December 12, 2000

Mr. J. Sorensen
Site General Manager
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT - NRC INSPECTION REPORT 50-282/00-16(DRP); 50-306/00-16(DRP)

Dear Mr. Sorensen:

On November 16, 2000, the NRC completed an inspection at your Prairie Island Nuclear Generating Plant. The enclosed report documents the inspection findings which were discussed on November 16, 2000, with Mr. D. Schuelke and other members of your staff.

This inspection 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.

The inspectors identified one issue of very low safety significance (Green). The issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny the Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; The Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Prairie Island facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's*

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Sincerely,

/RA/

Roger Lanksbury, Chief
Reactor Projects Branch 5

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

Enclosure: Inspection Report 50-282/00-16(DRP),
50-306/00-16(DRP)

cc w/encl: Plant Manager, Prairie Island
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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:	50-282/00-16(DRP); 50-306/00-16(DRP)
Licensee:	Nuclear Management Company, LLC
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Drive East Welch, MN 55089
Dates:	October 1 - November 16, 2000
Inspectors:	S. Ray, Senior Resident Inspector S. Thomas, Resident Inspector G. Pirtle, Physical Security Inspector
Approved by:	Roger Lanksbury, Chief Reactor Projects Branch 5 Division of Reactor Projects

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 05000282-00-16; 05000306-00-16, on 10/01 - 11/16/2000; Nuclear Management Company, Prairie Island Nuclear Generating Plant, Units 1 & 2: Temporary modifications.

The inspection was conducted by resident inspectors and a regional physical security specialist. The inspection identified one Green finding which was a Non-Cited violation. The significance of the finding is indicated by its color (GREEN, WHITE, YELLOW, RED) using IMC 0609, "Significance Determination Process" (SDP).

Inspector-Identified Findings

Cornerstone: Mitigating Systems

- GREEN. The inspectors identified a Non-Cited Violation of Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, for the improper implementation of the temporary change procedure. This improper implementation resulted in the deletion from an operating procedure of instructions on how to restore the operability of the 121-cooling water pump by providing a safety-related backup source of cooling water to pump bearings should normal cooling water be lost.

  The finding was of very low safety significance because it only affected one train of the redundant cooling water system and the condition only existed for a short period of time. (Section 1R23.1)

Report Details

Summary of Plant Status: Unit 1 and Unit 2 operated at or near full power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

.1 Partial Walkdowns

a. Inspection Scope

The inspectors performed partial walkdowns of systems to verify that critical portions of the redundant system or train, or other significant protected equipment, was in the correct lineup during the time when the one system or train was out-of-service.

The inspectors walked down the 121 and 12 cooling water pumps when the 22-cooling water pump was out-of-service for preventive maintenance. Included as part of this inspection was the review of the following documents:

- Integrated Checklist C1.1.35-3, "Cooling Water System," Revision 16;
- Integrated Checklist C1.1.38, "Common Fuel System Status," Revision 12;
- Operating Procedure C35, "Cooling Water System," Revision 36; and
- Operating Procedure 2C20.5, "Unit 2 - 4.16 KV [Kilovolt] System," Revision 14.

The inspectors reviewed the status and alignment of equipment identified by the licensee as protected while Notice of Enforcement Discretion 00-3-01 (see Section 1R23.1 for more details) was in effect. This equipment included electrical buses 111 and 211, valve MV-32062 [21-refueling water storage tank (RWST) to charging], valve MV-32060 [11-RWST to charging], and 2LT112 [level transmitter for Unit 2 volume control tank]. Included as part of this inspection was the review of the following documents:

- Temporary Change Notice 2000-1628 for 1ES-01, "Reactor Trip Recovery," Revision 16;
- Temporary Change Notice 2000-1629 for 2ES-01, "Reactor Trip Recovery," Revision 14;
- 11/18/2000 Daily At Power Risk Report; and
- Prairie Island Nuclear Generating Plant Notice of Enforcement Discretion 00-3-01, dated November 3, 2000.

b. Findings

No findings of significance were identified.

