRP)

This inspection was performed by the resident inspectors and included aspects of licensee operations, maintenance, engineering, and plant support.

Operations

- Normal operations of the plant were adequately conducted. The inspectors observed proper control room manning, close attention to control panels, generally good use of formal communication techniques, proper use and adherence to procedures, and detailed interactive shift briefings. No significant problems were observed. Spent fuel moves were conducted by operators in a controlled and deliberate manner. (Section O1.1)

- The licensee had an adequate program to ensure the timely implementation of flood protection measures designed to protect plant safety-related equipment. (Section O2.2)

Maintenance

- All observed surveillance testing and preventive maintenance activities were successfully completed in a careful manner and in accordance with approved procedures. (Section M1.1).

- Excellent on-the-job training by the nuclear engineer and proper supervisory oversight by the senior reactor operator led to the successful unloading and storage of 12 new fuel assemblies. (Section M1.2)

- A weakness was noted in that a copy of Maintenance Procedure D9, “Nuclear Fuel Technical Evaluation,” was not available at the work site during the unloading of the fuel shipping containers from the flatbed truck. (Section M1.2)

- The material condition of the spent fuel cooling system was good and the system was being properly operated in accordance with established procedures. (Section M2.1)

Engineering

- The inspectors noted good system engineering involvement in several operations and maintenance activities during this inspection period. Those activities included spent fuel cask loading activities, receipt and inspections of new fuel assemblies, and surveillance testing of cooling water pumps and emergency diesel generators. (Section E2.1)

- System engineers provided good support to maintenance during the placement of Cask 08 in the spent fuel pool and provided good support to operations while spent fuel assemblies were being placed in Casks 08 and 09. Spent fuel moves were conducted in a controlled and deliberate manner. No discrepancies were identified during the Cask 08 and 09 move and loading evolutions. (Section E2.2)

Plant Support

- During loading and handling of the dry spent fuel casks, radiation protection specialists adequately performed gamma and neutron radiation surveys, ensured personnel working in the vicinity of the casks wore the proper dosimetry, and established appropriate boundaries after the casks had been moved. (Section R1)

- Good implementation of security procedures was evident during the movement of the 08 spent fuel cask to the Independent Spent Fuel Storage Installation. (Section S1)

Report Details

Summary of Plant Status

Unit 1 operated continuously at or near full power for the entire inspection period. Unit 2 operated at or near full power except for a brief power reduction to about 40 percent for turbine valve testing on March 13-14, 1999.

I. Operations

O1 Conduct of Operations

O1.1 General Comments

a. Inspection Scope 71707)

The inspectors conducted frequent reviews of plant operations. These reviews included observations of control room evolutions, shift turnovers, operability decisions, and logkeeping. Updated Safety Analysis Report (USAR) Section 13, "Plant Operations," was reviewed as part of the inspection. In addition, the inspectors reviewed operator performance of spent fuel storage activities.

b. Observations and Findings

The inspectors observed proper control room manning, close attention to control panels, generally good use of formal communication techniques, proper use and adherence to procedures, and detailed interactive shift briefings. No significant problems with normal plant operations were noted.

Spent fuel moves were conducted by operators in a controlled and deliberate manner. Further discussion of spent fuel storage activities is contained in Section E2.2.

c. Conclusions

Normal operations of the plant were adequately conducted. The inspectors observed proper control room manning, close attention to control panels, generally good use of formal communication techniques, proper use and adherence to procedures, and detailed interactive shift briefings. No significant problems were observed. Spent fuel moves were conducted by operators in a controlled and deliberate manner.

O2 Operational Status of Facilities and Equipment

O2.2 Flood Preparation and Flood Control Panel Inspection

a. Inspection Scope (71707)

The inspectors reviewed Surveillance Test Procedure (SP) 1293, “Flood Preparation - Flood Control Panel Inspection/Installation,” Revision 6, Abnormal Operating Procedure AB-4, “Flood,” Revision 13, and Technical Specifications 5.1 and 6.5.A.6, to ensure that the licensee maintained the ability to implement action, during an external flood threat.

