

October 24, 2003

Mr. Thomas Coutu  
Site Vice President  
Kewaunee Nuclear Plant  
Nuclear Management Company, LLC  
N490 Hwy 42  
Kewaunee, WI 54216-9511

SUBJECT: KEWAUNEE NUCLEAR POWER PLANT  
NRC INTEGRATED INSPECTION REPORT 05000305/2003006

Dear Mr. Coutu:

On September 30, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Kewaunee Nuclear Power Plant. The enclosed integrated inspection report documents the inspection findings which were discussed on October 2, 2003, with Mr. Hoops and other members of your staff.

The 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.

Based on the results of this inspection, there was one NRC-identified and one self-revealed finding of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because these violations were of very low safety significance, non-willful and non-repetitive, and because the violations were entered in your corrective program, the NRC is treating these issues as Non-Cited Violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, 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 copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector Office at the Kewaunee facility.

T. Coutu

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Sincerely,

**/RA/**

Patrick L. Loudon, Chief  
Branch 5  
Division of Reactor Projects

Docket No. 50-305  
License No. DPR-43

Enclosure: Inspection Report 05000305/2003006  
w/Attachment: Supplemental Information

cc w/encl: D. Graham, Director, Bureau of Field Operations  
Chairman, Wisconsin Public Service Commission  
State Liaison Officer

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 50-305

License No.: DPR-43

Report No.: 05000305/2003006

Licensee: Nuclear Management Company, LLC

Facility: Kewaunee Nuclear Power Plant

Location: N 490 Highway 42  
Kewaunee, WI 54216

Dates: July 1 through September 30, 2003

Inspectors: R. Krsek, Senior Resident Inspector  
J. Cameron, Project Engineer  
M. Maley, Reactor Engineer, NRR  
B. Jorgensen, Reactor Engineer  
D. McNeil, Reactor Engineer  
D. Chyu, Reactor Engineer

Observers: R. Berg, Resident Inspector

Approved By: Patrick Loudon, Chief  
Branch 5  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000305/2003006; 07/01/2003 - 09/30/2003; Kewaunee Nuclear Power Plant; Equipment Alignment and Operability Determinations.

This report covers a 3-month period of baseline resident and announced licensed operator requalification program inspections. The inspections were conducted by the resident inspectors, and Region III and NRC Headquarters inspectors. The inspection identified two Green findings which were Non-Cited Violations (NCVs). One NRC-identified Green finding and one self-revealed Green finding associated with NCVs were 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 Significance Determination Process does not apply may be Green or 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 3, dated July 2000.

### A. Inspector-Identified and Self-Revealed Findings

#### **Cornerstone: Mitigating Systems**

- Green. The inspectors identified a Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to prescribe instructions or procedures appropriate to the circumstances for the seismic control of equipment stored near the vicinity of the 'A' Auxiliary Feedwater (AFW) piping to the 'A' Steam Generator, an activity affecting quality. The inspectors identified during plant walkdowns that following the 2003 Refueling Outage, portable plant equipment, including two portable 2.5-ton cranes, were stored in close proximity to the AFW piping, without the use of seismic restraints.

This inspector-identified finding was greater than minor because if left uncorrected the finding would become a more significant safety concern. The failure to ensure that equipment stored near the safety-related 'A' AFW piping was seismically restrained affected the mitigating systems attributes of configuration control and protection against external factors (seismic). In addition, the finding affected the cornerstone objective of ensuring the reliability and capability of the engineered safeguards systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance mainly because the finding did not represent an actual loss of safety function of a system and did not screen as potentially risk significant due to a seismic event. Therefore the finding screened as Green utilizing the Inspection Manual Chapter 0609 Significance Determination Process Phase 1 Worksheet for Mitigating Systems. (Section 1R04.1)

- Green. A Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was self-revealed when the licensee, in preparing and verifying the response to NRC

Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," dated June 9, 2003, determined that the containment refueling cavity standpipe had not been installed after the Spring 2003 Refueling Outage. A procedure revision, issued prior to the 2003 Outage, had removed prescribed instructions to install the refueling cavity drain standpipe following reactor vessel refueling activities. The inspectors also concluded that this finding had, as a primary cause, a human performance deficiency.

This self-revealed finding was greater than minor because the failure to ensure that the refueling cavity standpipe was installed affected the mitigating systems attributes of configuration control and procedure quality. In addition, the finding affected the cornerstone objective of ensuring the reliability and capability of the engineered safeguards systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance mainly because the finding did not represent an actual loss of safety function of a system. Therefore the finding screened as Green utilizing the Inspection Manual Chapter 0609 Significance Determination Process Phase 1 Worksheet for Mitigating Systems. (Section 1R15.1)

**B. Licensee-Identified Violation**

No findings of significance were identified.

## REPORT DETAILS

### Summary of Plant Status

The plant was operated at or near full power for most of the inspection period.

Exceptions included a planned power reduction to approximately 70 percent power for 16 hours on July 3 and 4, 2003, to perform routine turbine valve and auxiliary feedwater pump testing. On July 16, 2003, the licensee received a license amendment to increase reactor power to 1673 Megawatts-Thermal, through a Measurement Uncertainty Recapture Uprate. Therefore, from July 16 through July 27, 2003, full reactor power was reported as 99 percent since the licensee had not yet implemented the power uprate. Finally, on July 24 through 26, 2003, plant power was reduced to 98.5 percent to perform Reactor Protection System calibration and testing to support implementation of the Measurement Uncertainty Recapture Uprate.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R04 Equipment Alignment (71111.04)

##### .1 Auxiliary Feedwater (AFW) System Train 'A' Piping

###### a. Inspection Scope

The inspectors conducted a partial walkdown of the 'A' Train of Auxiliary Feedwater while the 'B' Train of AFW equipment was out-of-service which also included a verification walkdown of the AFW Train 'B' once it was returned to service. One inspection procedure sample was completed. The inspectors verified that the systems were correctly aligned to perform their design safety function.

In preparation for the walkdowns, the inspectors reviewed the system lineup checklists, normal operating procedures, abnormal and emergency operating procedures, and system drawings to verify the correct system lineup. During the walkdowns, the inspectors also examined valve positions and electrical power availability to verify that valve and electrical breaker positions were consistent with, and in accordance with, the licensee's procedures and design documentation. The material condition of the equipment was also inspected. Finally, the inspectors verified seismic housekeeping requirements were in place for areas surrounding the AFW piping and equipment.