.2 Complete Walkdown

a. Inspection Scope

The inspectors performed a complete walkdown of the Unit 2 emergency alternating current power system which included the D5 and D6 diesel generators, Buses 25 and 26 load sequencers, associated low voltage power supplies, and essential support equipment. The system was selected due to its high importance as a mitigating system and the fact that major preventive maintenance was being performed on the D6 diesel generator during the time. The inspectors verified that valves were positioned correctly and did not exhibit excessive leakage; electrical power was available as required; major components were properly labeled; lubricated, cooled, and ventilated, hangers and supports appeared to be properly installed and functional; essential support systems were operable; and that debris or other equipment would not interfere with the diesels' functions. The following documents were reviewed as part of this inspection:

- Integrated Checklist C1.1.20.7-9, "D5 Diesel Generator Valve Status," Revision 8;
- Integrated Checklist C1.1.20.7-10, "D5 Diesel Generator Auxiliaries and Local Panels and Switches," Revision 5;
- Integrated Checklist C1.1.20.7-11, "D5 Diesel Generator Main Control Room Switch and Indicating Light Status," Revision 3;
- Integrated Checklist C1.1.20.7-12, "D5 Diesel Generator Circuit Breakers and Panel Switches," Revision 8;
- Integrated Checklist C1.1.20.7-13, "D6 Diesel Generator Valve Status," Revision 8;
- Integrated Checklist C1.1.20.7-14, "D6 Diesel Generator Auxiliaries and Local Panel and Switches," Revision 5;
- Integrated Checklist C1.1.20.7-15, "D6 Diesel Generator Main Control Room Switch and Indicating Light Status," Revision 4;
- Integrated Checklist C1.1.20.7-16, "D6 Diesel Generator Circuit Breakers and Panel Switches," Revision 6;
- Operating Procedure 2C20.7, "D5/D6 Diesel Generators," Table 5, "D5 Remote/Local Independent Verification Checklist," Revision 15;
- Work Order (WO) 0007287, "High Cylinder Deviation Temperature - D6 Engine 2 1B Cylinder"; and
- WO 0007983, "Replace Pressure Switch."

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors conducted fire protection walkdowns focused on the condition and operating status of installed fire barriers. The inspectors selected the following fire areas

for inspection based on their overall contribution to internal fire risk, as documented in the Individual Plant Examination of External Events (IPEEE):

- Fire Areas 31 and 32, auxiliary feedwater pump rooms;
- Fire Area 18, relay and cable spreading room;
- Fire Areas 97 through 130, D5 and D6 diesel generator building; and
- Fire Areas 33 through 36, safeguards battery rooms.

As part of these inspections, the inspectors reviewed the following documents:

- IPEEE, NSPLMI-96001, Appendix B, "Internal Fires Analysis," Revision 1; and
- Plant Safety Procedure F5 Appendix F, "Fire Hazard Analysis," Revision 12.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed an operating crew on the simulator during requalification testing activities. The inspectors observed crew performance in the areas of clarity and formality of communications; ability to take timely corrective actions in the safe direction; prioritization, interpretation, and verification of alarms; procedure use; control board manipulations; oversight and direction from supervisors; and group dynamics. The inspectors also observed the performance of the examination evaluators and reviewed the simulator configuration compared to the actual control room. The scenario involved loss of the controlling pressurizer pressure channel, a charging line leak, and a loss of all alternating current power and was described in Lesson Plan P9160S-002, Revision 2.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors verified the licensee's implementation of the maintenance rule for structures, systems, or components (SSCs) with performance problems. This evaluation included the following aspects:

- whether the SSC was scoped in accordance with 10 CFR 50.65;
- whether the performance problem constituted a maintenance rule functional failure;
- safety significance classification;
- the proper 10 CFR 50.65 a(1) or a(2) classification for the SSC; and

- the appropriateness of the performance criteria for SSCs classified as a(2) or the appropriateness of goals and corrective actions for SSCs classified as a(1).

The inspectors reviewed the licensee's implementation of the maintenance rule requirements for the following SSCs:

- annunciators;
- radiation monitoring; and
- the D3 and D4 diesel generators.

The inspectors selected the annunciator system for review because of the large number of repair tags posted on the annunciators and control boards in the control room.