These actions would include an orderly shut down of the plant and the protection of safety-related equipment.

The inspectors conducted this inspection based on the risk significance of external flooding. Although the licensee concluded that external flooding did not impact the safe operation of the plant, according to the Individual Plant Examination of External Events (IPEEE) NSPPLMI-98001, Revision 0, that conclusion was based on the assumption that the flood preparation actions as presented in SP 1293 and AB-4 could be completed in a timely manner. The focus of the inspection was to determine whether those actions could be readily completed.

b. Observations and Findings

The inspectors performed a walkdown inspection of all the flood panels installed for protection of doors into important equipment areas using SP 1293 as a reference. Specific attention was paid to the condition of the flood panels, gaskets, interferences for panel installation, and for the presence of necessary lifting equipment (such as pad eyes, forklifts, and cranes) for panel installation.

The inspectors questioned how five of the flood panels would be moved from their storage locations to the assigned door openings. Questions about two of the panels were addressed by a maintenance supervisor who explained how the panels would be rigged into place. The inspectors noticed that the remaining three flood panels: MK-7 [Door No. 1- Administration Building to Turbine Main Entry], MK-15 [Door No. 257- Screenhouse Safeguards Traveling Screen Room to 22 Diesel Cooling Water Pump Room], and MK-16 [Door No. 258- Screenhouse Safeguard Traveling Screen Room to 12 Diesel Cooling Water Pump Room], could not be positioned correctly without the installation of additional lifting equipment. After discussions with the engineers responsible for the flood panels, the inspectors learned that the need for additional lifting equipment for these doors, as well as for the east turbine building roll-up door, had been identified during the previous performance of SP 1293. Work Orders 9903849 through 9903851 had been generated to install the lifting rails and/or lifting devices for each of the doors in question.

The inspectors examined each of the 17 flood panel storage and installation locations and observed portions of the annual performance of inspections in accordance with SP 1293. No operational issues or material deficiencies were seen. The inspectors noted that the one of the functions of SP 1293 was to document any changes at each flood panel location that would hinder placement of the flood panels. During the performance of SP 1293, the inspectors observed that the maintenance personnel performing the surveillance test documented anything found that could have prevented the successful implementation of the surveillance test.

c. Conclusions

The licensee had an adequate program to ensure the timely implementation of flood protection measures designed to protect plant safety-related equipment.

O8 Miscellaneous Operations Issues (92700)

O8.1 Licensee Organizational Changes

The licensee announced four organizational changes effective March 1, 1999.

- Mr. Joel Sorensen, formerly the plant manager, was selected for the new position of site general manager. The site general manager had the overall responsibility for ensuring compliance with regulatory requirements and the optimization of both human and nuclear assets. Specific duties included site finance, training, administration and oversight organizations, community relations, security, information systems, and corporate issues.

- Mr. Don Schuelke, formerly the general superintendent of radiation protection and chemistry, was selected for the position of plant manager. With the initiation of the site general manager position, the plant manager position would strictly focus on the areas of operations, maintenance, engineering, and radiation protection and chemistry, to ensure safe plant operation.

- Mr. Al Johnson was selected for the position of general superintendent of radiation protection and chemistry.

- The two plant staff general superintendent of engineering positions for systems engineering, one for mechanical systems and the other for electrical and instrumentation and controls systems, were consolidated into one position under Mr. Ted Amundson. Mr. Amundson was formerly the general superintendent for mechanical systems engineering. In addition, the process computer systems group, formerly under the general superintendent of radiation protection and chemistry, was reorganized to report to the general superintendent of engineering. The USAR review and Improved Technical Specifications projects were moved from system engineering to under the general superintendent of engineering for nuclear generation services.