###### b. Findings

Introduction: The inspectors identified a Green finding associated with a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to prescribe instructions or procedures appropriate to the circumstances for the seismic control of equipment stored near the vicinity of the 'A' AFW piping to the 'A' Steam Generator, an activity affecting quality. In addition, the inspectors identified during plant walkdowns that following the 2003 Refueling Outage,

portable plant equipment, including two portable 2.5-ton cranes, were stored in close proximity to the auxiliary feedwater piping without the use of seismic restraints.

Description: On July 24, 2003, the inspectors identified during an equipment walkdown of the 'A' Train of the AFW system, that heavy mobile equipment was stored adjacent to the AFW system piping and was not secured. At the time, two 2.5-ton portable cranes were stored within two inches of the 3-inch 'A' Train AFW piping. The inspectors noted that the AFW piping penetrated the floor of the Mechanical Equipment Room on the 606-foot elevation of the Auxiliary Building and then traversed horizontally several feet to the containment penetration for the 'A' AFW piping to the 'A' Steam Generator. The inspectors also noted that a 3/4-inch branch line utilized for chemical addition was connected to the AFW piping in the same area.

The inspectors reviewed licensee procedure GNP-01-31.01, "Plant Cleanliness and Storage," Revision E, dated October 17, 2002, and determined that the procedure prescribed the area surrounding the 'A' Train AFW piping as an acceptable storage area, not subject to seismic controls for the storage of equipment near safety-related equipment. In further discussions with the licensee, the inspectors determined that the procedure was based on a September 10, 1996, licensee analysis which utilized Electric Power Research Institute Document NP-6041-SL, "A Methodology for Assessment of Nuclear Plant Seismic Margin (Revision 1)." After consultation with NRC Region III Inspectors and Nuclear Reactor Regulation Technical Staff, the inspectors concluded that the Electric Power Research Institute Document had not been endorsed by the NRC for plant licensing basis evaluations, and since a seismic event is a design basis event, the use of this document may not be appropriate to the circumstances.

The licensee concurred with the inspector's observations and initiated Condition Report CAP017393, "Potential Interaction of three-inch AFW Piping with Portable Equipment." In addition, the licensee took immediate corrective actions to initially secure and later remove the portable equipment stored in close proximity to the safety related 'A' Train AFW piping. The licensee also established a temporary exclusion zone surrounding the piping to ensure no future equipment was stored in the area. The licensee's pending corrective actions included the determination of a safe distance from the piping for storage of equipment in the Mechanical Equipment Room and implementation of permanent changes to Procedure GNP-01-31.01.

Analysis: The inspectors determined that the failure to have appropriate instructions or prescribed actions in Procedure GNP 01.31.01 to ensure that the equipment stored near the 'A' AFW piping would not adversely affect the function of the AFW piping during a design basis seismic event was considered a licensee performance deficiency warranting a significance evaluation. This inspector-identified finding was greater than minor because if left uncorrected the finding would become a more significant safety concern. The failure to ensure that equipment stored near the safety-related 'A' AFW piping was seismically restrained affected the mitigating systems attributes of configuration control and protection against external factors (seismic). In addition, the finding affected the cornerstone objective of ensuring the reliability and capability of the engineered safeguards systems that respond to initiating events to prevent undesirable consequences.

The inspectors evaluated the finding using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening, and determined that the finding:

- was not a design or qualification deficiency;
- did not represent an actual loss of safety function of a system;
- did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time;
- did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment designated as risk significant;
- did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event;
- did not involve the total loss of any safety function that contributed to core damage accident sequences initiated by seismic events; and
- did not involve the loss or degradation of equipment or function designed to mitigate a seismic initiating event.

Therefore, the finding was determined to be of very low safety significance (Green).

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances. Contrary to this requirement, Procedure GNP 01.31.01, "Plant Cleanliness and Storage," Revision E, did not provide instructions or procedures to ensure that the equipment stored near the 'A' AFW piping would not adversely affect the function of the AFW piping during a design basis seismic event, an activity affecting quality; therefore, the procedure was not appropriate to the circumstances. The inspectors determined this finding was a violation of 10 CFR Part 50, Appendix B, Criterion V. Because this violation was of very low safety significance (Green) and was documented in the licensee's corrective action program as CAP017393, this finding is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy. (NCV 05000305/2003006-01)

## .2 Other Partial Equipment Alignments

### a. Inspection Scope

The inspectors conducted partial walkdowns of the system trains listed below while the opposite train of equipment was out-of-service or after return-to-service of a system train to verify that the systems were correctly aligned to perform their design safety function. In preparation for the walkdowns, the inspectors reviewed the system lineup checklists, normal operating procedures, abnormal and emergency operating procedures, and system drawings to verify the correct system lineup. During the walkdowns, the inspectors also examined valve positions and electrical power availability to verify that valve and electrical breaker positions were consistent with, and in accordance with, the licensee's procedures and design documentation. The material condition of the equipment was also inspected.

Partial system walkdowns were conducted on the following systems which constituted three inspection procedure samples:

- Diesel Generator 1A;
- Safety Injection Pump 1A; and
- Service Water Pumps Trains 'A' and 'B'.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of fire fighting equipment, the control of transient combustibles and ignition sources, and on the condition and operating status of installed fire barriers. The inspectors selected fire areas for inspection based on their overall contribution to internal fire risk, as documented in the Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate a plant transient, or their impact on the plant's ability to respond to a security event. The inspectors used the documents listed in Attachment 1 to verify that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and that fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors verified that minor issues identified during the inspection were entered into the licensee's corrective action program.