The inspectors selected the radiation monitoring system due to the large number of degraded and corrective work orders generated to address problems within the last year.

The inspectors selected the D3 and D4 diesel generators based on the fact that the licensee currently considered it in an acceptable but degraded status.

As part of these inspections, the inspectors reviewed the 1999 Annual and First Quarter Equipment Performance Report, dated May 2, 2000, Second Quarter Equipment Performance Report, dated July 28, 2000, Third Quarter Equipment Performance Report, dated October 26, 2000, Prairie Island Maintenance Rule System Basis Document, as well as the following WOs and condition reports (CRs):

- Annunciators
  - WO 9813374, "Bad or Loose Card For 121 Boric Acid Tank Hi/Lo/Lo-Lo Level";
  - WO 9900169, "Investigate 3 First Out Annunciators on Unit 1 Trip";
  - WO 9900757, "Unit 1 NSSS [Nuclear Steam Supply System] Retag/Rewire Temp Annunciator Rack and Cables";
  - WO 9901016, "Relay #8 in Power Cabinet 2AP3 is Chattering Abnormally";
  - WO 9901535, "Investigate the Intermittent Unit 2 NSSS Trouble Alarm on ERCS [Emergency Response Computer System] During B-Panel Joystick Testing";
  - WO 9904637, "Investigate/Repair Bad Alarm For 121 Boric Acid Tank Hi/Lo/Lo-Lo Level";
  - WO 9905658, "Numerous False NSSS Alarms on Panels 47015 and 47016";
  - WO 9908262, "Auto Rod Withdrawal Blocked Light on at 100% power. Light Should Only Be On at <15% Turbine Power";
  - WO 0003608, "Updated Safety Analysis Report 10.2.2.3 States That Spent Fuel Pool Temperature Detectors Are Nominally Set at 130 F, However, They Are Set at 120 F";
  - CR 0003712, "Manually Tripped 11 Safety Injection Pump During Monthly Lube, per TP [test procedure]-1087, Due to Mini-Flow Annunciator Alarming About 2 Minutes into Run";

- WO 0010737, “CV [control valve] 31199, 1FCV110A Controls Boric Acid Flow Out-of-Specification - Boric Acid to 11 BA Blender CV”;
- WO 0008654, “FCVIII for CV-31206 Control Out of Specification Flow Deviation - 11 Reactor Makeup Water to Boric Acid Blender CV”;
- WO 9905935, “Hi Temp Indication on TI436 - Pressurizer Safety Relief Line A Temp”;
- WO 9905662, “CV-31001 1A Hood Spray - 1A Cond Exhaust Hood Spray Water CV”;
- WO 0007782, “Troubleshoot High Condenser Air in Leakage - 11 Air Ejector Leakage Indication (Use D82 as Guide)”;
- WO 0003176, “Calibrate Turbine Lo-Lo Level alarm - Unit 1 Turbine Oil Purification System”;
- WO 0001303, “Turbine Intercept CV-31173 Close Indication On Panel 48001”;
- WO 0010736, “Open Limit Switch Arm Didn’t Move When CV Cycled - 1 Turbine 1 Reheat Stop Control Valve”;
- WO 0010966, “12 Heater Drain Tank Pump Speed Wanders in Manual”;
- WO 0003833, “Alarms and Dumps Heater Drain Tank at 3" - Unit 1 Heater Drain System”;
- WO 0003555, “ERCS Point Failed”;
- WO 9810895, “Correct ERCS Point for 13 Heater Drain Tank Pump RPM [revolutions per minute]”;
- WO 0010837, “11 Cooling Water Pump Hi Vibration Alarms”;
- WO 0003428, “12 Condensate Pump Motor Upper Bearing Temperature Element to be Replaced”;
- WO 0010774, “13 Heater Drain Tank Pump Vibrations Toggling (Reset 11/12/13 Heater Drain Tank Pump Motor Upper Bearing Vibration Setpoints)”;
- WO 0004451, “ERCS Point 1Q2470A 11 Condensate Pump Kilowatts Reads Low”;
- WO 0003813, “ERCS Point PID IT 2484 Reading High and Erratic - 12-Condensate Pump Motor Stator Temp”;
- WO 0000373, “12-Containment Fan Coil Unit Breaker Alarm Open/Off with Fan Coil Unit Running in Fast”;
- WO 0007979, “Add Reactor Coolant Pump Display with Vibration Displays - Unit 1 ERCS Computer System”;
- WO 0008627, “ERCS Alarm Printers Not Advancing Paper at New Month”;
- WO 0010923, “122 Cooling Tower Fan Indicates Running”;
- WO 0007861, “23A Level Switch Will Not Reset (23A Feedwater Heater Hi Level Dump to 2A Condenser)”;
- WO 0004673, “Detailed Investigation into 2 Generator Voltage Regulator”;
- WO 0004731, “2 Turbine Upper Reheat Steam Intercept CV2 Has Dual Indication”;
- WO 0010711, “21A Gland Steam Exhauster Overload Trip”;
- WO 0010727, “22 Feedwater Pump Oil Cooler Oil Outlet Temperature Reads 8 Degrees Lower Than Normal”;
- WO 0011008, “21 Feedwater Pump Casing Bottom Reading 60 Degrees Hotter Than Feedwater (ERCS Point 2T2807A)”;