08.2 Plant Selected as Pilot Plant for New Inspection, Assessment, and Enforcement Process

On February 22, 1999, the NRC announced that the Prairie Island Nuclear Generating Plant was selected as one of nine sites to participate in a new inspection, assessment, and enforcement process during a six-month pilot program beginning June 1, 1999. Additional information was available in NRC Announcement No. 99-31 which was publically available on the Internet under http:\\www.nrc.gov.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments

a. Inspection Scope (61726, 62707, and 92902)

The inspectors observed all or portions of the following maintenance and surveillance test activities. Included in the inspection was a review of the surveillance test procedures (SPs), preventive maintenance procedures (PMs), and work orders (WOs) listed, as well as the appropriate USAR sections regarding the activities. The inspectors verified that the SPs for the activities observed met the requirements of the Technical Specifications. The following activities and procedures were reviewed by the inspectors:

- PM 3002-2-12, "12 Diesel Cooling Water Pump Annual Inspection," Revision 16;
- SP 1106A, "12 Diesel Cooling Water Pump Test," Revision 54;
- SP 1334, "D1 Diesel Generator 24 Hour Load Test," Revision 5;
- SP 1093, "D1 Diesel Generator Slow Start Test," Revision 67;
- SP 1335, "D2 Diesel Generator 24 Hour Load Test," Revision 5;
- SP 1305, "D2 Diesel Generator Slow Start Test," Revision 17;
- SP 2093, "D5 Diesel Generator Slow Start Test," Revision 64;
- SP 2780, "AMSAC [Anticipated Transient Without Scram Mitigation System Actuation Circuit] Quarterly Functional Test," Revision 5;
- Instrument and Control Preventive Maintenance Procedure ICPM 1-460, "Unit 1 RCS [Reactor Coolant System] Ultrasonic Level Instrumentation Per-Outage Check," Revision 4;
- WO 9901268, "Measure Flow Through the Emergency Intake Line";
- WO 9904539, "Remove Blank Flange From CD-34166 and CD-34147";
- Maintenance Procedure D95.1, "TN-40 Cask Loading Procedure," Revision 7;
- Maintenance Procedure D95.3, "TN-40 Cask Removal and Storage Procedure," Revision 4; and
- Maintenance Procedure D95.4, "TN-40 Cask Receipt Procedure," Revision 5.

b. Observations and Findings

- The inspectors monitored portions of the number 12 diesel-driven cooling water pump annual inspection. The inspectors noted that the system engineer

responsible for the pump was actively involved with performance of the maintenance on the pump and was usually present at the job site when the inspectors monitored the status of the work on the pump. The inspectors noted that the maintenance personnel performing the inspection in accordance with PM 3002-2-12 were competent and successfully completed the preventive maintenance procedure within the scheduled time period.

- The inspectors observed the performance of testing in accordance with SP 1106A, "12 Diesel Cooling Water Pump Test." During the surveillance test, the pump was observed to start smoothly within the required time period and to operate successfully for over an hour. At the end of the hour-run period, the pump performance data that was obtained was within the desired operating band on the number 12 diesel-driven cooing pump performance curve.

- The D1 and D2 emergency diesel generator slow start and 24-hour load tests were performed on successive days, and the inspectors were able to observe the starting, loading, and securing of each diesel generator, with periodic monitoring of each during the respective 24-hour load runs. Prior to the starting of each generator, a comprehensive pre-job briefing was held in the control room. Throughout the performance of the surveillance tests, the inspectors observed good monitoring of operating parameters, both locally in the diesel rooms and at the diesel generator control panels in the control room. Both the D1 and D2 diesels met the acceptance criteria of their respective slow start and 24-hour load test surveillance test procedures.

  Following the completion of the D2 slow start and 24-hour load test, the system engineer identified that CV-31506 (D-2 diesel generator cooling water supply valve) did not fully close. Through discussions with the system engineer, the inspectors learned that this valve had leaked by for a short period of time before the D2 testing, but had stopped leaking prior to any corrective actions being performed. To address the most recent valve leak by, the system engineer planned for a short D2 outage to troubleshoot, identify, and repair the cause of the leak by. The system engineer also informed the inspectors that D2 lube oil temperatures would continue to be monitored to ensure that they were not adversely affected by the cooling water supply valve leaking by.