The following 7 areas were inspected by walkdowns:

- Fire Zone TU-91, Emergency Diesel Generator (EDG)1A Day Tank Room;
- Fire Zone TU-93, EDG 1B Day Tank Room;
- Fire Zone TU-95C, AFW Pump Room 1A;
- Fire Zone AX-23D, Component Cooling Water Pump 1B Room;
- Fire Zone SC-70B, Screenhouse, South Area;
- Fire Zone TC-101, Technical Support Center (TSC) 606' Level; and
- Fire zone TC-102, TSC Non-Safeguards Battery and Electric Equipment Room.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On August 7, 2003, the licensee conducted heat exchanger performance monitoring for the 1B EDG service water support systems. The inspectors reviewed the test procedure and reviewed the test data to verify: 1) that the test was performed as written; 2) that the acceptance criteria were adequate to demonstrate acceptable heat transfer capability of the heat exchanger; and 3) that the test data met the acceptance criteria. The inspectors also verified that the test accounted for instrument inaccuracies and that the test frequency was sufficient to provide early detection of heat exchanger degradation prior to any loss of heat removal capabilities below design values. Finally, the inspectors compared the current test results with previous test data to verify the performance of the heat exchangers tested. This activity constituted one inspection procedure sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Written Examination and Operating Test Results

a. Inspection Scope

The inspectors reviewed the pass/fail results of individual written tests, operating tests, and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calendar year 2003. This represents one sample.

b. Findings

No findings of significance were identified.

.2 Resident Inspector Quarterly Inspection of Licensed Operator Requalification

a. Inspection Scope

On September 30, 2003, the inspectors observed a simulator dynamic requalification examination for Cycle 03-05 to evaluate crew performance, clarity and formality of communications, ability to take timely actions in a safe direction, procedure use, control board manipulations, oversight and direction from supervisors, group dynamics and annunciator response. Additionally, the inspectors evaluated the crew's implementation of the facility's abnormal and emergency operating procedures, oversight and direction provided to the crew by the shift manager and control room supervisor.

The inspectors also compared the simulator board configuration with the actual control room board configuration to verify that the simulator environment matched the actual control room environment as closely as possible. The inspectors observed the post-

scenario critiques to determine whether performance issues were accurately identified and addressed by the licensee. This observation constituted one quarterly inspection procedure sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the implementation of the maintenance rule for the systems and/or equipment problems listed below to verify that component and equipment failures were identified, entered, and scoped within the Maintenance Rule. The inspectors also verified that the system or equipment was properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65. The inspectors reviewed a sample of station logs, maintenance work orders, action requests, functional failure evaluations, unavailability records, and corrective action reports to verify that the licensee was identifying issues related to the Maintenance Rule at an appropriate threshold and that corrective actions were appropriate. Additionally, the inspectors reviewed the licensee's performance criteria to verify that the criteria adequately monitored equipment performance. The systems reviewed by the inspectors, which constituted two quarterly inspection procedure samples, were the:

- Emergency Diesel Generator Systems (excluding the TSC Diesel Generator)
- Safety Injection Systems.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and assessment of plant risk, scheduling, and configuration control during the planned and emergent work activities listed below. In particular, the licensee's planning and management of maintenance was evaluated to verify that on-line risk was acceptable and in accordance with the requirements of 10 CFR 50.65(a)(4).

Additionally, the inspectors compared the assessed risk configuration against the actual plant conditions and any in-progress evolutions or external events to verify that the assessment was accurate, complete, and appropriate. Licensee actions to address increased on-line risk during these periods were also inspected to verify that actions were in accordance with approved administrative procedures. The inspectors conducted the following five inspection procedure samples during the inspection period:

- Safety Monitor Risk Assessment for July 7 through 11, 2003;
- Safety Monitor Risk Assessment for July 14 through 18, 2003;
- Safety Monitor Risk Assessment for July 21 through 25, 2003;
- Safety Monitor Risk Assessment for August 18 through 22, 2003; and
- Safety Monitor Risk Assessment for September 22 through 26, 2003.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors observed licensee personnel performance during the planned plant evolutions associated with the implementation of the Measurement Uncertainty Recapture Uprate which occurred the last 2 weeks of July 2003. The inspectors observed operators performance during the scheduled testing and calibration of Reactor Protection System Channels, which were new evolutions.

The inspectors reviewed operator log entries, and plant process computer data to verify the appropriate plant response during the implementation of power uprate and to ensure plant performance was consistent with the expected changes in operating parameters. The inspectors also observed briefings conducted for the plant operators related to the implementation of power uprate, and verified operations procedures and training were updated to reflect the changes associated with the power uprate.

Finally, the inspectors verified that the licensee identified problems associated with the power uprate implementation at the appropriate thresholds and that conditions adverse to quality were entered into the licensee's corrective action system. This activity constituted one inspection procedure sample.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Reactor Cavity Drain Standpipe

a. Inspection Scope

The inspectors reviewed design basis and Updated Final Safety Analysis Report information, and technical specification requirements to verify the technical adequacy of the operability evaluation performed for the failure to install the Reactor Cavity Drain Pipe. The inspectors also verified that the Engineered Safeguards System operability

was properly justified and that the system remained available, such that no

unrecognized increase in risk occurred. This activity constituted one inspection procedure sample.

b. Findings

Introduction: A Green finding associated with a NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was self-revealed when the licensee, in preparing and verifying the response to NRC Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," dated June 9, 2003, determined that the containment refueling cavity standpipe had not been installed after the Spring 2003 Refueling Outage. A procedure revision, issued prior to the 2003 Refueling Outage, had removed prescribed instructions to install the refueling cavity drain standpipe following reactor vessel refueling activities.

Description: On June 9, 2003, the NRC issued Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," to all holders of operating licenses for pressurized-water reactors. The Bulletin requested licensees to review the potential impact of debris blockage on the Emergency Core Cooling System and Containment Spray System recirculation functions. While reviewing and validating the response to the NRC Bulletin, the licensee determined that the containment refueling cavity drain standpipe may not have been installed following the Spring 2003 Refueling Outage.

The function of the refueling cavity drain standpipe was to prevent and minimize the transport of debris, mainly unqualified containment coatings, from entering Containment Sump 'A' following a design basis Large Break Loss of Coolant Accident (LBLOCA). The transport path of concern was that debris which enters Containment Sump 'A' could be transported to the containment basement floor and Containment Sump 'B' when Containment Sump 'A' overflows, as designed, following a LBLOCA. Debris transported to Containment Sump 'B' was a sump screen blockage concern, in that, the Residual Heat Removal, Safety Injection and Internal Containment Spray systems take suction from Containment Sump 'B' during the Recirculation Phase of a LBLOCA.

