April 28, 2004

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

SUBJECT: KEWAUNEE NUCLEAR POWER PLANT
NRC INTEGRATED INSPECTION REPORT 05000305/2004002

Dear Mr. Coutu:

On March 31, 2004, 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 April 6, 2004, with you 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, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector Office at the Kewaunee facility.

In accordance with 10 CFR 2.390 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 document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Kimberly A. Gruss, Acting Chief
Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000305/2004002
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.:	05000305/2004002
Licensee:	Nuclear Management Company, LLC
Facility:	Kewaunee Nuclear Power Plant
Location:	N 490 Highway 42 Kewaunee, WI 54216
Dates:	January 1 through March 31, 2004
Inspectors:	R. Krsek, Senior Resident Inspector J. Adams, Senior Resident Inspector, Prairie Island P. Krohn, Senior Resident Inspector, Point Beach R. Morris, Resident Inspector, Point Beach D. Karjala, Resident Inspector, Prairie Island F. Ramirez, Reactor Engineer D. Nelson, Radiation Specialist H. Peterson, Senior Operations Engineer B. Jorgensen, NRC Consultant M. Jordan, NRC Consultant
Approved By:	K. A. Gruss, Acting Chief Branch 5 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000305/2004002; 01/01/2004 - 03/31/2004; Kewaunee Nuclear Power Plant; Licensed Operator Requalification and Event Follow-up.

This report covers a 3-month period of baseline resident inspection and an announced baseline radiation protection program inspection. The inspections were conducted by the resident and Region III inspectors. The inspection identified one NRC-identified Green finding and one self-revealed Green finding, both associated with non-cited violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." 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. A finding of very low safety significance associated with a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when, on December 10, 2003, licensee personnel discovered evidence of component cooling water (CCW) system leakage from a radiation detector housing integral to the CCW piping. The leakage was determined to be evidence of a through wall leak of an American Society of Mechanical Engineers (ASME) Section XI Class 3 pipe which rendered both trains of CCW inoperable. Therefore, on December 12, 2003, operators declared both trains of the CCW system inoperable, due to the small CCW leak on the CCW radiation detector housing. The licensee subsequently determined that evidence of the leakage had been present for the past 13 years. However, less than adequate procedure acceptance criteria resulted in licensee personnel classifying the leakage during inservice inspections as a 'non-recordable' indication instead of the required 'recordable' indication for this type leakage.

  The licensee took immediate corrective actions to move the ASME Section XI Class 3 piping boundary to the radiation detector housing. In addition, the licensee implemented corrective actions to prevent recurrence which included: revision of 19 inservice inspection surveillance procedures to incorporate appropriate acceptance criteria; and discussions of the root cause with licensee inservice inspection personnel as a lessons-learned.

  This self-revealed finding was greater than minor because, if left uncorrected, the finding would become a more significant safety concern. The inspectors

evaluated the finding using the Significance Determination Process, Appendix A, Phase 1 Screening, and determined that the finding was of very low safety significance. (Section 4OA3.1)

- Green. A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspectors identified that the facility licensee failed to notify the NRC within 30 days of an identification of a change in medical status of a licensed operator that required a restriction to the operating license. Specifically, the facility licensee received a change in medical status following a biennial medical examination conducted in March 2002 requiring a corrective lenses restriction on an operator's license in accordance with the medical requirements of 10 CFR 55.21, "Medical Examination," 55.23, "Certification," and 55.25, "Incapacitation Because of Disability or Illness." Although the facility licensee received the appropriate information from the medical physician of the license restriction, the requirement for the license restriction was not identified nor the NRC informed until the NRC identified the error on January 6, 2004. Once identified, the licensee implemented immediate corrective actions to review all operators' records to demonstrate that no other similar condition existed. In addition, the facility licensee verified that the operator in question had worn corrective lenses since the issuance of the original operator license.

  This finding was more than minor because the combination of inadequate attention to detail in processing medical examination documents by the medical physician and the inadequate processing of medical restrictions by the facility licensee could result in potential consequences due to licensed operators who may not be medically qualified, or may require license restrictions, to perform licensed duties. This could, therefore, potentially affect the health and safety of the public. The finding was also of very low safety significance because no actual consequences were noted due to the adverse medical condition. In addition, no adverse operational events were observed to have occurred due to inadequate medical conditions or medical restrictions to the operator's license. (Section 1R11.1)

B. <u>Licensee-Identified Violation</u>

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 except for brief periods when operators reduced power to facilitate routine tests. In addition, on January 16, 2004, operators initiated a standard shutdown sequence in accordance with Technical Specifications (TSs) when the licensee declared both trains of safety injection (SI) pumps inoperable due to the discovery of significant debris accumulation in both the SI pump lube oil coolers. Following the implementation of corrective actions for this issue, the plant was returned to 100 percent power on February 1, 2004. As a result of this incident, the NRC initiated a special inspection which was documented in NRC Special Inspection Report No. 05000305/2004003.

On February 27, 2004, the licensee received License Amendment No. 172 from the NRC's Office of Nuclear Reactor Regulation to increase reactor power from 1673 megawatts-thermal to 1772 megawatts-thermal, through a Stretch Power Uprate. The licensee began implementation of the Stretch Power Uprate on March 21, 2004, and thereafter reactor power was reported as 94 percent (1673 megawatts-thermal). On March 25, 2004, reactor power was increased to 1772 megawatts-thermal which corresponded to the new 100 percent power limit for the plant.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

During periods of cold weather, when conditions were indicative of frazil ice formation, the inspectors reviewed the facility's design and the licensee's procedures to verify that structures, systems and components would remain functional when challenged by the adverse weather conditions. This represented one inspection procedure sample. Additionally, the inspectors walked down selected plant areas to ensure that operator actions maintained the readiness of essential systems and that accessibility of controls, indications, and equipment would be maintained during these cold weather conditions. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed partial walkdowns of the following four systems, completing four inspection procedure samples:

- Train A Diesel Generator, while the Train B Diesel Generator was out-of-service;
- Train A CCW System, while the Train B CCW System was out-of-service;
- Train A Residual Heat Removal (RHR) System, while the Train B RHR System was out-of-service; and
- Accessible portions of the Main Steam and Main Feedwater Systems outside containment, following implementation of the Stretch Power Uprate.

The inspectors conducted partial walkdowns of the systems listed 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 inspectors also observed the material condition of the equipment. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors walked down the following six fire protection zones, completing six inspection procedure samples:

- Fire Zone SC-70A, Service Water (SW) Screenhouse North;
- Fire Zone SC-70B, SW Screenhouse South;
- Fire Zone TU-22, Turbine Building Basement, Elevation 586;
- Fire Zone TU-22, Turbine Building - Operating Floor, Elevation 626;
- Fire Zone AX-23A, SI Pumps 1A and 1B; and
- Fire Zone AX-35, Control Room Area.

During the walkdowns, the inspectors focused on the availability, accessibility, and condition of fire fighting equipment; the control of transient combustibles and ignition sources; and the operating status of installed fire barriers. The inspectors selected fire areas for inspection based on the overall contribution to internal fire risk, and the potential to impact equipment which could initiate a plant transient. The inspectors verified that fire response equipment was in the designated location and available for

immediate use without obstruction; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and that passive features such as fire doors, dampers, and penetration seals were in satisfactory condition. The inspectors verified that minor issues identified during the inspection were entered into the licensee's corrective action program (CAP).