- During the performance of D5 emergency diesel generator testing in accordance with SP 2093, the inspectors noted that the control room operator was particularly diligent in using self-checking techniques while manipulating the controls for the system. He would read the procedure step, point to the appropriate control switch and read its label, hold his finger on the switch while rereading the procedure step, perform the step, and then verify that the proper response was obtained.

- The inspectors observed the first performance of testing in accordance with SP 2780, "AMSAC Quarterly Functional Test." The activities in this procedure tested the functionality of the recently installed AMSAC/DSS [diverse scram system] circuitry with the unit at power. Since it was the initial performance of the surveillance test, the procedure writer was present during the performance of the SP. Throughout the performance of the testing, the inspectors noted that the

procedure writer continually looked for changes that could be made to improve the procedure. The procedure was completed successfully.

- The measurement of emergency intake line capacity under WO 9901268 was similar to a measurement completed on November 15, 1995, as discussed in Inspection Report 50-282/95014; 50-306/95014, Section 3.14. The licensee wanted to determine whether the flow capacity had increased as a result of cleaning the emergency intake line and improvements to the periodic flushing procedure. The results demonstrated that the flow had increased somewhat but was still less than the original design. The licensee had previously amended its Technical Specifications and operating procedures, as discussed in Inspection Report 50-282/99001(DRP); 50-306/99001(DRP), Section E8.1, to compensate for the fact that original design flow could not be obtained.

- The inspectors reviewed the removal of a blank flange associated with steam exclusion dampers CD-34146 and CD-34147. The flange was removed in accordance with WO 99074539. The flange was installed inside the 122 control room chiller room and isolated the control room special ventilation envelope from the auxiliary building. The inspectors confirmed that the control room special ventilation envelope was not compromised as a result of the blank flange removal. The inspectors also verified that the work order contained proper instructions to ensure that when maintenance workers removed one of the two blank flanges that the control room ventilation envelope remained intact.

- The inspectors observed pre-outage instrumentation checks associated with the Unit 1 RCS hot leg ultrasonic water level indications in accordance with ICPM 1-460. The ultrasonic water level indications were used during reduced reactor vessel inventory operations when installing and removing steam generator nozzle dams. The inspectors verified that the ultrasonic instrument range and time delay settings were appropriate for monitoring the air/water interface during loop drain down. The inspectors observed the drain down test of ICPM 1-460, Step 7.13.7, and noted that the ultrasonic transducer and associated oscilloscope were capable of continuously monitoring loop water level down to 24 percent of full loop height. The couplant used to transmit sound between the ultrasonic transducer and the metal of the hot leg was examined and found to have a temperature range of 40 degrees Fahrenheit (°F) to 400°F. Given that the expected metal hot leg temperatures during reduced inventory operations was approximately 110°F, the choice of couplant was appropriate to ensure the continuity of sound transmission during reduced inventory operations.

c. Conclusions

All observed surveillance testing and preventive maintenance activities were successfully completed in a careful manner and in accordance with approved procedures.

M1.2 New Nuclear Fuel Receipt and Evaluation

a. Inspection Scope (62707)

The inspectors observed portions of each aspect of the fuel evaluations conducted in accordance with Maintenance Procedure D9, "Nuclear Fuel Technical Evaluation." This procedure provided instruction for the receiving, unloading, evaluation, and storage of new nuclear fuel. The inspectors reviewed the performance of this evaluation, which required several days to complete, for the first twelve fuel assemblies received for the Unit 1 outage scheduled for spring 1999. The following procedures and documents were reviewed by the inspectors as part of this inspection:

- Maintenance Procedure D9, "Nuclear Fuel Technical Evaluation," Revision 28;
- SP 1051A, "Fuel Handling System Checkout For Fuel Receipt," Revision 17;
- Maintenance Procedure D58.5.1, "Load Handling Using Auxiliary Building Crane in Non-Proof Mode," Revision 0; and
- WO 9901816, "Rigging Support For New Fuel Receipt."

b. Observations and Findings

The inspectors viewed the unloading of the fuel shipping containers from the flatbed truck and their placement in the fuel receipt area. The coordination of the riggers and crane operators was adequate, and the fuel shipping container offload was performed in accordance with the appropriate procedures. The inspectors also reviewed the copy of WO 9901816 that was at the work site. The WO contained abbreviated special lifting instructions and Maintenance Procedure D58.5.1 as an attachment. Although WO 9901816 referenced Maintenance Procedure D9, which provided more detailed instruction on rigging and lifting new fuel shipping containers, the inspectors noted that there was no copy of Maintenance Procedure D9 at the work site.