During a routine, at-power containment entry on August 13, 2003, the licensee verified that the refueling cavity drain standpipe was not installed and was positioned in the lower reactor cavity in containment. The licensee performed an operability determination and determined that containment sump recirculation system was considered operable, but non-conforming in accordance with NRC Generic Letter 91-18, based on the following:

- Engineering Calculation C10922, concluded that eight cubic feet of unqualified coatings in containment would not result in inoperability of the emergency core cooling systems. Currently, there existed approximately three cubic feet of unqualified coatings in containment, of which only 1.4 cubic feet would potentially enter the reactor cavity post accident; and

- The transport path for the unqualified containment coatings from the reactor cavity to Containment Sump 'B' was torturous, in that a number of debris diversions were present.

The inspectors noted a minor issue, in that, the initial licensee operability determination did not address the potential fluid blockage which could be caused by the refueling cavity standpipe, if positioned near the refueling cavity drain. The licensee subsequently determined that the shape and orientation of the standpipe was such that, even if positioned near the refueling cavity drain, fluid transport from the refueling cavity to Containment Sump 'A' would not be negatively impacted.

The licensee determined that the procedure steps prescribing the installation of the refueling cavity drain standpipe were inadvertently deleted in a 1998 revision of Procedure RF-1.0, "KNPP Refueling Procedure," due to the belief that the refueling cavity drain standpipe was permanently installed plant equipment. The licensee's immediate corrective actions included adding the installation of the refueling cavity drain standpipe to the licensee's forced outage work scope, in addition to initiating a procedure change to correct Procedure RF-1.0.

Analysis: The inspectors determined that the licensee's failure to have appropriate instructions or prescribed actions in Procedure RF-01.00, to ensure that the containment refueling cavity drain standpipe was installed following refueling activities was considered a licensee performance deficiency warranting a significance evaluation. This self-revealed finding was greater than minor because the failure to ensure that the refueling cavity standpipe was installed affected the mitigating systems attributes of configuration control and procedure quality. In addition, the finding affected the cornerstone objective of ensuring the reliability and capability of the engineered safeguards systems that respond to initiating events to prevent undesirable consequences.

The inspectors evaluated the finding using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening, and determined that the finding:

- was not a design or qualification deficiency;
- did not represent an actual loss of safety function of a system;
- did not represent an actual loss of a safety function of a single train for greater than Technical Specification outage time;
- did not represent an actual loss of a safety function of one or more Non-Technical Specification trains of equipment designated as risk significant; and
- did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Therefore, the finding was determined to be of very low safety significance (Green).

The inspectors also determined that the finding affected the cross-cutting area of Human Performance, because the procedure error contained in Refueling Procedure

RF-01.00 was caused by the removal of a procedure step without the appropriate verification and validation of the actual plant configuration.

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances. Contrary to this requirement, Procedure RF-01.00, "KNPP Refueling Procedure," Revision J, did not provide instructions or procedures to ensure that the containment refueling cavity drain standpipe was reinstalled following reactor refueling activities; therefore, the procedure was not appropriate to the circumstances. The inspectors determined this finding was a violation of 10 CFR Part 50, Appendix B, Criterion V. Because this violation was of very low safety significance (Green) and was documented in the licensee's corrective action program as CAP017357, this finding is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy. (NCV 05000305/2003006-02)

.2 Other Operability Determinations Reviewed

a. Inspection Scope

The inspectors reviewed design basis information and technical specification requirements to verify the technical adequacy of the operability evaluations listed below and to verify that system operability was properly justified and that the system remained available, such that no unrecognized increase in risk occurred.

The inspectors reviewed the following corrective action process (CAP) operability evaluations, which constituted four inspection procedure samples:

- CAP017169, 'A' Emergency Diesel Generator Speed Cycling;
- CAP017273, Blue Channel Reactor Protection System T-Average Response;
- CAP017771, Generic Letter 89-13 Test Methodology Questionable for the Emergency Diesel Generator Coolers and Containment Fan Coil Units; and
- CAP017736, Quality Assurance Typing on Fire Protection Relays for the 'A' and 'B' Emergency Diesel Generator Start and Trip circuit Not Correct.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed previously identified operator workarounds, equipment deficiency logs, and control room deficiencies to verify that the cumulative effects did not create significant adverse consequences regarding the reliability, availability and operation of accident mitigating systems. The inspectors also assessed these cumulative effects on the ability to implement abnormal and emergency response procedures in a correct and timely manner.

The inspectors reviewed the planned actions to address operator workarounds to verify that the priority to resolve the deficiencies were appropriate when considering the potential impact on plant risk and safety. In addition, the inspectors reviewed emergent risk significant operator workarounds to determine if the functional capability of a system or human reliability of an initiating event was affected. Finally, the inspectors reviewed condition reports regarding operator workarounds to verify that the corrective actions were prioritized and appropriate, commensurate with the safety significance of the issue. These activities constituted one inspection procedure sample.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the post-maintenance testing activities associated with the scheduled and emergent work activities listed below to verify that the testing was adequate for the scope of the maintenance work performed. The inspectors reviewed the tests' acceptance criteria to ensure that the criteria was clear and that testing demonstrated operational readiness consistent with the design and licensing basis documents.

The inspectors attended pre-job briefings, when possible, to verify that the impact of the testing had been properly characterized; and observed or reviewed the test to verify that the test was performed as written and that all testing prerequisites were satisfied. Following the completion of each test, the inspectors completed walkdowns of the affected equipment, when applicable, to verify that the test equipment was removed and that the equipment was returned to a condition in which it could perform its safety function. The inspectors also reviewed the completed test data to ensure the test acceptance criteria were met for the following activities, which constituted seven inspection procedure samples:

- Replacement of 1B Safety Injection Pump Seal Cooling Heat Exchanger;
- Partial Installation of 'A' Component Cooling Water Pump Recirculation Piping;
- Partial Installation of 'B' Component Cooling Water Pump Recirculation Piping;
- Direct Current Supply & Distribution 7.5 KVA Inverter BRA-111 Electrical Maintenance;
- Component Cooling Water System Minimum Flow Recirculation Line Testing and Data Gathering Activities;
- Service Water System - Motor-Operated Valves SW1300 and SW1306, Service Water Outlet and Bypass Valves for 'B' Component Cooling Water Heat Exchanger, preventive maintenance; and
- Service Water System - Motor Operated Valve SW601B, Emergency Service Water Suction for AFW Pump 1B, preventive maintenance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed and reviewed the surveillance testing results for the surveillances listed below to verify that the equipment was capable of performing the intended safety function and that the surveillance tests satisfied the requirements contained in Technical Specifications and the licensee's procedures. The inspectors reviewed the surveillance tests to verify the tests were adequate to demonstrate operational readiness consistent with the design and licensing basis documents, and that the testing acceptance criteria were well documented and appropriate to the circumstances.