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Conformance With Operator License Conditions (Medical)

a. Inspection Scope

The inspectors evaluated the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. Specifically, the inspectors reviewed four license applications for an initial operator license. One particular license application was for an individual who was applying for a licensed operator upgrade to a Senior Reactor Operator (SRO) license. The inspectors reviewed the previously licensed operator's application and medical certification in accordance with the medical standards delineated in ANSI/ANS 3.4-1983, "American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," and with the medical requirements of 10 CFR 55.21, "Medical Examination," 55.23, "Certification," and 55.25, "Incapacitation Because of Disability or Illness." The inspectors interviewed management personnel via telephone and reviewed pertinent licensee documents, including corrective action reports and apparent cause evaluations (ACE).

b. Findings

Introduction: The inspectors identified two issues that were considered to be of very low safety significance. One issue was dispositioned as a Non-Cited Violation (NCV) and the second issue as an additional example of a previously identified NCV. The first issue was a Green finding that involved an NCV of 10 CFR 50.74(c), "Notification of Change in Operator or Senior Operator Status." The inspectors identified that the facility licensee failed to notify the NRC within 30 days of identification of a change in medical status of a licensed operator that required a restriction to the operator's Reactor Operator (RO) license. Specifically, the facility licensee received a change in medical status following a biennial medical examination conducted in March 2002, that identified that the operator required a corrective lenses restriction on the operator license in accordance with the medical requirements of 10 CFR 55.21, 55.23, and 55.25. This issue was considered to be NRC-identified because the licensee had failed to identify it for approximately 2 years, until identified by NRC on January 6, 2004, during a review of a license application for an upgrade SRO license.

The second issue was a Severity Level IV finding that involved a potential NCV of 10 CFR 50.9, "Completeness and Accuracy of Information." The inspectors identified

that the same individual who required a corrective lenses restriction on the operator license as described above was originally issued an RO license without any restrictions on January 18, 2001. The facility licensee management provided inaccurate information to the NRC regarding the operator's medical restrictions. Specifically, the licensee submitted Form NRC 396, "Certification of Medical Examination by Facility Licensee," certifying that the operator, as an initial license applicant for an RO license on November 9, 2000, required no medical restrictions on the operator license. However, the operator's medical records indicated that the operator's vision test failed to meet the medical requirements for eyes in accordance with ANSI/ANS 3.4-1983. The issue was considered to be of very low safety significance, but was considered to have important regulatory significance because the information was provided to the NRC under sworn statement and would have potentially affected NRC licensing actions.

Description: On January 6, 2004, following the review of preliminary license applications for four individuals scheduled to take the operator license examination in February 2004, the inspectors identified an apparent discrepancy for one individual applying for an SRO-upgrade license. The RO license, issued for that individual by the NRC on January 18, 2001, indicated no medical restrictions. However, the SRO-upgrade license application for the same individual in January 2004 noted a medical restriction for corrective lenses in accordance with ANSI/ANS 3.4-1983 and 10 CFR 55.23.

Between February and April 2004, the inspectors performed periodic follow up inspections through phone conversations and document reviews to ascertain the cause of the apparent discrepancy and any corrective actions pertaining to the identified issues. Based on a review of the facility licensee's corrective action, CAP 019441, "Failure to Update Operator License for Restricted License Condition," and subsequent ACE of the issue, ACE 002532, the inspectors determined that a combination of mistakes, including inadequate attention to details and lack of oversight, resulted in the incorrect processing of the licensed operator's medical condition.

The initial error was made by the facility licensee's contract physician. On October 30, 2000, the contract physician documented the operator's medical condition as no restrictions required on the initial application. This information was submitted to the Kewaunee RO training department through the facility licensee's document, "Medical Certification of NRC Licensed Personnel." However, the medical records indicated that the individual wore contact lenses and the uncorrected vision acuity was 20/200 for both eyes. In accordance with ANSI/ANS 3.4-1983, Section 5.4.5, "Eyes," the near and distance visual acuity must be at least 20/40 in the better eye, corrected or uncorrected. Although the medical physician appropriately tested the individual and documented the medical examination, the physician failed to correctly document the operator license medical restriction that corrective lenses must be worn when performing licensed duties in accordance with ANSI/ANS 3.4-1983.

On March 14, 2002, during the required biennial medical evaluation of all licensed operators, the same medical physician documented that the same operator required a

corrective lenses restriction on the operator license in accordance with ANSI/ANS 3.4. The medical certification noted that the license restriction was received and processed

by the Kewaunee training department. The facility licensee noted the medical certification for corrective lenses restriction for the operator in question and updated the internal database using Form G-1, "Operations Watchstander Temporary Restriction," dated March 22, 2002. However, no actions were taken to verify and update the condition of the operator's license or notify the NRC of the change in medical status. Once the change in medical condition was known, the facility licensee was required to notify the NRC within 30 days in accordance with 10 CFR 50.74(c). The NRC must be notified to appropriately place the required license restriction in accordance with 10 CFR 55.23 and 55.25.

The facility licensee issued CAP 19441 and implemented immediate corrective actions to ensure the operator's conformance with corrective lenses and to review all of the other operators' training and medical records to preclude similar errors. Additional corrective actions included formal training of licensed operators on their responsibility with respect to the requirements of ANSI/ANS standard 3.4. The facility licensee also implemented additional requirements for a previously opened corrective action dated September 23, 2002, CAP 013062, "Failure to Perform Portions of the Medical Certification Tests for Licensed Personnel," to develop a site procedure to address control and tracking of operator licenses. This action was anticipated to be completed by May 2004. Although the facility licensee continued to document and track corrective actions and performed evaluation of apparent causal factors, the inspectors determined that the facility licensee lacked a thorough root cause evaluation.

Analysis: The inspectors reviewed the issue concerning the licensee's failure to timely notify the NRC of a change in status of licensed operators' medical condition against the guidance contained in Appendix B, "Issue Dispositioning Screening," of Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports." This finding affected the mitigating system cornerstone objective because inadequate evaluation or identification of medical restrictions on operator licenses could result in potential consequences. A licensed operator who may not be medically qualified to perform licensed duties could cause operational errors, thus potentially endangering the health and safety of the public. Consequently, the safety significance of this issue was determined to be more than minor.

The inspectors reviewed this issue in accordance with Manual Chapter 0609, "SDP," Appendix I, "Operator Requalification Human Performance SDP." The SDP concerning medical issues focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. Based on this SDP, the inspectors determined that this finding was of very low safety significance (Green) because the failure to properly identify and inform the NRC of medical restrictions on operator licenses exceeded the 20 percent threshold (one out of four records reviewed) for record deficiencies.

The NRC relied on the NRC Form 396, signed by the site vice president, as the licensee's certified evidence to the NRC of the medical certification to comply with 10 CFR 55.21 and 55.23. The submitted form affirmed the applicant's medical condition and general health as adequate and allowed the NRC to perform the regulatory processes to authorize an applicant to take the NRC initial license examination and to issue an NRC operator license, once the applicant successfully passed the NRC

examination. In addition, the forms further indicated that any false statement or omission may be subject to civil and criminal sanctions.

The inspectors determined that the failure to provide accurate and complete information to the NRC regarding complete medical evaluations of initial RO license applicants was a significant regulatory issue and a violation of 10 CFR 50.9. In addition, because violations of 10 CFR 50.9 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the SDP. Using IMC 0612, Appendix B, the inspector determined that the finding was more than minor because the information was provided to the NRC signed under oath by the site vice president and would have resulted in a reconsideration of a NRC regulatory position. Specifically, the operator would have been issued an operator license with a medical restriction for corrective lenses rather than an operator license with no restrictions. However, following the licensee's corrective actions to review all other operator records for similar conditions and verification that the operator in question appropriately wore corrective lenses while performing license duties, no adverse operational events were observed to have occurred due to inadequate medical conditions or restrictions on the operator license.