The licensee recently instituted procedure level-of-use expectations which required that procedures be stamped with directions regarding their expected use. Maintenance Procedure D9 was stamped as "reference use" which meant that procedure segments could be performed from memory, but that the procedure should be available at the work site. Failure to have the procedure at the work location was considered a weakness but, since all steps of the procedure were completed correctly, it was not considered a violation of NRC requirements. The nuclear engineer informed the inspectors that to prevent future problems with the use of D9 during this maintenance activity, D9 would only be used as a developmental procedure in the preparation of the work order, and that all the information in D9 pertaining to lifting the fuel shipping cask would be included in the applicable work order.

The significant contribution of the nuclear engineers to the safe handling of fuel assemblies continued to be demonstrated during the unloading of the new fuel assemblies from their shipping containers and their transfer to the new fuel storage area. During the unloading of the first few assemblies, the inspectors observed that, since the personnel that were performing the unloading were fairly inexperienced operators, the nuclear engineer overseeing the evolution frequently provided instruction

and training to ensure that all the operators knew exactly what was expected during each step of the procedure. This on-the-job training continued during the fuel examination phase of the task. The inspectors frequently observed the nuclear engineer overseeing the evolution and questioning a less experienced engineer, who was assisting, about various aspects of the examination process.

The inspectors observed the performance of the senior reactor operator who directed the new fuel handling operation. In Inspection Report 50-282/98018(DRP); 50-306/98018(DRP), Section O1.1b, the inspectors documented a situation where a senior reactor operator, who was tasked with directing new fuel handling operations, performed work tasks associated with reassembling an unloaded shipping container. A similar loss of supervisory oversight was not observed during these operations. The senior reactor operator provided adequate supervisory oversight throughout the performance of the new fuel handling evolution.

c. Conclusions

Excellent on-the-job training by the nuclear engineer and proper supervisory oversight by the senior reactor operator led to the successful unloading and storage of twelve new fuel assemblies. One weakness noted was that a copy of Maintenance Procedure D9, "Nuclear Fuel Technical Evaluation," was not available at the work site during the unloading of the fuel shipping containers from the flatbed truck.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Safety System Walkdown of Spent Fuel Cooling System

a. Inspection Scope (71707)

The inspectors performed a walkdown of the spent fuel cooling system focusing on the material condition of system components. The inspectors also examined whether system status was consistent with present plant operating conditions and whether system design was consistent with the system requirements outlined in USAR Section 10.2.2, "Spent Fuel Cooling System."

b. Observations and Findings

The inspectors examined the accessible piping and components associated with the spent fuel cooling system. They noted that the material condition of these components was good, and the system was configured to support cooling of the spent fuel pool in accordance with approved operating procedures. The inspectors also noted that the system was operating and that observed system parameters, such as spent fuel pool level, temperature, and spent fuel cooling pump discharge pressure, were being maintained within their normal band. After a review of Section 10.2.2 of the USAR, the inspectors determined that the installed spent fuel cooling system was consistent with the system description.

c. Conclusions

The material condition of the spent fuel cooling system was good and the system was being properly operated in accordance with established procedures.

III. Engineering

E2 Engineering Support of Facilities and Equipment (37551)

E2.1 System Engineering Support of Operations and Maintenance Activities

The inspectors noted good system engineering involvement in several operations and maintenance activities during this inspection period. Those activities included spent fuel cask loading activities, receipt and inspections of new fuel assemblies, and surveillance testing of cooling water pumps and emergency diesel generators. Additional details of the inspectors' observations are contained in Sections M1.1, M1.2, and E2.2 of this report.