- WO 0006650, “21 Heater Drain Pump Motor Stator Temperature (ERCS Point 2T2376A)”;
- WO 0004685, “2-Turbine High Pressure Axial Bolt Temperature (ERCS Point 2T2062A Bad)”;
- WO 0008645, “CV-31228, Loop A Pressurizer Spray Valve Appears Stuck”;
- WO 0004360, “CV-31228 Leaks By - 21 Reactor Coolant Pump Loop A Pressurizer Spray CV”;
- WO 0007855, “Repair Controller - 21 Pressurizer Pressure/Spray Valve Control Station”;
- WO 0004569, “Investigate and Repair Step Change in N31 Counts”;
- WO 0004546, “Investigate and Repair Head Leakage Past Head Vent System”;
- WO 0004567, “Calibrate Reactor Makeup Integrator (21-Reactor Makeup Water to Boric Acid Blender Motor”;
- WO 0007838, “Controller Output High - 22-Centrifugal Charging Pump Speed Control Station”;
- WO 0004037, “MV [motor-operated valve]-32178 Leaks by With MV-32180 Open (Sump B to 21 Residual Heat Removal Pump Train A)”;
- WO 9801215, “22 Auxiliary Building Cooling Water Return CV-39433 Local Control Operation”;
- WO 0004185, “Dual Indication - 23-Auxiliary Building Cooling Loop Cooling Water Return CV”;
- WO 0004449, “21-Containment Cleanup Fan Hi Differential Pressure Alarm in (Replace 12-Charcoal Filter Trays)”;
- WO 0010596, “21-Reactor Makeup Pump - Alarm Comes in When Diluting and 21-Reactor Makeup Pump Running”;
- WO 0007987, “Green Light For MV-32224 Not Functioning Properly”; WO 0010775, “11-Battery Room Special Exhaust Fan Thermals Tripped (Inspect/Monitor Fan and Motor Control Center Bucket)”;
- WO 0004092, “Light Socket Doesn’t Work - 11-Chiller Condenser Inlet Cooling Water Supply Valve”;
- WO 9911224, “12-Fan Coil Unit Cooling Water Outlet Flow Indication - Reading High with MV Closed”;
- WO 9911225, “14-Fan Coil Unit Cooling Water Inlet Flow Indication - Flow Indicated With MV’s Closed”; and
- WO 9905940, “12-Fan Coil Unit High Vibration in Fast Speed.”

- Radiation Monitoring
  - CR 19991117, “Relay Contacts for R-25 and R-31 that Isolate Containment Inservice Purge Have Not Been Tested”;
  - CR 19992551, “1R30 Spiking, Summary of Troubleshooting Efforts, Detector Replacements, Module Replacements, Time Domain Refexology Testing and Inspection”;
  - CR 19992928, “2R-11/12 Manual Discharge Valve (2RD-1-3) Found Closed”;
  - WO 0007298, “2R-39 Low Flow Switch Not Working”;
  - WO 0003434, “Clean/Repair 1R-39 Flow Switch and Rotometer”;

- WO 9811721, “1R22 Shield Building Vent Gas Radiation Detector Low Flow”;
- WO 9812624, “1R11 Filter Drive Motor Needs Replacement”;
- WO 9907993, “1R-30 Spike Caused Auxiliary Building Special Ventilation To Start”;
- WO 9900101, “R-18 Low Source Check During Monthly Test”; and
- WO 9911119, “2R-11/12 No Low Flow Alarm with Discharge Valve Shut.”