Enforcement: Title 10 CFR 50.74(c) requires, in part, that each facility licensee notify the NRC within 30 days of a permanent disability or illness as described in 10 CFR 55.25 in regard to a licensed operator or senior operator. Part 55.25 requires, in part, that if a licensed operator develops a permanent physical or mental condition that causes the operator to fail to meet the requirements of Part 55.21, the facility licensee must notify the NRC within 30 days of learning of the diagnosis in accordance with 10 CFR 50.74. For conditions for which a conditional license is required, the facility licensee must provide medical certification on NRC Form 396 as required by 10 CFR 55.23. Title 10 CFR 55.21 requires, in part, that the licensed operator have a medical examination by a physician every 2 years. The physician shall determine that the applicant or licensee meets the requirements of 10 CFR 55.33(a)(1). In addition, 10 CFR 55.23 requires that to certify the medical fitness of the applicant, an authorized representative of the facility licensee complete and sign NRC Form 396, "Certification of Medical Examination by Facility Licensee." The licensee committed to follow ANSI/ANS 3.4-1983 to assure compliance with 10 CFR 55.21, 55.23, and 55.25. The criteria in ANSI/ANS 3.4-1983 requires, in part, that the primary responsibility for assuring that qualified personnel are on duty rests with the facility licensee. In addition, the health requirements set forth in that standard provide the minimum criteria necessary to determine that the physical condition and general health of the operators would not cause operational errors which could lead to endangering public health and safety. The specific health requirements are described in Section 5.4, "Specific Minimum Capacities Required for Medical Qualifications," of the ANSI standard.

On March 14, 2002, during the required biennial medical examinations, the licensee was informed by the contract medical physician of a medical restriction for corrective lenses (ANSI/ANS Section 5.4.5, "Eyes") for a RO licensed operator. The facility licensee acknowledged the medical evaluation, but failed to appropriately inform the NRC within 30 days of the change in medical condition and request a license medical restriction. On January 6, 2004, the inspectors identified the lack of the required medical restriction on the operator's license. In addition, the inspectors identified that the operator was

previously licensed as an RO in January 2001, and was not appropriately licensed with the required medical restriction for corrective lenses (ANSI/ANS Section 5.4.5, “Eyes”).

This Green finding concerning the licensee’s failure to notify the NRC within 30 days following the diagnosis of permanent change in medical status of an operator is considered a violation of 10 CFR 50.74(c). Because of the very low safety significance, this violation is being treated as a Non-Cited Violation (05000305/2004002-01), consistent with Section VI.A.1 of the ”General Statement of Policy and Procedure for NRC Enforcement Actions,” NUREG-1600, NRC Enforcement Policy. This issue is in the licensee’s CAP as CAP 019441 and CAP 013062. The licensee adequately implemented immediate corrective action and satisfactorily verified that the operator was performing licensed duties with corrective lenses. In addition, the licensee implemented additional corrective actions as indicated in this report.

Title 10 CFR 50.9 requires, in part, that information provided to the NRC by an applicant for a license or the licensee be complete and accurate in all material respects. Title 10 CFR 55.23 requires that an authorized representative of the licensee certify the medical fitness of an applicant by completing and signing NRC Form 396. Form 396, when signed by an authorized representative of the facility licensee, certifies that a physician conducted a medical examination of the applicant as required in 10 CFR 55.21, and the guidance contained in ANSI/ANS 3.4-1983 was followed in conducting the examination and making the determination of medical qualification. However, on or about November 9, 2000, the facility licensee submitted an NRC Form 396 for an applicant applying for an initial operator’s license, in accordance with 10 CFR 55.21, that was not accurate in all material respects. Specifically, the NRC Form 396 certified that the applicant met the medical requirements of ANSI/ANS 3.4-1983 with no medical restrictions. In fact, the applicant failed to meet the minimum standards of ANSI/ANS 3.4-1983 for the medical criteria for eyes. The applicant required a medical restriction for corrective lenses on the operator license. This information was material to the NRC because the NRC relied on this certification to determine whether the applicant met the requirements to operate the controls of a nuclear power plant pursuant to 10 CFR Part 55.

This finding, concerning the inaccurate information, is considered a violation of 10 CFR 50.9 and is characterized at Severity Level IV. The violation was determined to be of very low safety significance because no adverse operational events were observed to have occurred due to inadequate medical conditions or medical restrictions on the license. Although this issue was of significant regulatory concern because an incorrect licensing action was taken based on the inaccurate information that was provided by the licensee, the inspectors determined that the cause of the error was due to the lack of attention to detail by the contract medical physician. The cause of this error was similar to the previous 10 CFR 50.9 Non-Cited Violation (05000305/2003005-02) documented in November 2003. Because, in both cases, the same contract medical physician failed to implement the requirements of ANSI/ANS 3.4 - 1983, this violation is being treated as an additional example to the November 2003 NCV.

.2 Resident Inspector Quarterly Inspection of Licensed Operator Requalification

a. Inspection Scope

On March 16, 2004, the inspectors observed a simulator dynamic requalification examination for Cycle 04-02, completing one inspection procedure sample. The inspectors evaluated 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 verified the crew's implementation of the facility's abnormal and emergency operating procedures and the 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.

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 listed below, completing two inspection procedure samples:

- Auxiliary Feedwater (AFW) System, System 05B; and
- Chemical and Volume Control System, System 35.

The inspectors verified that the licensee identified, entered, and scoped component and equipment failures within the maintenance rule requirements. The inspectors also verified that the systems and equipment were 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 (ARs), functional failure evaluations, unavailability records, and a sample of condition reports (CRs) to verify that the licensee identified 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. Documents reviewed during this inspection are listed in the Attachment.

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 following planned and emergent work activities, completing five inspection procedure samples:

- Safe Shutdown Functional Assessment for January 17 through 24, 2004;
- Safe Shutdown Functional Assessment for January 25 through 31, 2004;
- Safety Monitor Risk Assessment for February 9 through 13, 2004;
- Safety Monitor Risk Assessment for February 23 through 27, 2004; and
- Safety Monitor Risk Assessment for March 8 through 12, 2004.

In particular, the inspectors evaluated the licensee's planning and management of maintenance and verified that shutdown and on-line risk was acceptable and monitored 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. The inspectors also reviewed licensee actions to address increased shutdown and on-line risk during these periods to verify that the actions were in accordance with approved administrative procedures. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

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

.1 Intake Structure Frazil Ice Event

a. Inspection Scope

On January 28, 2004, the plant was in a start-up evolution, and weather conditions were appropriate for the formation of frazil ice on Lake Michigan. The reactor was in hot shutdown and a circulating water pump had been started at approximately 1:00 a.m. At approximately 4:00 p.m., the control room received a low SW forebay level alarm. The shift crew entered and followed the instructions contained in the applicable operations procedures. Service water bay level continued to decrease and at approximately 4:30 p.m. the control room operators stopped the operating circulating water pump prior to the automatic pump trip. Upon stopping the operating circulating water pump, SW forebay level promptly recovered to a normal level, terminating the transient. The licensee later confirmed that a frazil ice event had occurred, as evidenced by the small amounts of passive frazil ice observed at the intake structure by divers approximately 48 hours after the transient.