E2.2 Spent Fuel Cask Loading

a. Inspection Scope (71707)

The inspectors observed activities associated with two TN-40 spent fuel storage casks (Casks 08 and 09) during the inspection period. For Cask 08, the inspectors attended the pre-evolution briefing associated with placing the cask into the spent fuel pool, observed portions of preparations for cask loading, and observed portions of loading spent fuel assemblies into the cask. For Cask 09, the inspectors observed portions of the preparations for cask loading, observed portions of loading of spent fuel assemblies into the cask, and observed movement of the loaded cask from the spent fuel pool to the decontamination cell. Included as part of this inspection was a review of the following documents:

- Maintenance Procedure D95.1, "TN-40 Cask Loading Procedure," Revision 7;
- Maintenance Procedure D95.3, "TN-40 Cask Removal and Storage Procedure," Revision 4;
- Maintenance Procedure D5.1, "Spent Fuel Pit Fuel Handling Operations," Revision 18;
- Work Order (WO) 9902032, "Auxiliary Building Crane and Lift Beam Inspection";
- Surveillance Test Procedure (SP) 1402, "Auxiliary Building Crane and Lift Beam Inspection," Revision 2;
- WO 9901445, "Load TN-40 Cask 08 per D95.1";
- WO 9904547, "Load TN-40 Cask 09 per D95.1"; and
- Operating Procedure C17, "Fuel Handling System," Revision 26.

b. Observations and Findings

The system engineer conducted a detailed pre-evolution briefing for personnel who would participate in placing spent fuel storage Cask 08 into the spent fuel pool.

Included as a part of the briefing was a discussion of the precautions contained in Maintenance Procedure D95.1, an outline of the steps used to move the cask into the spent fuel pool, and a discussion of past problems associated with this evolution. A video tape of previous cask moves was used as a tool to familiarize personnel with the evolution.

Procedures in use by the licensee were approved by appropriate personnel and were in active use at the job site for Casks 08 and 09. Mechanical maintenance personnel were assigned to ensure the cask move followed the established heavy load path. No discrepancies were identified associated with placing Cask 08 in the spent fuel pool and with moving loaded Cask 09 from the pool to the decontamination cell.

A senior reactor operator, a reactor operator, a radiation protection technician, and the system engineer were present during spent fuel assembly movements into the cask. The senior reactor operator provided adequate oversight of the operation. Three-part communication was generally used. Spent fuel moves were conducted in a controlled and deliberate manner. The system engineer used the underwater camera to aid the operators in determining when fuel assemblies were properly placed in the cask. No discrepancies were identified during the cask loading.

Regional inspectors also observed the loading and sealing of Cask 08. A detailed report of those observations can be found in Inspection Report 72-10/99001(DNMS).

c. Conclusions

System engineers provided good support to maintenance during the placement of Cask 08 in the spent fuel pool and provided good support to operations while spent fuel assemblies were being placed in Casks 08 and 09. Spent fuel moves were conducted in a controlled and deliberate manner. No discrepancies were identified during the Cask 08 and 09 move and loading evolutions.

E8 Miscellaneous Engineering Issues (92700, 92903)

E8.1 The Licensee Event Reports (LERs) listed below all involved issues that were not considered violations of NRC requirements, were minor violations not subject to enforcement action, or were violations of low safety significance that were treated as Non-Cited Violations (NCVs).

For each LER, the inspectors verified that the uncompleted corrective actions discussed in the reports were in the licensee's corrective action program. The associated licensee commitment tracking numbers are listed. The LERs were closed based on recent changes to NRC policy that allows minor issues to be closed when entered in the licensee's corrective action system. The policy relies on periodic inspections of the licensee's corrective action program to verify that actions are completed in a time period commensurate with safety.

The licensee's records indicated that many of the commitments had been completed, but the inspectors did not verify completion as part of this inspection.