- D3 and D4 Diesel Generators
  - WO 9908441, “D3 Motor Driven Rheostat Set to Minimum Volts”;
  - WO 9914760, “Test D3 Relays”;
  - WO 9914764, “Investigate Cause of Voltage/Governor Control Problem”;
  - WO 0000412, “Lube Oil Cooler Durability is Suspect”;
  - WO 9908111, “D4 Engine Trouble”;
  - WO 9908138, “Functionally Test Crankcase Pressure Switch”;
  - WO 9912523, “D4 Trip on High Crankcase Pressure”;
  - CR 19993463, “D3 Diesel Generator Locked Out While Troubleshooting Loss of Speed/Voltage Control While Performing TP 1745 - WO 9914760 Issued”;
  - CR 19992587, “CS [control switch] 55200-31 For Breaker 31-2 Found in Pull-to-Lock - This Alignment Made D3 Diesel Generator Unavailable to Bus 31";
  - CR 19993304, “D4 Tripped on High Crankcase Pressure 8 Minutes Into TP 2745";
  - CR 20002420, “Found D4 Output Breaker 42-2 in the Test Position During Performance of TP 2745 - Breaker Racked Into Connect and TP Rerun”; and
  - CR 20004323, “Negative Trend Related to Mispositioned Equipment Events.”

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee’s management of plant risk for high risk configurations during routine maintenance activities and its control of emergent work activities. The inspectors verified that evaluation, planning, control, and performance of the work was done in a manner to reduce risk where practical, and that contingency plans were in place where appropriate. The following activities were inspected:

- reducing to single heater drain tank pump (HDTP) operation on Unit 1;
- broken manual speed control potentiometer on the 22 charging pump control board controller 2HC-428B; and
- restoring the prime to the 23-fuel oil storage tank pump for the D5 diesel generator.

As part of these inspections, the inspectors reviewed the following documents:

- WO 0010975, “P3555-3-11, 11 HDTP Amplispeed Brush”;
- WO 0011075, “Operate on 12 HDTP to Replace 11 HDTP Brushes”;
- 10/4/2000 7:00 Daily At-Power Risk Report;
- 10/19/2000 10:00 Daily At-Power Risk Report;
- WO 0013056, “22 Charging Pump Manual Pot on Hand Controller 2HC-428B Stop is Broke - Manual Knob Can be Pulled Out of Controller”;
- WO 0013266, “ 23-Fuel Oil Storage Tank Pump Develops no Discharge Pressure or Flow”; and
- 10/31/2000 7:00 Daily At-Power Risk Report.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed a sampling of operability evaluations for safety significant systems and conditions to determine that operability was justified, that availability was assured, and that no unrecognized increase in risk had occurred. The following evaluations were reviewed:

- Safety Evaluation 72-573, “Storage of Spent Fuel Assemblies With Repaired Top Nozzles,” Revision 0;
- CR 20004776, “Cooling Water - Vertical Cooling Water Pump Bearing Lubricating Supply Downgrade to Non-Quality May Require Additional Documentation”; and
- Safety Evaluation 307, “Diesel Generators and Diesel Cooling Water Pumps Fuel Oil Piping Design Issues,” Revision 0.