Immediately following the circulating water pump trip, the inspectors observed and verified continuing operator actions in the control room and performed a walkdown of the SW screenhouse with auxiliary equipment operators. The inspectors reviewed control room logs, reviewed the applicable operations procedures and verified that the

operator's actions were in accordance with plant procedures. The inspectors also verified that alternate safety-related SW supplies were available during the transient. Finally, the inspectors verified that issues identified during the transient were entered into the licensee's corrective action system, completing one inspection sample. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Implementation of Stretch Power Uprate

a. Inspection Scope

On February 27, 2004, the licensee received License Amendment No. 172 from the NRC's Office of Nuclear Reactor Regulation to increase reactor power from 1673 megawatts-thermal to 1772 megawatts-thermal, through a Stretch Power Uprate. The inspectors observed the licensee's implementation of the Stretch Power Uprate which began on March 21, 2004, and concluded at the new 100 percent power level of 1772 megawatts-thermal on March 25, 2004. The inspection activity completed one inspection procedure sample. Documents reviewed during this inspection are listed in the Attachment.

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 infrequently performed evolution 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. Prior to the initial increase in power, the inspectors reviewed and verified that license conditions incorporated into the license amendment, were accomplished.

Finally, the inspectors verified that the licensee identified issues associated with the power uprate implementation were entered into the licensee's corrective action system.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following operability evaluations, completing five inspection procedure samples:

- OPR000059; Consider Affect of Peak Containment Accident Temperature on Annulus Analysis;

- OPR000060; Consider Affect of Peak Containment Accident Temperature on Evaluation No. C10955;
- OPR000061; Discrepancy Between Predicted and Observed Performance of New SI Pump Oil Coolers;
- OBD015324; Lighting and Receptacle Panel LRPB1 Transformer No. 1-916, not Protected per National Electric Code; and
- OPR000063; Control Room Exclusion Zone (CREZ) Potential Design and Analysis Weaknesses.

The inspectors reviewed design basis information, the Updated Final Safety Analysis Report, TSs requirements, and licensee procedures to verify the technical adequacy of the operability evaluations. Documents reviewed during this inspection are listed in the Attachment. In addition, the inspectors verified that compensatory measures were implemented, as required. The inspectors verified that system operability was properly justified and that the system remained available, such that no unrecognized increase in risk occurred.

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 workarounds did not create significant adverse consequences regarding the reliability, availability, and operation of accident mitigating systems, completing one inspection procedure sample. Documents reviewed during this inspection are listed in the Attachment. The inspectors also assessed the effects of the workarounds on the ability to implement abnormal and emergency response procedures in a correct and timely manner. In addition, the inspectors reviewed any emergent risk significant operator workarounds to determine if the functional capability of a system or human reliability of an initiating event was affected.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed the engineering analyses, design information and modification documentation for the installation of the new SI pump lube oil coolers installed during the forced outage in January 2004, completing one inspection procedure sample. Documents reviewed during this inspection are listed in the Attachment. The inspection activities included, but were not limited to, verification and review of the following

parameters associated with this modification: material compatibility; functional properties; environmental qualification; seismic qualification; heat removal; operation; flow paths; pressure boundary; process medium, including fluid temperatures and flowrates; failure mode potentials; and the associated 10 CFR 50.59 analysis. Additionally, the inspectors observed portions of the installation and testing of the lines, reviewed acceptance testing results, and reviewed CRs associated with the design change to verify that the licensee identified and documented problems at an appropriate threshold.

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 following scheduled and emergent work activities, completing five inspection procedure samples:

- 1B SI Pump following preventive maintenance activities associated with the SI Pump lube oil cooler on January 15, 2004;
- Main Steam Isolation Valve Solenoid Testing following maintenance activities on January 31, 2004;
- 1A Charging Pump following preventive maintenance activities on February 12, 2004;
- Turbine Driven AFW Pump following preventive maintenance activities associated with the pump discharge pressure switch on March 5, 2004; and
- Average Reactor Thermal Output and Ultrasonic Flow Monitoring Device programs on the plant process computer following maintenance for modifications associated with the Stretch Power Uprate on March 22, 2004.

The inspectors verified that the testing was adequate for the scope of the maintenance work performed. The inspectors reviewed the acceptance criteria of the tests to ensure that the criteria was clear and that testing demonstrated operational readiness consistent with the design and licensing basis documents. Documents reviewed during this inspection are listed in the Attachment.

The inspectors attended pre-job briefings to verify that the impact of the testing was appropriately characterized. The inspectors also observed the performance of testing to verify the procedure was followed and that all testing prerequisites were satisfied. Following the completion of each test, the inspectors walked down the affected equipment to verify removal of the test equipment and to ensure the equipment could perform the intended safety function following the test. The inspectors also reviewed the completed test data to ensure the test acceptance criteria were met for the post maintenance testing.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage (71111.20)

a. Inspection Scope

The inspectors observed the licensee's performance during a forced shutdown which began on January 16, 2004, completing one inspection procedure sample. The licensee initiated a standard shutdown sequence in accordance with TSs following the licensee's declaration of both trains of SI inoperable, due to the discovery of a significant debris accumulation in both the SI pump lube oil coolers. The inspection consisted of in-plant observations of equipment alignment, evolutions and outage activities. Specifically, the inspectors verified that the licensee effectively managed elements of shutdown risk pertaining to reactivity control, decay heat removal, inventory control, electrical power control, and containment integrity. Documents reviewed during this inspection are listed in the Attachment.

The inspectors performed in-plant observations of the following outage activities daily:

- Outage management turnover meetings to verify that the current shutdown risk status was accurate, well understood, and adequately communicated;
- Walkdowns of the control room to observe the alignment of systems important to shutdown risk;
- Observed ongoing work activities in the plant; and
- Reviewed issues that the licensee entered into its CAP to verify that identified problems were entered into the program with the appropriate characterization and significance.

Additionally, the inspectors performed in-plant observations of the following specific activities:

- Observation of plant cooldown process to verify that TSs cooldown restrictions were appropriately implemented;
- Verification that the status and configurations of electrical systems met TSs requirements and the licensee's outage risk plans;
- Observation and verification of the proper operation of the decay heat removal systems;
- Verification during heatup and startup activities that TSs, license conditions, and other prerequisites for mode changes were met prior to the licensee changing modes or plant configurations;
- Observation of portions of the reactor heatup and approach to criticality; and
- Observation of the start of the first circulating water pump, in light of the previous frazil ice event which occurred on January 28, 2004, as discussed in Section 1R14.1 of this report.

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 following surveillances, completing seven inspection procedure samples:

- Diesel Generator 1A Monthly Availability Test;
- Train A Internal Containment Spray Pump and Valve Test;
- Train B SW Pump and Valve Test;
- Residual Heat Removal Pumps Full Flow Testing;
- Train A and B SI Pump Testing;
- Engineered Safeguards Train A Logic Channel Testing; and
- Channel 2 (White Channel) Reactor Coolant Temperature and Pressurizer Pressure Instrument Calibration, Instrument Channel Test, Delta-T Scaling Resistor Replacement and Setpoint Restoration, Nuclear Power Range Test.

The inspectors verified that the equipment could perform the intended safety function and that the surveillance tests satisfied the requirements contained in TSs 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. Documents reviewed during this inspection are listed in the Attachment.