- (Closed) LER 50-282/97006; 50-306/97006 (1-97-06): Discovery of Logic Error in Control Room Ventilation System. (Commitment 19970370)

- (Closed) LER 50-282/98001; 50-306/98001 (1-98-01), Supplement 1: Leakage Through Redundant Control Room Steam Exclusion Dampers Found to Exceed Value Assumed in the HELB [High Energy Line Break] Analysis. (Commitments 19980242 through 19980244)

- (Closed) LER 50-306/98004 (2-98-04): Shield Building Integrity. (No commitments required)

- (Closed) LER 50-282/98005; 50-306/98005 (1-98-05), Supplement 0: Inoperability of Actuation Logic for Main Steam Isolation Valves in Certain Flooding Conditions for a Feedwater Line Break. (Commitments 19980880 and 19980881) This issue was considered NCV 50-282/98023-03(DRP). Supplement 1 of this LER was closed in Inspection Report 50-282/98023(DRP); 50-306/98023(DRP).

- (Closed) LER 50-282/98006; 50-306/98006 (1-98-06): Control Room Vent Outside Air Equipment Qualification. (Commitments 19980833 through 19980835)

- (Closed) LER 50-306/99001 (2-99-01): Technical Specification-Required Reactor Protection Logic Test Missed due to Personnel Error. (Commitment 19983344) This issue was considered NCV 50-396/99001-01(DRP).

- (Closed) LER 50-282/99002 (1-99-02): While at Hot Shutdown an RCP [Reactor Coolant Pump] was Tripped During Surveillance Testing of RCP Breakers, Resulting in no RCPs Running and an Auto-Start of an Auxiliary Feedwater Pump. (Commitments 19990366 and 19990368) This event was considered NCV 50-282/98023-02.

E8.2 The Severity Level IV violations listed below were issued in Notices of Violation prior to the March 11, 1999, implementation of the NRC's new policy for treatment of Severity Level IV violations (Appendix C of the Enforcement Policy). Because these violations would have been treated as Non-Cited Violations in accordance with Appendix C, they are being closed out in this report.

For each violation, the inspectors verified that the corrective actions listed in the associated licensee response letter to the Notice of Violation were in the licensee corrective action system. The associated licensee commitment tracking numbers are listed with each violation.

The licensee's records indicated that many of the commitments had been completed, but the inspectors did not verify completion as part of this inspection.

- (Closed) Violation 50-282/96006-05(DRS); 50-306/96006-05(DRS): Inadequate Main Steam Line Break Analysis. (Commitments 19960215 through 19960217)

- (Closed) Violation 50-282/97008-08(DRS); 50-306/97008-08(DRS): Inadequate Verifications of Calculations. (Commitments 19970401 through 19970403)

- (Closed) Violation 50-282/97012-02(DRS); 50-306/97012-02(DRS): Failure to Submit Updated Fire Hazards Analysis in the Updated Final Safety Analysis Report. (Commitment 19981078)

- (Closed Violation 50-282/97012-05(DRS); 50-306/97012-05(DRS): Failure to Maintain Records of Fire Detection Surveillances as Quality Records. (Commitments 19981080 and 19981081)

E8.3 (Open) LER 50-282/99003; 50-306/99003 (1-99-03): Design Basis Issues Discovered with High Energy Line Break Analysis Room Over-Pressurization.

This issue involved the licensee's discovery, while revising the HELB analysis, that three sets of double airlock doors in the auxiliary building were configured in such a way that they may not have opened to relieve pressure as assumed in the analysis. The LER was assigned to the Mechanical Engineering Branch in the NRC Region III, Division of Reactor Safety for followup.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls (71750, 92904)

During the licensee's loading and handling of dry spent fuel Casks 08 and 09, the inspectors noted that the radiation protection specialists adequately performed gamma and neutron radiation surveys, ensured personnel working in the vicinity of the casks wore the proper dosimetry, and established appropriate boundaries after the casks had been moved.