As part of the Safety Evaluation 307, the inspectors reviewed CR 20004924, “Evaluate the Need to Protect Fuel Oil Supply Line for 22-Diesel Driven Cooling Water Pump in 12 Diesel Driven Cooling Water Pump Room.” The inspectors also conducted a search of available information on the Internet regarding potential missiles generated by catastrophic failures of Caterpillar diesel engines, the kind that power two of the safety-related cooling water pumps. No relevant information was found.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

Through routine evaluation of outstanding work items, the inspectors identified an operator workaround associated with the Unit 1 reactor makeup water flow controller that

had not been included in the licensee's list of workarounds. The inspectors evaluated the workaround to determine if the functional capability of the system or if human reliability in responding to an initiating event was impacted by the workaround. The inspectors also reviewed Condition Report 20004601, "Flow Deviations and Alarms Associated With Chemical and Volume Control System Makeup System Creates a Workaround for the Control Room Operator," which was generated by the licensee in response to the workaround.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed post-maintenance testing activities to ensure that the testing adequately verified system operability and functional capability. The post-maintenance testing activities were selected based on the respective system's importance to mitigating core damage or protecting barrier integrity.

The inspectors observed post-maintenance testing associated with the following work:

- breaker electrical 5-year preventive maintenance (PM) for the 12-shield building ventilation recirculation fan;
- electrical 18-month PM for the D6 diesel generator;
- mechanical 18-month PM for the D6 diesel generator; and
- annual inspection of the 22-diesel driven cooling water pump.

As part of these inspections, the inspectors reviewed the following documents:

- WO 9913571, "PE-122k-35, Breaker Electrical 5-Year PM, 12-Shield Building Recirculation Fan";
- SP 1073, "Monthly Shield Building Ventilation System Test," Revision 34;
- MCC [Motor Control Center] Electrical Preventive Maintenance for General Electric 7700 Line MCCs;
- SP 2306, "D6 Diesel Generator 18-Month Function Test," Revision 4;
- PM 3002-2-22, "22-Diesel Cooling Water Pump Annual Inspection," Revision 19; and
- PM 3001-2-D6, "D6 Diesel Generator 18-Month Inspection - Mechanical," Revision 2.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors verified, by witnessing selected surveillance testing and reviewing test data, that the equipment tested by the SPs met Technical Specifications, the Updated Safety Analysis Report, Design Basis Documents, and licensee procedural requirements, and demonstrated that the equipment was capable of performing its intended safety functions. The following tests were evaluated:

- SP 2100, “21-Motor Driven AFW [Auxiliary Feedwater] Pump Monthly Test”;
- SP 1106B, “22-Diesel Cooling Water Pump Test,” Revision 54; and
- SP 2295, “D5 Diesel Generator 6-Month Fast Start Test,” Revision 20.

The inspectors reviewed the following additional documents as part of these inspections:

- CR 20004116, “Scaffolding Prevented Full Closure of 2AF-33-1 While Performing SP 2100";
- CR 20000592, “21-Motor Driven AFW Pump Developed a Steam Leak at the Outboard Pump Seal During Performance of SP 2100";
- WO 0007203, “Repack Outboard Seal on 21-Motor Driven AFW Pump”;
- WO 0010802, “Adjust Pump Packing on 21-Motor Driven AFW Pump”;
- WO 0011062, “Trim Shaft Guard on 22-Turbine Driven AFW Pump”;
- WO 0001214, “21-AFW Pump Outboard Pump Packing Shot”;
- WO 0001270, “Verify AFW Pump Shaft Sleeve Compression Nut Tightness”;
- WO 0004386, “Adjust Outboard Pump Packing on 21-Motor Driven AFW Pump”;
- WO 0004478, “Adjust Outboard Pump Packing on 21-Motor Driven AFW Pump”;
- WO 0007813, “Adjust Outboard Pump Packing on 21-Motor Driven AFW Pump”;
- WO 0007974, “21-AFW Pump Auxiliary Lubricating Oil Pump Runs Every Day”;
- SP 1376, “AFW Flow Path Verification Test After Each Cold Shutdown,” Revision 5;
- Operating Procedure 1C1.2, “Unit 1 Startup Procedure,” Revision 21;
- Design Basis Document DBD SYS-28B, “Auxiliary Feedwater System,” Revision 2;
- WO 0008798, “Quarterly Jacket Heat Exchanger Valve Timing During SP 1106B”;
- SP 2118, “Verifying Paths From the Grid to U-2 Buses,” Revision 11; and
- WO 0010853, “D5 Air Quality Stack Testing.”