The inspectors observed portions of the test to verify the following attributes: performance of the test in accordance with prescribed procedures; completion of test procedure prerequisites; and verification that the test data was complete, appropriately verified, and met the acceptance criteria of the test. Following the completion of the tests, when applicable, the inspectors walked down the affected equipment to verify test equipment removal and to confirm the equipment tested was in an operable condition.

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 temporary plant modification TCR 04-03, "Circulating Water Intake/Recirculating Heating," completing one inspection procedure sample.

The inspectors verified that the temporary modification did not adversely impact other

safety-related equipment and that the modification was 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 CRs to verify that temporary modification problems were entered into the CAP with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed a licensed shift operating crew perform an "as-found" exercise on the simulator on March 16, 2004, completing one emergency planning simulator exercise sample. The inspectors observed activities in the control room simulator, attended the critique, and reviewed the completed drill documentation and critique report. The inspectors evaluated the drill performance and verified that deficiencies were entered into the CAP and drill failures were appropriately accounted for in the licensee's drill and exercise performance indicator (PI) tracking. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Review of Licensee PIs for the Occupational Exposure Cornerstone

a. Inspection Scope

The inspectors reviewed the licensee's records to determine if occupational exposure control cornerstone PIs had been identified during the previous five calender quarters. If PIs had been identified, the inspectors would determine whether or not the conditions surrounding the PIs had been evaluated and identified problems had been entered into the CAP for resolution. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors walked down selected radiologically controlled areas within the plant to verify the adequacy of radiological boundaries and postings. The inspectors also performed confirmatory radiation measurements (using an NRC survey meter), to verify that these areas and selected radiation areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and the TSs. This review represented one sample.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous And Liquid Effluent Treatment And Monitoring Systems (71122.01)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the 2002 annual Radioactive Effluent Release Report to verify that the program was implemented as described in the Offsite Dose Calculation Manual and to determine if ODCM changes were made in accordance with Regulatory Guide 1.109 and NUREG-0133. The inspectors determined whether the modifications made to radioactive waste system design and operation changed the dose consequence to the public. The inspectors verified that technical and/or 10 CFR 50.59 reviews were performed when required and determined whether radioactive liquid and gaseous effluent radiation monitor setpoint calculation methodology changed since completion of the modifications. Documents reviewed during this inspection are listed in the Attachment. The inspectors determined whether anomalous results reported in the current Radiological Effluent Release Report were adequately resolved.

The inspectors reviewed the ODCM to identify the effluent radiation monitoring systems and its flow measurement devices, effluent radiological occurrence PI incidents in preparation for onsite follow-up, and the Updated Safety Analysis Report description of all radioactive waste systems. This review represented one sample.

b. Findings

No findings of significance were identified.

02.02 Onsite Inspection

a. Inspection Scope

The inspectors walked down the major components of the gaseous and liquid release systems (e.g., radiation and flow monitors, demineralizers and filters, tanks, and vessels) to observe current system configuration with respect to the description in the Updated Safety Analysis Report, ongoing activities, and equipment material condition. This review represented one sample.

The inspectors observed the routine processing (including sample collection and analysis) and release of radioactive liquid waste to verify that appropriate treatment equipment was used and that radioactive liquid waste was processed and released in accordance with procedure requirements and observed the sampling and compositing of liquid effluent samples. The inspectors reviewed several radioactive liquid waste release permits, including the projected doses to members of the public. The inspectors reviewed several radioactive gaseous effluent release permits, including the projected doses to members of the public, to verify that appropriate treatment equipment is used and that the radioactive gaseous effluent is processed and released in accordance with ODCM requirements. This review represented one sample.

The inspectors reviewed the records of abnormal releases or releases made with inoperable effluent radiation monitors and reviewed the licensee's actions for these releases to ensure an adequate defense-in-depth was maintained against an unmonitored, unanticipated release of radioactive material to the environment. This review represented one sample.

The inspectors reviewed the licensee's technical justification for changes made by the licensee to the ODCM, as well as to the liquid or gaseous radioactive waste system design, procedures, or operation, since the last inspection to determine whether the changes affect the licensee's ability to maintain effluents as low as is reasonably achievable, and whether changes made to monitoring instrumentation resulted in a non-representative monitoring of effluents. This review represented one sample.

The inspectors reviewed a selection of year 2003 monthly, quarterly, and annual dose calculations to ensure that the licensee properly calculated the offsite dose from radiological effluent releases and to determine if any annual TSs/ODCM (i.e., Appendix I to 10 CFR Part 50 values) were exceeded. This review represented one sample.

The inspectors reviewed air cleaning system surveillance test results (or licensee specific methodology) to ensure that the system was operating within the licensee's acceptance criteria. The inspectors reviewed surveillance test results the licensee used to determine the stack and vent flow rates. The inspectors verified that the flow rates were consistent with ODCM or Updated Safety Analysis Report values. This review represented one sample.

The inspectors reviewed records of instrument calibrations performed since the last inspection for each point of discharge effluent radiation monitor and flow measurement

device and reviewed any completed system modifications and the current effluent radiation monitor alarm setpoint value for agreement with ODCM requirements. The inspectors also reviewed calibration records of radiation measurement (i.e.,counting room) instrumentation associated with effluent monitoring and release activities and the quality control records for the radiation measurement instruments. This review represented one sample.

The inspectors reviewed the results of the interlaboratory comparison program to verify the quality of radioactive effluent sample analyses performed by the licensee. The inspectors reviewed the licensee's quality control evaluation of the interlaboratory comparison test and associated corrective actions for any deficiencies identified. The inspectors reviewed the licensee's assessment of any identified bias in the sample analysis results and the overall effect on calculated projected doses to members of the public. This review represented one sample.

Documents reviewed during this inspection are listed in the Attachment.

02.03 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed a 2003 Chemistry Department self-assessment report related to the radioactive effluent treatment and monitoring program to determine if identified problems were entered into the CAP for resolution. The inspectors also verified that the licensee's self-assessment program was capable of identifying repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

The inspectors also reviewed corrective action reports from the radioactive effluent treatment and monitoring program since the previous inspection, interviewed staff and reviewed documents to determine if corrective actions were conducted in an effective and timely manner commensurate with their importance to safety and risk. This review represented one sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 PI Verification (71151)

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors reviewed the licensee submittals for the following PIs, completing three PI verification inspection samples:

- Scrams with Loss of Normal Heat Removal for the 1st quarter 2003 through the 4th quarter 2003;
- Reactor Coolant System (RCS) Leak Rate for the 1st quarter 2003 through the 4th quarter 2003; and
- RCS Activity for the 1st quarter 2003 through the 4th quarter 2003.

The inspectors used PI guidance and definitions contained in Nuclear Energy Institute Document 99-02, Revision 2, "Regulatory Assessment PI Guideline," to verify the accuracy of the PI data. The inspectors' review included, but was not limited to, conditions and data from logs, CRs, and calculations for each PI specified. The inspectors also reviewed CRs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the CAP in accordance with station corrective action procedures. Documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Radiation Safety Strategic Area

a. Inspection Scope

The inspectors verified the licensee's assessment of its PIs for public radiation safety. Since reportable elements were not identified by the licensee during any calendar quarter of 2003, the inspectors reviewed the licensee's data to verify that there were no occurrences concerning the public radiation safety cornerstone during those quarters. This review represented one sample.

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 CRs 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 in the Attachment. In the section entitled "CRs Initiated for NRC-Identified Issues."

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report (LER) 50-305/2003-006-00: Component Cooling System R-17 Radiation Detector Pipe Assembly Leakage.