S1 Conduct of Security and Safeguards Activities (71750, 92904)

Each week during routine activities or tours, the inspectors monitored the licensee's security program to ensure that observed actions were consistent with the approved security plan. The inspectors noted that persons within the protected area displayed proper photo-identification badges and those individuals requiring escorts were properly escorted. The inspectors also verified that checked vital areas were locked and alarmed. Additionally, the inspectors also verified that observed personnel and packages entering the protected area were searched by appropriate equipment or by hand. Good implementation of security procedures was evident during the movement of the 08 spent fuel cask to the Independent Spent Fuel Storage Installation.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of the licensee management at the conclusion of the inspection on April 6, 1999. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Amundson, General Superintendent Engineering
J. Goldsmith, General Superintendent Engineering, Nuclear Generation Services
J. Hill, Nuclear Performance Assessment Manager
A. Johnson, General Superintendent Radiation Protection and Chemistry
G. Lenertz, General Superintendent Plant Maintenance
J. Maki, Outage Manager
D. Schuelke, Plant Manager
T. Silverberg, General Superintendent Plant Operations
M. Sleigh, Superintendent Security
J. Sorensen, Site General Manager

INSPECTION PROCEDURES USED

IP 37551:	Engineering
IP 61726:	Surveillance Observations
IP 62707:	Maintenance Observations
IP 71707:	Plant Operations
IP 71750:	Plant Support Activities
IP 92700:	Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901:	Follow up - Operations
IP 92902:	Follow up - Maintenance
IP 92903:	Follow up - Engineering
IP 92904:	Follow up - Plant Support

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-282/99003; 50-306/99003 (1-99-03)	LER	Design Basis Issues Discovered with High Energy Line Break Analysis Room Over-Pressurization

Closed

50-282/96006-05(DRS); 50-306/96006-05(DRS)	VIO	Inadequate Main Steam Line Break Analysis
50-282/97008-08(DRS); 50-306/97008-08(DRS)	VIO	Inadequate Verifications of Calculations
50-282/97012-02(DRS); 50-306/97012-02(DRS)	VIO	Failure to Submit Updated Fire Hazards Analysis in the Updated Safety Analysis Report
50-282/97012-05(DRS); 50-306/97012-05(DRS)	VIO	Failure to Maintain Records of Fire Detection Surveillances as Quality Records
50-282/97006; 50-306/97006 (1-97-06)	LER	Discovery of Logic Error in Control Room Ventilation System
50-282/98001; 50-306/98001 Supplement 1 (1-98-01-01)	LER	Leakage Through Redundant Control Room Steam Exclusion Dampers Found to Exceed Value Assumed in the HELB Analysis
50-306/98004 (2-98-04)	LER	Shield Building Integrity
50-282/98005; 50-306/98005 Supplement 0 (1-98-05-00)	LER	Inoperability of Actuation Logic for Main Steam Isolation Valves in Certain Flooding Conditions for a Feedwater Line Break
50-282/98006; 50-306/98006 (1-98-06)	LER	Control Room Vent Outside Air Equipment Qualification
50-306/99001 (2-99-01)	LER	Technical Specification-Required Reactor Protection Logic Test Missed due to Personnel Error
50-282/99002 (1-99-02)	LER	While at Hot Shutdown an RCP was Tripped During Surveillance Testing of RCP Breakers, Resulting in no RCPs Running and an Auto-Start of an Auxiliary Feedwater Pump

Discussed

None.

LIST OF ACRONYMS USED

AMSAC	Anticipated Transient Without Scram Mitigation System Actuation Circuit
CFR	Code of Federal Regulations
°F	Degrees Fahrenheit
DNMS	Division of Nuclear Materials Safety
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
DSS	Diverse Scram System
HELB	High Energy Line Break
ICPM	Instrument and Control Preventive Maintenance Procedure
IP	Inspection Procedure
IPEEE	Individual Plant Examination of External Events
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PDR	Public Document Room
PM	Preventive Maintenance Procedure
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
SP	Surveillance Test Procedure
USAR	Updated Safety Analysis Report
VIO	Violation
WO	Work Order