Portions of the test were observed to verify the test was performed as written, that all testing prerequisites were satisfied, and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the tests, when applicable, the inspectors conducted walkdowns of the affected equipment to verify that the test equipment was removed and that the effected equipment was returned to an operable condition.

The inspectors observed and reviewed the following tests, which constituted seven inspection procedure samples:

- Surveillance Procedure SP-42-312B, Diesel Generator 'B' Start-Up Air Leakage and Monthly Availability Testing;
- Surveillance Procedure SP-23-100A, Train 'A' Internal Containment Spray Pump and Valve Inservice Testing;
- Surveillance Procedure SP-31-168A, Component Cooling Water Pump Train 'A' Inservice Testing;
- Repetitive Test Procedure RT-DGM-10, Technical Support Center Diesel Generator Monthly Test;
- Surveillance Procedure SP-23-100B, Train 'B' Internal Containment Spray Pump and Valve Inservice Testing;
- Surveillance Procedure SP-34-099A, Train 'A' Residual Heat Removal Pump and Valve Inservice Testing; and
- Surveillance Procedure SP-18-043, Containment Pressure Instrument Monthly Channel Testing.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the modification documentation and associated 10 CFR 50.59 evaluation for the following temporary plant modification:

- TCR-03-26, Power Operated Relief Valve Discharge Temperature Element

The inspectors verified that the temporary modification did not adversely impact other safety-related equipment and that the modification was being controlled in accordance with the licensee's administrative procedures. The inspectors also verified that the modification did not affect system operability or availability.

In addition, the inspectors reviewed condition reports to verify that temporary modifications problems were entered into the corrective action program with the appropriate significance characterization. This activity constituted one inspection procedure sample.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the emergency response activities associated with the licensee emergency preparedness drill conducted on August 6, 2003. The drill was designed to exercise the licensee's onsite and offsite emergency response organizations and emergency plans. The inspectors observed portions of the drill from the control room simulator, the TSC and the Operations Support Facility to evaluate the licensee's evaluation, classification, and notification of the simulated event. The inspectors also attended both the drill controllers' debrief and the general drill critique to determine whether the licensee properly identified drill performance weaknesses at an appropriate threshold.

The inspectors verified that the weaknesses observed during the emergency preparedness drill were identified during the licensee's critique and captured in the corrective action program. This activity constituted one inspection procedure sample.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification (71151)

###### .1 Reactor Safety Strategic Area

###### a. Inspection Scope

The inspectors reviewed the licensee's Performance Indicator data collection process and historical data from the third quarter of 2002 through the second quarter of 2003 to verify the accuracy of licensee collected and submitted data. The inspectors used performance indicator definitions and guidance contained in Revision 2 of the Nuclear Energy Institute's Document 99-02, "Regulatory Assessment Performance Indicator Guideline," to verify the performance indicator data. The following Performance Indicators were evaluated which constituted four inspection procedure samples:

- Unplanned Power Changes;
- Emergency Alternating Current Power System Unavailability;
- Auxiliary Feedwater Heat Removal System Unavailability; and
- Residual Heat Removal System Unavailability.

The inspectors reviewed corrective action documents, monthly operating reports, completed surveillance procedures, control room logs, and licensee event reports to independently verify the data that the licensee had collected. The inspectors also independently re-performed calculations for system unavailability when applicable.

###### b. Findings

No findings of significance were identified.

##### 4OA2 Identification and Resolution of Problems (71152)

###### .1 Routine Review of Identification and Resolution of Problems

###### a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that issues were entered into the licensee's corrective action system at an appropriate threshold, that adequate attention was given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors also reviewed all condition reports written by licensee personnel during the inspection quarter. Minor issues entered into the licensee's corrective action system as a result of inspectors' observations are included in the list of documents reviewed which is attached to this report.

###### b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

- .1 May 1, 2003 Event Notification Number 39816: Loss of Radiation Level Indications in the Auxiliary Building and Containment Vent Stacks.

On May 1, 2003, the licensee conservatively reported a major loss of emergency assessment capability under 10 CFR 50.72(b)(3)(xiii). The licensee's report stated the following, in part: "it was determined that the Containment and Auxiliary Building SPING Units were not functioning properly and could not be relied upon to determine Emergency Classifications based on Emergency Action Level Chart A(2). Alternate Radiation Monitors remain available to provide indication of radiation levels in the Auxiliary Building and Containment Vent Stacks; however, their use is not currently proceduralized. The use of alternate radiation monitors to determine the Emergency Classification could impair the plant's ability to declare an emergency in a timely manner."

During routine followup of this event notification, the inspectors determined that the licensee had written a condition report to document the equipment deficiencies and taken immediate contingency actions at the time the event notification was made. However, the licensee had not assessed the impact on the emergency plan with these radiation monitors being out-of-service from approximately November 2002 through April 2003 and with no compensatory actions in place. Licensee management concurred that this issue needed further evaluation and initiated Condition Report CAP018205 to evaluate the consequences of the radiation monitors being out-of-service from approximately November 2002 through April 2003. Therefore, pending the licensee's evaluation of the circumstances surrounding this issue, the inspectors have identified this issue as an Unresolved Item, URI 05000305/2003006-03.

- .2 August 14, 2003, Loss of the East Coast Electric Power Grid: On August 14, 2003, shortly after 3:00pm (Central Time) there was a loss of the east coast power grid. Shortly after the grid loss, the inspectors observed onsite plant parameters and status, and reviewed the control room alarms and conditions immediately prior to and following the east coast event. The inspectors verified that plant equipment responded as expected and that the licensee entered minor equipment issues observed shortly after this evolution into the corrective action program. The inspectors verified that no significant effects were seen at the plant as a result of this event.

- .3 (Closed) Licensee Event Report (LER) 50-305/2001-002-03: Non-Rated Fire Barrier Separating Redundant Appendix R Safe Shutdown Capabilities.