Introduction: A Green finding associated with an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when an Instrumentation and Control Technician performed a routine calibration of Radiation Monitor R-17 on December 10, 2003, and discovered evidence of CCW system leakage from the radiation detector housing. The licensee determined that evidence of the leakage had been present for the past 13 years. However, less than adequate acceptance criteria in procedures for the Inservice Inspection program resulted in licensee personnel classifying this leakage as a 'non-recordable' indication instead of the required 'recordable' indication for this type leakage.

Description: On December 10, 2003, an Instrumentation and Control Technician identified potential CCW system leakage while performing a routine calibration of the CCW system Radiation Monitor R-17. This appearance of leakage was determined to be evidence of a through-wall leak of American Society of Mechanical Engineers (ASME) Section XI Class 3 piping and thus rendered both trains of CCW inoperable because the section of pipe was a common header for both trains of CCW. Therefore, on December 12, 2003, operators declared both trains of the CCW system inoperable, due to the discovery of the small CCW leak on the CCW Radiation Detector R-17 housing (welded studding outlet). The licensee initiated immediate corrective actions to move the CCW pressure boundary to the outer portion of the housing, which the inspectors had previously reviewed and documented (See Section 1R23.1 of NRC Inspection Report 05000305/2003008).

The inspectors reviewed the LER for Reportable Occurrence 50-305/2003-006-00 and Root Cause Evaluation RCE000634, "R-17 Radiation Detector Pipe Assembly Leakage," completing one inspection procedure sample. The licensee concluded, and the inspectors verified, that the root cause of this event was inadequate inservice inspection procedures, in that, licensee procedures did not distinguish between leak indications on piping components versus flanges and valve stems, and did not provide an adequate interpretation of evidence of leakage. Since 1990, the licensee had identified the CCW chemical residue on the radiation detector housing in the vicinity of an air-port test hole, but had incorrectly classified the leakage as a non-recordable indication. Significant contributing factors also included non-destructive examination training which did not adequately explain the term "evidence of leakage" or differences between flanges, valve stems and pipe, and a less than adequate operational decision-making process which resulted in delays of recognizing the full implication of the initial discovery. The licensee had performed an extent of condition and did not identify any additional instances similar to this event.

The licensee's corrective actions to prevent recurrence included the revision of

19 inservice inspection surveillance procedures to incorporate appropriate acceptance criteria and discussions of the root cause with licensee inservice inspection personnel as lessons learned. Corrective actions to address the contributing factors included: revision of the initial and continuing inservice inspection training to include clarification of evidence of leakage; and creation of a station procedure to implement an operational decision-making process. In addition, immediate corrective actions included: the installation of a temporary design change to isolate the minimal leakage which had occurred; checks of the housing four times per day by operations staff; the performance of an ultrasonic examination of the base metal near the fillet weld of the housing; and the performance of a magnetic particle examination of the fillet weld of the housing.

Analysis: The inspectors determined that the licensee's failure to specify acceptance criteria in inservice inspection procedures appropriate to the circumstances was considered a licensee performance deficiency warranting a significance evaluation. This self-revealed finding was greater than minor because if left uncorrected the finding would become a more significant safety concern.

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

- Affected the mitigating systems cornerstone;
- Was not a design or qualification deficiency confirmed not to result in loss of function per Generic Letter 91-18;
- 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 TSs outage time;
- Did not represent an actual loss of a safety function of one or more Non-TS 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 Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by procedures of a type appropriate to the circumstances and include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Contrary to this requirement, as of December 2003, 19 licensee inservice inspection procedures were not appropriate for the circumstances, in that, appropriate quantitative or qualitative acceptance criteria for determining evidence of leakage and distinguishing piping leaks were not incorporated into the procedures. This resulted in the failure to ensure inspection activities were satisfactorily accomplished for the CCW system since 1990. 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 documented in the licensee's CAP as CAP019188, this finding is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy. (NCV 05000305/2004002-02)

.2 (Open) LER 05000305/2004-001-00: Blocked Lube Oil Coolers to SI Pumps Force Plant Shutdown.

On January 16, 2004, operators initiated a standard shutdown sequence in accordance with TSs when the licensee declared both trains of SI inoperable due to the discovery of significant debris accumulation in both the SI pump lube oil coolers. The inspectors reviewed the initial circumstances surrounding the incident and verified the licensee's immediate corrective actions.

Based on the risk and deterministic criteria specified in Management Directive 8.3, "NRC Incident Investigation Program," and Inspection Procedure 71153, "Event Followup," and due to the equipment performance problems which occurred, a Special Inspection was initiated in accordance with Inspection Procedure 93812, "Special Inspection," to evaluate the facts and circumstances surrounding the event, as well as the actions taken by licensee staff in response to the unexpected system condition. The special inspection was documented in NRC Inspection Report No. 05000305/2004003, dated February 27, 2004.

The inspectors continued to follow-up on open questions regarding past operability of the SI pumps commensurate with the identification of lube oil cooler fouling under Unresolved Item 05000305/2004003-01. In addition, the inspectors reviewed the licensee's initial event report for Reportable Occurrence 50-305/2004-001, completing one inspection procedure sample.

This item will remain open until the resolution of open questions under Unresolved Item 05000305/2004003-01, and receipt and review of the supplemental response for Reportable Occurrence 2004-001.

.3 Event Notification 40489 - Declaration of Unusual Event on January 30, 2004:

On January 30, 2004, at approximately 11:51 a.m., the licensee declared an Unusual Event in accordance with Chart P, "External Events and Chemical Spills," of the Emergency Action Levels. Chart P required an Unusual Event to be declared for a release of toxic gas with portable monitors indicating toxic concentrations at life threatening levels of the gas near the spill area.

After the licensee had filled the Carbon Dioxide Storage Tank, the fill line relief valve, MG-5, actuated as designed when liquid carbon dioxide trapped in the line began to heat up and pressurize. This actuation caused the vent line to release carbon dioxide through a weep hole in the relief valve to the carbon dioxide tank room. At 11:40 a.m., the Shift Manager was informed that carbon dioxide gas levels in the tank room had reached life threatening levels. The Shift Manager subsequently declared an Unusual

Event at 11:51 a.m., and licensee personnel took immediate action to ventilate the tank

room. At 1:46 p.m., the licensee terminated the event when carbon dioxide levels returned to normal.

The inspectors observed the licensee's Emergency Response Organizations' performance in the Control Room and Technical Support Center during the event, completing one inspection procedure sample. The inspectors verified that the required notifications were made to the state, county and local municipalities in a timely and accurate manner. No safety-related systems were affected by this event. In addition, the inspectors reviewed the licensee's ACE, immediate and long-term corrective actions.

4OA6 Meetings

.1 Exit Meeting

On April 6, 2004, the resident inspectors presented the inspection results to Mr. T. Coutu and other members of licensee management, who 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.

.2 Interim Exit Meeting

An interim exit meeting was conducted for:

- Radiation Protection inspection with Mr. K. Hoops on February 13, 2004; and
- Licensed operator medical issue via telephone with Mr. T. Coutu on April 2, 2004.