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

.1 Temporary Modification 00T077

a. Inspection Scope

The inspectors reviewed the Temporary Modification 00T077, "Add a Safeguards Quality Supply of Water to the Shaft Bearings of 12 and 22 Cooling Water Pumps." This temporary modification was selected because it was being used to restore the operability of the 12 and 22 cooling water pumps subsequent to the NRC discovering that the normal filtered water supply to the pumps had been downgraded to nonsafety-related (Category 3) from safety-related (Category 1) several years ago. A safeguards lubricating water supply to the pump bearings had to be available to consider the pumps operable. The following additional documents were reviewed as part of this inspection:

- Temporary Modification 00T077, "Add a Safeguards Quality Supply of Water to the Shaft Bearings of 12 and 22 Cooling Water Pumps";
- Temporary Change Notice (TCN) 2000-1661, "Add Compensatory Measures to Address Possibility of Vertical Cooling Water Pump Discharge Float Trap Failure and/or Failure of Filtered Water System";
- TCN 2000-1669, "Add Compensatory Measures to Address Possibility of Vertical Cooling Water Pump Discharge Float Trap Failure"; and
- Administrative Work Instruction (AWI) 5AWI 1.5.10, "Procedure Temporary Changes," Revision 5.

b. Findings

The inspectors identified one Non-Cited Violation for failure to follow the procedure for making temporary procedure changes. The failure to follow the procedure impacted the operability of the 121 motor-driven cooling water pump.

On November 1, 2000, the licensee declared the three vertical safety-related cooling water pumps inoperable due to lack of a qualified source of line shaft bearing water. The licensee requested, and was granted, a Notice of Enforcement Discretion to allow non-compliance with Technical Specification 3.3.D for a period not to exceed 14 days. During this time the licensee committed to design and install a temporary modification for the 12 and 22 cooling water pumps. The temporary modification would provide a safety-related source of water to the pumps' line shaft bearings. Additionally, included as a compensatory action until the temporary modification was completed for the 12 and 22 cooling water pumps, was a dedicated operator stationed in the screenhouse whose sole function was to install a backup supply of bearing cooling water to the pumps should the normal supply fail.

On November 12, while reviewing the status of the bearing water temporary modifications for the 12 and 22 cooling water pumps, the inspectors were informed that the work for the 12-cooling water pump was complete, the 22-cooling water pump was out-of-service with modification work in progress, and the 121-cooling water pump was aligned to substitute for the 22-cooling water pump. Since the 121-cooling water pump was being used as the B train safety-related cooling water pump, the inspectors asked

the dedicated screenhouse operator for the procedure he would use to provide backup bearing water to the 121-cooling water pump should the normal supply be lost. The inspectors were informed by the operator that the TCN that provided instructions on installing the backup water supply, TCN 2000-1661, had been replaced a few hours earlier by TCN 2000-1669, which provided no direction on how to provide backup water supply to the 121-cooling water pump. The inspectors brought this to the attention of the Unit 1 shift supervisor, who promptly reinstated TCN 2000-1661 and rescinded TCN 2000-1669.

Appendix B, Criterion V, "Instructions, Procedures, and Drawings," of 10 CFR Part 50, required, in part, that the activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and be accomplished in accordance with these instructions, procedures, or drawings. Contrary to this, on November 12, 2000, the licensee failed to properly implement 5AWI 1.5.10, "Procedure Temporary Changes," a procedure affecting quality. Specifically, prior to the issuance of TCN 2000-1669, the TCN approver did not adequately perform Step 6.4.2.a. That step, in part, directed the person responsible for approving the change to ensure that the change would not cause a violation of Technical Specifications or other operability requirements. The replacement of TCN 2000-1661 by TCN 2000-1669 removed the procedural guidance, needed by the screenhouse operator, to ensure the operability of the 121 cooling water pump by restoring line shaft bearing cooling water should its normal source of cooling water be lost. This violation is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy (50-282/00-16-01(DRP); 50-306/00-16-01(DRP)). This issue was entered into the licensee's corrective action program as Condition Report 20005178.

The inspectors performed a risk significance determination of this issue in accordance with NRC Inspection Manual 0609, "Significance Determination Process." The issue was screened out during the Phase 1 evaluation because only one train of a redundant system was affected and only for a short time. Thus the issue was considered of very low safety significance (GREEN), and within the licensee response band. The finding was assigned to the mitigating systems cornerstone for both Units 1 and 2.