The licensee submitted an update to the original Licensee Event Report to reflect the licensee's completed Root Cause Evaluation and additional corrective actions taken in response to this event. This issue was initially discussed as an Unresolved Item URI 50-305/01-02-1 and subsequently closed as an Non-Cited Violation in NRC Inspection Report 50-305/01-11. A final safety significance determination of was documented in a letter to the licensee dated June 6, 2001. The inspectors concluded that this update provided supplemental information regarding this issue based on the

licensee's completion of a Root Cause Evaluation and the updated information did not affect the final safety significance documented. Therefore, the inspectors considered this item closed.

#### 40A4 Cross-Cutting Aspects of Findings

- .1 A Green finding described in Section 1R15.1 of this report had, as a primary cause, a human performance deficiency, in that, a revision to Refueling Procedure RF-01.00 removed the procedure step to ensure the refueling cavity drain standpipe was installed following refueling activities without the appropriate verification and validation of the actual plant configuration.

#### 40A5 Other Activities

(Closed) Unresolved Item (URI) 50-305/01-02-02: Relay room carbon dioxide system testing. This issue was reviewed by the Office of Nuclear Reactor Regulation and the Office of General Counsel. The NRC staff's acceptance of the Kewaunee system was based on the licensee's commitment to satisfy the requirements of National Fire Protection Association (NFPA) 12-1973, "Carbon Dioxide Extinguishing Systems." Based on the licensee's commitment to meet the NFPA 12-1973, the licensing basis requirement for carbon dioxide concentration was 50 percent and because

NFPA 12-1973 did not require a specific soak time, there was no specific licensing basis soak time for Kewaunee. Since the 1973 edition of the standard did not explicitly require a full discharge test, no full discharge test was required. The NRC concluded that the licensing basis for the gaseous suppression system at Kewaunee has been met. This item is closed.

#### 40A6 Meetings

On October 2, 2003, the resident inspectors presented the inspection results to Mr. Hoops and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

#### .2 Interim Exit Meetings

An exit meeting was conducted for:

- Results of Licensed Operator Requalification Testing for Calendar Year 2003 and Applicability of NRC Inspection Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)," with K. Davison on August 26, 2003.

#### 40A7 Licensee-Identified Violation

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Nuclear Management Company, LLC**

T. Coutu, Site Vice President  
K. Hoops, Site Director  
G. Arent, Regulatory Affairs  
L. Gerner, Acting Regulatory Affairs Manager  
L. Armstrong, Engineering Director  
K. Davison, Operations Manager  
S. Baker, Manager, Radiation Protection  
M. Fencil, Security Manager, Kewaunee/Point Beach  
G. Harrington, Licensing  
J. McCarthy, Plant Manager  
B. Presl, NMC Security Consultant  
S. Putman, Assistant Plant Manager, Maintenance  
R. Repshas, Manager, Site Services  
J. Riste, Licensing Supervisor  
J. Stafford, Superintendent, Operations

#### **NRC Personnel**

J. Lamb, Project Manager  
T. McMurtray, Acting Project Manager  
J. Gavula, Senior Reactor Engineer

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

05000305/2003006-01	NCV	Green 10 CFR 50, Appendix B, Criterion V NCV for the Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Seismic Storage of Equipment Near the 'A' Auxiliary Feedwater Piping (Section 1R04.1)
05000305/2003006-02	NCV	Green 10 CFR 50, Appendix B, Criterion V NCV for the Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Installation of the Refueling Cavity Drain Standpipe Following Refueling Activities (Section 1R15.1)
05000305/2003006-03	URI	Licensee Evaluation of Circumstances Surrounding Event Notification 39816, dated May 1, 2003 (Section 4OA3.1)

### Closed

05000305/2003006-01	NCV	Green 10 CFR 50, Appendix B, Criterion V NCV for the Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Seismic Storage of Equipment Near the 'A' Auxiliary Feedwater Piping (Section 1R04.1) (Section 1R04.1)
05000305/2003006-02	NCV	Green 10 CFR 50, Appendix B, Criterion V NCV for the Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Installation of the Refueling Cavity Drain Standpipe Following Refueling Activities (Section 1R15.1) (Section 1R15.1)
05000305/2001002-02	URI	Relay room carbon dioxide system testing. (Section 4OA5)
05000305/2001002-03	LER	Non-Rated Fire Barrier Separating Redundant Appendix R Safe Shutdown Capabilities (Section 4OA3.3)

### 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 of 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.

### 1R04 Equipment Alignment

N-DGM-10-CLA; Diesel Generator Fuel Oil System Prestartup Checklist; Revision I

E-244; Circuit Diagram Generator And 4160V Equipment, Revision Z

OPERXK-100-29; Flow Diagram Safety Injection System, Revision Z

OPERM-202-1,2,3; Flow Diagram Service Water System, Sheets 1,2, and 3

N-SI-33-CL; Operating Procedure - Safety Injection System Prestartup Checklist, Revision AG

N-FW-O5B-CL; Operating Procedure, "Auxiliary Feedwater System Prestartup Checklist," July 26, 2001

GNP1.31.1; General Nuclear Procedure - Plant Cleanliness and Storage, Revision E

September 10, 1996 correspondence entitled AFW Pipe Seismic Housekeeping

#### Condition Reports Initiated for NRC-Identified Issues

CAP017487; NRC Resident Question Concerning FI-23153, Feedwater Bypass Line Flow Indicator

CAP017411; Valves Associated with Safety Injection Pumps Not Labeled

CAP017192; No CAP Written When Control Room AFW Pump Room Smoke Alarm Actuated

CAP017393; Potential Interaction of 3-Inch AFW Line with Portable Equipment

### 1R05 Fire Protection

KNPP Fire Protection Program Plan; Revision 4

PFP-5; Fire Plan Drawing - 1A Diesel Generator and Diesel Generator Day Tank Rooms; Revision C

PFP-6; Fire Plan Drawing - 1B Diesel Generator and Diesel Generator Day Tank Rooms; Revision C

PFP-9; Fire Plan Drawing - 480V Switchgear Bus 1-61 and 1-62 Room and Auxiliary Feedwater Pump Area; Revision B

PFP-22; Fire Plan Drawing - Residual Heat Removal Heat Exchanger, Component Cooling Water Pump, Letdown and Sealwater Filter Areas and Refueling Water Storage Tank and Valve Gallery; Revision C