4OA7 Licensee-Identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Nuclear Management Company, LLC

T. Coutu, Site Vice President
K. Hoops, Site Director
K. Davison, Plant Manager
L. Armstrong, Engineering Director
S. Baker, Manager, Radiation Protection
L. Gerner, Acting Regulatory Affairs Manager
E. Gilson, Security Manager
W. Godes, Operations Training General Supervisor
G. Harrington, Licensing
W. Hunt, Training Manager
D. Lohman, Operations Manager
B. Presl, NMC Security Consultant
S. Putman, 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

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000305/2004002-01	NCV	Failure to timely inform the NRC within 30 days of a change in medical status of a licensed operator in accordance with 10 CFR 50.74(c). (Section 1R11.1)
05000305/2004002-02	NCV	Green. Non-coted Violation of 10 CFR 50, Appendix B, Criterion V, "Procedures," for the failure to have procedures appropriate to the circumstances, including appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished for Inservice Inspection Activities, an activity affecting quality. (Section 4OA3.1)

Closed

05000305/2004002-01	NCV	Failure to timely inform the NRC within 30 days of a change in medical status of a licensed operator in accordance with 10 CFR 50.74(c). (Section 1R11.1)
05000305/2004002-02	NCV	Green. Non-coted Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to have procedures appropriate to the circumstances, including appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished for Inservice Inspection Activities, an activity affecting quality. (Section 4OA3.1)
05000305/2003-006-00	LER	Component Cooling System R-17 Radiation Detector Pipe Assembly Leakage. (Section 4OA3.1)

Discussed

05000305/2004-001-00	LER	Blocked Lube Oil Coolers to SI Pumps Force Plant Shutdown. (Section 4OA3.2)
05000305/2004003-01	URI	Followup on open questions regarding past operability of the SI pumps commensurate with the identification of lube oil cooler fouling.

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.

1R01 Adverse Weather Protection

US Army Corps of Engineers Document; Examination, Evaluation and Analysis of the KNPP with Respect to Prevention and Mitigation of Frazil Ice Blockage; dated December 2003

NUREG/CR-0548; Ice Blockage Water Intakes

CAP019857; Frazil Ice Plan Not Successfully Implemented

1R04 Equipment Alignment

N-DGM-10-CLA; Operating Procedure - Diesel Generator A Pre-startup Checklist; Revision 1; November 06, 2001

OPERM-220; Flow Diagram Fuel Oil Systems; Revision AH

OPERM-213-9; Flow Diagram Diesel Generator Startup Air Compressor A & B and Fist Screen Air; Revision C

N-CC-31-CL; Operating Procedure - Component Cooling System Prestartup Checklist; Revision Z; November 18, 2003

XK-100-19; Flow Diagram Component Cooling Systems; Revision AH

N-RHR-34-CL; RHR Prestartup Checklist; Revision AG; November 20, 2001

DC-PM 3398-6; KNPP 6 percent Stretch Power Uprate Implementation Plan; Revision B; March 20, 2004

N-FW-05A-CL; Feedwater System Prestartup Checklist; Revision Y

N-MS-06-CL; Main Steam and Steam Dump Prestartup Checklist; Revision AC

1R05 Fire Protection

KNPP Fire Protection Program Plan; Revision 5; October 2003.

KNPP Fire Protection Program Analysis; Revision 5; October 2003

Fire Plan Drawing PFP-4; Screen House; Revision B

Fire Plan Drawing PFP-11; Turbine Building Basement; Revision C

Fire Plan Drawing PFP-22; Turbine Building - Operating Floor; Revision C

Fire Plan Drawing PFP-16; Refueling Water Storage Tank and Containment Spray Pump Area; Revision C

Fire Plan Drawing PFP-26; Control Room; Revision C

PMP-08-20; FP - Portable Fire Extinguisher Inspection; Revision F

PM08-043; Preventive Maintenance Cards - Fire Extinguisher Inspection

NFPA-10; Standard for Portable Fire Extinguishers; 1975

PMP-08-21; FP - Fire Damper Visual Inspection; Revision F

PMP-08-22; FP - Operability Test of Fire Dampers (Fusible Link Style); Revision G

GNP-08.12.04; Ladder Use and Storage; Revision A; July 29, 2003

GNP-01.31.01; Plant Cleanliness and Storage; Revision E; October 17, 2002

Attachment B; GNP-01.31.01; Revision E; In-Plant Temporary/Permanent Storage Permit; Turbine Building, 586' Elevation; Dated May 27, 2003

Attachment B; GNP-01.31.01; Revision E; In-Plant Temporary/Permanent Storage Permit; Turbine Building, 586' Elevation; Dated January 1, 2003

FPEE-053; NFPA Code Compliance Evaluation in Risk Significant Ares; Revision 0

CAP020123; Recurring Problem of Exceeding NEIL/NFPA Requirement for Storage of Combustibles

1R11 Licensed Operator Requalifications

Four Applications for Operator License; dated various
Portions of One Licensed Operator's Medical Records; dated various

ACE 02532; ACE - Failure to update operator license for restricted license condition; dated January 8, 2004

CAP 013062; Failure to Perform Portions of the Medical Certification Tests for Licensed Personnel; dated September 23, 2002

CAP 019441; Failure to Update Operator License for Restricted License Condition; dated January 6, 2004

Medical Certification of NRC Licensed Personnel; dated various

NRC Form 396; Certification of Medical Examination by Facility Licensee; dated various

Kewaunee Letter to the NRC; NRC-04-004; Change in License Operator Medical Status; dated January 8, 2004

NAD-01.15; Medical Examination Program; Revision I; dated September 30, 2003

NAD-01.15; Medical Examination Program; Revision F; dated January 3, 2002

NTP-4; Implementation; Revision J; dated July 15, 2002

Form G-1; Operations Watchstander Temporary Restriction; dated March 22, 2002

Aurora Clinic, Physical Examination Protocol; Checklist; no date

Aurora Health Care; ANSI/ANS 3.4-1983 Checklist; no date

Licensed Operator's Active Status; Table; Effective Period July 1 - September 30, 2002

SEG No. LRC-04-DY201; Cycle 04-02 Simulator Dynamic; Revision A

Form NTP-6421; Individual Competency Evaluation; Revision A

NUREG 1021; Appendix D; Simulator Testing Guidelines

A-O-03; Rapid Power Reduction; Revision B

A-CD-03; Condensate System Abnormal Operation; Revision N

A-FW-05A; Abnormal Feedwater System Operation; Revision P

A-EHV-39; Abnormal 4160VAC Supply and Distribution System; Revision AA

A-MI-87; Bistable Tripping for Failed Reactor Protection or Safeguards Instrumentation; Revision P

FR-H-1; Response to Loss of Secondary Heat Sink; Revision S

1R12 Maintenance Effectiveness

Maintenance Rule Scoping Criteria for System 05B; Auxiliary Feedwater

Maintenance Rule Performance Criteria for System 05B; Auxiliary Feedwater

Maintenance Rule Basis Document for System 05B; Auxiliary Feedwater; Revision 5

General review of all AR CAPs resulting from search of licensee's T-Track data base searching on key word AFW (search limited to the years of 2002 and 2003)

General review of all maintenance rule evaluations (MRE) resulting from search of licensee's T-Track data base searching on key word AFW (search limited to the years of 2002 and 2003)

General review of all work requests and work orders resulting from search of licensee's data base searching on key word AFW (search limited to the years of 2002 and 2003)

Maintenance Rule Desktop Guide; Revision2

Nuclear Administrative Directive (NAD) 08.20; Maintenance Rule Implementation; Revision D

General Nuclear Procedure (GNP) 08.20.04; Maintenance Rule Maintenance Rule Functional Failure and Maintenance Preventable Functional Failure Evaluation; Revision D