.2 Temporary Modification 00T074

a. Inspection Scope

The inspectors reviewed Temporary Modification 00T074, "21-Turbine Oil Reservoir Leakage Collection." This temporary modification was selected because of the potential of the condition it corrected causing a plant transient due to a loss of turbine oil or a fire. The following additional documents were reviewed as part of this inspection:

- WO 0006635, "21 Turbine Oil Reservoir Oil Cooler Flange Leaking"; and
- WO 0007953, "Install Oil Recycling Equipment be Turbine Oil Reservoir"; and
- Updated Safety Analysis Report, Section 11.2, "Turbine-Generator System," Revision 19.

b. Findings

No findings of significance were identified.

.3 Temporary Modification 00T076

a. Inspection Scope

The inspectors reviewed Temporary Modification 00T076, "Route Vertical Cooling Water Pump Water Trap Discharge to Safeguards Cooling Water Pump Bay." This temporary modification was selected because it was being used to resolve an operability question related to the safeguards cooling water pumps. The licensee had been using a dedicated operator in the safeguards pump room as a compensatory measure until the issue was resolved.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP4 Security Plan Changes

a. Inspection Scope

The inspector reviewed Revision 40 of the Prairie Island Security Plan, and Revision 16 of the Prairie Island Security Force Training and Qualification Plan, which were submitted by licensee letter, dated August 30, 2000, to verify that the changes did not decrease the effectiveness of the security plans. The security plans were submitted in accordance with 10 CFR 50.54(p).

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors verified that the performance indicator data submitted by the licensee was accurate and complete for Reactor Coolant System Specific Activity. This was accomplished by a review of radiochemistry data for the period of October 1999 to September 2000 for Unit 1 and Unit 2. The inspectors also reviewed Radiation Protection Implementing Procedure (RPIP) 3603, "Unit 1 and 2 Mixed Bed Demin

Samples," Revision 2, and RPIP 3382, "Individual Gamma Emitters," Revision 6, and observed a daily reactor coolant system sample being drawn and analyzed as part of this inspection.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

a. Inspection Scope

The inspectors reviewed an event reported by the licensee on October 26, 2000, (Event Number 37458) concerning all three vertical safety-related cooling water pumps being inoperable (see Section 1R23.1 for more details). The inspectors verified that the event had been properly reported, that interim corrective actions involving a dedicated operator had been implemented, and that the actions that the operator was expected to take could reasonably be accomplished and would likely maintain system operability. The inspectors reviewed the following documents as part of this inspection:

- Event Notification Worksheet dated October 26, 2000;
- TCN 2000-1582, "Cooling Water System - New Section 5.25";
- 5AWI 3.15.5, "Operability Determinations," Revision 4;
- CR 20004760, "Investigate Possible Flooding of Safeguards Screenhouse Assuming Failure of a Vertical Cooling Water Pump Air and Vacuum Valve"; and
- CR 20004767, "5AWI 3.15.5 Not Addressed for Manual Operator Action in Operability Determination for CR 20004760."

b. Findings

This issue was first identified by the NRC during a concurrent inspection and any associated findings will be documented in the report of that inspection (Inspection Report 50-282/00-13(DRS); 50-306/00-13(DRS)).

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Schuelke and other members of licensee management on November 16, 2000. 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. Allen, General Superintendent Engineering, Nuclear Generation Services
T. Amundson, General Superintendent Engineering
T. Breene, Manager Nuclear Performance Assessment
A. Johnson, General Superintendent Radiation Protection and Chemistry
L. Gard, General Superintendent Plant Maintenance
D. Schuelke, Plant Manager
T. Silverberg, General Superintendent Plant Operations
M. Sleigh, Superintendent Security
J. Sorensen, Site General Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

50-282/00-16-01(DRP); 50-306/00-16-01(DRP)	NCV	Failure to Properly Implement the Temporary Procedure Change Process Which Could Have Resulted in the Loss of Operability of 121 Safeguards Cooling Water Pump. (1R23.1)

Discussed

None