PFP-4; Fire Plan Drawing - Screenhouse; Revision B

PFP-38; Fire Plan Drawing - Technical Support Center; Revision B

PMP-08-33; Penetration Fire Barrier Inspection; July 18, 2003; Revision E

Condition Reports Initiated for NRC-Identified Issues

CAP017388; Penetration PEN1021 Found in Degraded Condition

CAP017872; Abandoned Anchor Hole Found Above TSC Battery Room (Broke/Fix)

CAP018204; Wrong Fire Extinguisher Installed on Fire Station No. 26 (Broke/Fix)

CAP017192; No CAP Written When Control Room Auxiliary Feedwater Pump Room Smoke Alarm Actuated

1R07 Heat Sink Performance

PMP 10-11; Preventive Maintenance Procedure - Diesel Generator Cooling Water Heat Exchanger Performance Monitoring, Revision B; performed August 7, 2003

C11150; Calculation, Proto-Hx Inputs for Diesel Generator Jacket Water Coolers

CAP017760; Diesel Generator Performance Monitoring Data Entry Error

CAP017347; Generic Letter 89-13 Compliance Issue Discovered During Self-Assessment

Condition Reports Initiated for NRC-Identified Issues

CAP017771; Generic Letter 89-13 Test Methodology Questioned by NRC Resident Inspector

1R11 Licensed Operator Requalification

LRC-03-DY501; Cycle 03-05 Dynamic Exam, Revision A, dated August 19, 2003

1R12 Maintenance Implementation

Maintenance Rule Periodic Assessment; January 1, 2002 through December 31, 2002

Maintenance Rule System Basis - Emergency Diesel Generator; Revision 3

KNPP System Description (System No. 42); Diesel Generator Electrical (DGE),  
Revision 1

KNPP System Description (System No. 33); Safety Injection System (SI), Revision 4

Maintenance Rule a(1) and a(2) SSC Summary with PCs Exceeded during Month;  
June 2003

NAD-08.20; Maintenance Rule Implementation; Revision C; August 8, 2002

GNP-08.20.04; Maintenance Rule MRFF and MPFF Evaluations; Revision C;  
November 26, 2002

MRE002036 - Diesel Generator A Startup Air Dryer Local C/S Found in OFF Position,  
June 25, 2003

MRE001680 - D/G 1A Fuel Oil Tank Lo Level Alarm, December 9, 2002

MRE001539 - Out of spec on SP 33-056B (SI Accumulator Pressure Calibration),  
July 26, 2002

MRE001542 - Bistable (PC-937B) Found Out Of Tolerance During SP 33-56B, July 29,  
2002

MRE001850 - SI-312 Set point failure, April 19, 2003

NUMARC 87-00; Guidelines and Technical Bases for NUMARC Initiatives;  
Section D.2.2.2 Determining Unit EDG Reliability Indicator for Last 50 Demands,  
Revision 1

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

Safety Monitor Risk Assessment, Control Room Logs and Work Schedule for July 7  
through 11, 2003

Safety Monitor Risk Assessment, Control Room Logs and Work Schedule for July 14  
through 18, 2003

Safety Monitor Risk Assessment, Control Room Logs and Work Schedule for July 21  
through 25, 2003

Safety Monitor Risk Assessment, Control Room Logs and Work Schedule for August 18  
through 22, 2003

Safety Monitor Risk Assessment, Control Room Logs and Work Schedule for September 22 through 26, 2003

GNP 08.02.15; General Nuclear Procedure - Maintenance Activity Risk Assessment/ Management Process, Revision A

Condition Reports Initiated for NRC-Identified Issues

CAP017399; Missed Maintenance Rule (a)(4) Evaluation for 7/23/2003

1R14 Personnel Performance During Non-Routine Plant Evolutions

DC/PM3398-5; Physical Change Procedure, KNPP 1.4 percent MUR Power Uprate Implementation Plan, Revision C

Infrequently Performed Tests and Evolutions Checklists associated with Physical Change Procedure DC/PM3398-5

TCR DC/PM3398-5; Temporary Change Form for KNPP 1.4 percent MUR Power Uprate Implementation Plan, dated July 1, 2003

TCR DC/PM3398-5; Temporary Change Form for KNPP 1.4 percent MUR Power Uprate Implementation Plan, dated July 15, 2003

CAP017264; Human Performance Error During Performance of SP 36-272A

CAP017266; Incorrect Guidelines in Operations Procedures

CAP017097; MUR Power Uprate Appendix R Issue

CAP017267; AMAG Indicating Sudden Change in Correction Factor

CAP017417; Increased Variation in T-avg and Delta-T

CAP017453; Plant Backdown Required Due to Unexpected UFMD Response to Testing

Condition Reports Initiated for NRC-Identified Issues

CAP017691; Logging of Reactivity Manipulations During the Shift

1R15 Operability Evaluations

GNP 11.08.03; General Nuclear Procedure - Operability Determination, Revision B

CAP017169; 'A' Diesel Generator Speed Cycling and associated Operability Determination

CAP017273; Blue Channel T-Average Response and associated Operability Determination

CAP017771; Generic Letter 89-13 Test Methodology Questioned by NRC Resident Inspector

CAP017357; Refueling Cavity Standpipe Not Installed

CAP017736; QA Typing on Fire Protection Relays for A&B DG Start and Trip circuit not correct.

OBD000052; QA Typing on Fire Protection Relays for A&B DG Start and Trip circuit not correct.

OPR000046; Containment Refueling Cavity Standpipe May Not Be Installed

Preventative Maintenance Procedure PMP-08-30, "FP - CO2 System Inspection and Dry Test (QA-1)"

1R16 Operator Work-Arounds

Control Room Deficiency Log - Danger Tags, dated September 7, 2003

Control Room Deficiency Log - Out of Service Stickers, dated September 7, 2003

NAD-12.07; Nuclear Administrative Directive - Operator Workarounds, Revision B, September 19, 2002

ES-3.3; Emergency Operating Procedure - Post SGTR Cooldown Using Steam Dump, Revision K, November 28, 2001

Condition Reports Initiated for NRC-Identified Issues

CAP018070; IPEOP ES3.3, Step 9 Implies Atmospheric Steam Dump is Available When it is Not

1R19 Post-Maintenance Testing

PMP-33-01; SI - Safety Injection System QA-1 Pump Maintenance, Revision O

SP-33-098B; Train B Safety Injection Pump and Valve Test - IST, Revision A

SP-55-177; Inservice Testing of Pumps Vibration Measurements, Revision AA

GMP-131, Operational Use for SKF Microlog Analyzers, Revision F

Surveillance Work Order 03-001588-000, Vibration Monitoring

GMP-210, Operational Use of Infrared Scanners, Revision E

PMP-38-08; "EDC - DC Supply & Distribution 7.5 KVA Inverter Electrical Maintenance," Revision G; May 1, 2003

Work Order Number 03-008782-000; "Inverter-BRA 111 (Instrument Bus I)

SP-31-168A; Train A Component Cooling Water Pump and Valve Test - IST, Revision A; partial retest for SW-1300A on August 13, 2003

SP-31-168B; Train B Component Cooling Water Pump and Valve Test - IST, Revision A; partial retest for SW-1300B on August 19, 2003

SP-31-168B; Train B Component Cooling Water Pump and Valve Test - IST, Revision A; performed August 21, 2003

WO 02-016484-00; General Maintenance Procedure 244 Motor Control Center Breaker Testing

WO 02-016483-00; General Maintenance Procedure 244 Motor Control Center Breaker Testing

SOP-CC-31-30; Component Cooling Pumps Recirculation Flow Verification, Revision A; performed on September 3, 2003

GNP-03.24.01; Job Briefs Implementation, Revision B

CAP017845; Instrument Inverter BRA-111 Output Voltage High

CAP017778; Component Cooling Surge Tank Level Decrease During SP-31-168B

#### 1R22 Surveillance Testing

SP-42-312BA; Diesel Generator B Availability Test; Revision R

SP-42-328B; Diesel Generator B Start-UP Air Leakage Test; Revision ORIG

PMP 10-10; Diesel Generator Mechanical (DGM) Barring Over Engine (QA-1); Revision G

PMP 42-08; Auto Sequencing Test With Diesel B in Pullout, Revision I

PMP 10-02; DGM - Fluid Samples, Revision M

SP-23-100A; Train A Containment Spray Pump and Valve Test - IST, Revision D; performed on August 13, 2003

SP-55-177; Inservice Testing of Pumps Vibration Measurements, Revision AA

Historical Vibration Data for Internal Containment Spray Pump and Motor Train A as of August 13, 2003

ASME Oma-1998, Part 6; Inservice Testing of Pumps in Light-Water Reactor Plants

SP-31-168A; Train 'A' Component Cooling Water Pump and Valve Test - IST, Revision A; performed August 14, 2003

RT-DGM-10-TSC; Technical Support Center Diesel Generator, Revision X, July 24, 2003

SP-23-100B; Train B Containment Spray Pump and Valve Test, Revision C, February 27, 2003

N-ICS-23-CL; Containment Spray System Prestartup Checklist, Revision AB, March 25, 2003

SP-34-099A; Train 'A' Residual Heat Removal Pump and Valve Test, Revision C, April 24, 2003

03-004275-000; Surveillance Work Order for SP-34-099A

SP-18-043; Containment Pressure Monthly Test, Revision V, October 9, 2000

CAP 018013; Oil required for ICS Pump B following SP-23-100B

ACE002157; Apparent Cause - ICS-9A Opening Torque is at the Maximum Reference Value of 165 inch-lbs during SP-23-100A

CAP017479; Relay PC 948B/XB did not actuate during SP 18-043

CAP017648; Coordination of RT-ICS-23 and SP-23-100A

Condition Reports Initiated for NRC-Identified Issues

CAP017688; Incorrect Revision of Pre-Job Briefing Checklist Used

CAP017939; NRC Question - ICS Pump Vibration Readings

CAP018080; Minor Oil Leak Identified on the RHR Pump Motor Oil Sight Glass

CAP017690; Attachment of Pre-Job Brief and Post-Job Critique Checklists to Operations Surveillance Procedures

1R23 Temporary Plant Modifications

TCR-03-26; Relocate the Pressurizer PORV Discharge Temperature Reference Resistor and associated 50.59 Screening

CAP017181; Temperature Element-438, Pressurizer PORV Discharge Temperature, Out of Service

OPER XK-100-10; Flow Diagram - Reactor Coolant System

#### 1EP6 Drill Evaluation

Kewaunee Nuclear Power Plant Emergency Preparedness Drill Material from August 6, 2003, Drill

Pre-Exercise Drill Critique for August 6, 2003 Drill; dated August 26, 2003

Simulator Control Room, Technical Support Center and Emergency Operations Facility Controller Event Log Sheets from August 6, 2003 Drill

#### 4OA1 Performance Indicator Verification

GNP-03.18.01; General Nuclear Procedure - NRC Performance Indicators Reporting Instructions, Revision G, April 15, 2003

CAP015007; Diesel Generator B failed to start as required, February 28, 2003

CAP015049; Diesel Generator B in NMC 'Alarm' Status, March 3, 2003

Licensee Event Report LER 2003-002-00; Shutdown initiated - Diesel Generator Failed Start Test - Unusual Event - Caused by Start Relay Failure

CAP015459; Unexpected Response During SP-42-312A 'DG A Availability Test, April 1, 2003

CAP016188; AFW Pump Operability Concern due to working on discharge check valves, April 30, 2003

CAP016404; AFW-10B Closing Time Exceeds Action Value, May 12, 2003

Licensee Records and data for the 3<sup>rd</sup> Quarter 2002, 4<sup>th</sup> Quarter 2002, 1<sup>st</sup> Quarter 2003, and 2<sup>nd</sup> Quarter 2003 NRC Performance Indicators

#### Condition Reports Initiated for NRC-Identified Issues

CAP017198; Error in Reporting Parafield Compensatory Hours 3Q 2002

#### 4OA3 Event Followup

Letter Dated August 26, 2003 from NMC to the NRC, entitled Reportable Occurrence 2001-002-03.

#### Condition Reports Initiated for NRC-Identified Issues

CAP017749; Access Authorization

CAP018205; Consequences of SPING Units Being Out of Service Long Term

CAP018104; Emergency /Diesel Generator Fuel Oil Contract

## LIST OF ACRONYMS USED

AFW	Auxiliary Feedwater
CAP	Corrective Action Process
CFR	Code of Federal Regulations
EDG	Emergency Diesel Generator
LBLOCA	Large Break Loss of Coolant Accident
LER	Licensee Event Report
NCV	Non-Cited Violation
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
SDP	Significance Determination Process
TSC	Technical Support Center
URI	Unresolved Item
WO	Work Order