ACE 002056; Invalid Start of the Turbine-Driven AFW Pump

CAP 011577; Auxiliary Feedwater Valve AFW-2B Not Responding Properly

CAP 012967; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CAP 013374; Invalid Start of the Turbine-Driven AFW Pump

CAP 016361; Turbine-Driven AFW Pump Tachometer Not Working During SP-05B-333

CAP 016404; Auxiliary Feedwater Valve AFW-10B Closing Time Exceeds Action Value

CAP 017654; Perform MRE on Issue Described in CAP 011577

CA 008729; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CA 008730; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CA 008731; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CA 008732; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CA 009081; Invalid Start of the Turbine-Driven AFW Pump

CA 009601; Invalid Start of the Turbine-Driven AFW Pump

CA 009602; Invalid Start of the Turbine-Driven AFW Pump

CE 009788: Auxiliary Feedwater Valve AFW-2B Not Responding Properly

CE 010773; Two IPEOP Setpoints Non-conservative; Not In Accordance With Guidelines

CE 012832; Turbine-Driven AFW Pump Tachometer Not Working During SP-05B-333

CE 012861; Auxiliary Feedwater Valve AFW-10B Closing Time Exceeds Action Value

MRE 001628; Invalid Start of the Turbine-Driven AFW Pump

MRE 001958; Turbine-Driven AFW Pump Tachometer Not Working During SP-05B-333

MRE 001962; Auxiliary Feedwater Valve AFW-10B Closing Time Exceeds Action Value

MRE 002103; Perform MRE on Issue Described in CAP 011577

OTH 012171; Auxiliary Feedwater Valve AFW-10B Closing Time Exceeds Action Value

OTH 012172; Auxiliary Feedwater Valve AFW-10B Closing Time Exceeds Action Value

Maintenance Rule Quarterly Report; January 1, 2003, to March 31, 2003

Maintenance Rule Quarterly Report; April 1, 2003, to June 31, 2003

KNPP Maintenance Rule System Basis; SW; Revision 5

KNPP Maintenance Rule Scoping Questions; SW; Revision 2

KNPP Maintenance Rule Performance Criteria; SW; Revision 3

MRE001614; Charging Pump B speed control problems; dated 10/08/2002

MRE001726; Perform MR evaluation on CAP 14438 A Charging Pump Vari-Drive problem; dated 1/27/2003

MRE001728; A charging pump OOS; dated 1/28/2003;

MRE001748; Charging pump out-of-service; dated 2/11/2003

MRE001778; Charging pump A erratic sheave operation during exercise; dated 3/11/2003

CAP015400; Maintenance Rule System 35; Charging Pump A (a)(1) evaluation; dated 3/27/2003

CAP019596; CVC-832 failure; dated 1/20/2004;

ACE000763; Current to Pressure XMTR 35051 out of tolerance; dated 4/23/2002

ACE002211; Maintenance Rule System 35; Charging Pump A (a)(1) evaluation; dated 3/31/2003;

Work Order 02-005045-000; Monitor BAHT Trendscan Temperature Monitor Train A; dated 1/13/2002

Work Order 02-007654-000; Transmitter REAC CLNT PMP 1A SL WTR LO Range F XMTR; dated 05/09/2002

Work Order 02-007677-000; Controller Feed Preheater Outlet TC; dated 05/13/2002

Work Order 02-007678-000; Signal CNVTR Volume Control Tank Level S/CV; dated 5/13/2002

Work Order 02-008849-000; Controller CKT 53A Controller; dated 06/11/2002

Work Order 02-014131-000; 2 In Valve Control Charging line to regenerative heat exchanger; dated 08/02/2002

Work Order 02-016619-000; Actuator Charging Pump A Speed Control; dated 10/28/2002

Work Order 02-016633-000; Pump Charging Pump 1B belt needs replacement; dated 10/28/2002

Work Order 02-016674-000; Actuator CVC440/mv32127 Emerg Boration to Charging Pumps; dated 07/05/2002

Work Order 02-017725-000; Controller CKT 53A Controller; dated 12/11/2002

Work Order 03-000220-000; Controller BRC ACD Evap Distillate FC; dated 12/20/2002

Work Order 03-004142-000; 2 In valve check reactor coolant pump 1B inlet; dated 4/14/2003

Work Order 03-011333-000; Controller CKT 26A Controller; dated 10/21/2003

Work Order 03-012999-000; Controller CKT 95A Controller; dated11/12/2003

Work Order 03-013030-000; Motor Charging Pump B; dated 11/18/2003

Work Order 03-014146-000; Cibtrikker CKT 53A Controller; dated 11/25/2003

Work Order 03-014166-000; Control Station Pump Speed Pump A; dated 06/20/2003;

Work Order 03-014255-000; Controller CKT 86B Controller; dated 12/08/2003

Work Order 04-000363-000; Controller BRC ACD Evaporator PC; dated 01/19/2004

Maintenance Rule Quarterly Report; Section 3.3; Functions/SSC changed from (a)(2) degraded to (a)(1) during the quarter; July 01, 2003-September 30, 2003;

SSC Performance Criteria Sheet for System No. 35 Chemical & Volume Control; dated March 01, 2004;

KNPP Maintenance Rule Scoping Questions for System No. 35 Chemical & Volume Control; dated 03/01/04;

KNPP Maintenance Rule System Basis; Chemical & Volume Control System; Revision 6;

KNPP Listing of System 35 NFC to Closed Work Orders from March 2002 to March 2004; dated 3/1/2004

KNPP Listing of System 35 Open Work Orders; dated 3/1/2004

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

Safe Shutdown Functional Assessments; Control Room Logs and Work Schedule for January 17 through 24, 2004

Safe Shutdown Functional Assessments; Control Room Logs and Work Schedule for January 25 through 31, 2004

Safety Monitor Risk Assessments; Control Room Logs and Work Schedule for February 9 through 13, 2004

Safety Monitor Risk Assessments; Control Room Logs and Work Schedule for February 23 through 27, 2004

Safety Monitor Risk Assessments; Control Room Logs and Work Schedule for March 8 through 12, 2004

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

1R14 Personnel Performance During Non-Routine Plant Evolutions

Corrective Action CAP019749; Loss of Forebay Level; January 28, 2004

Shift Manager's Logbook; January 28, 2004

Control Room Logbook; January 28, 2004

Plant Process Indication Computer; Trend Point L9075A (forebay level); January 28, 2004

Operating Procedure E-CW-04; Loss of Circulating Water; Revision V; December 4, 2003

Emergency Plan Implementing Procedure EPIP-AD-02; Table 2-1; Chart O; Flood, Low Water or Seiche; Revision. AJ; January 28, 2004

License No. DPR-43; Amendment 172; February 27, 2004

License Conditions for License Amendment No. 172; KNPP 6 percent Stretch Power Uprate - Documentation of Completion; March 24, 2004

NMC Correspondence to NRC; Final Resolution Schedule for Resolution of Generic letter 96-06 Issues at the Kewaunee Nuclear Plant

Infrequently Performed Tests and Evolutions Checklist (WO #QF-0520; Procedure DC/PM 3398-6); March 22, 2004

DC-PM 3398-6; KNPP 6 percent Stretch Power Uprate Implementation Plan; Revision B; March 20, 2004

N-O-03; Reactor Power Operations Above 35 percent; Revision AQ

N-TB-54; Turbine and Generator Operation; Revision AZ

N-CVC-35A; Boron Concentration Control; Revision X

CAP020566; Control Room Received TLA-11 Reactor Thermal Power High

CAP020563; UFMD/UTM Problems Results in TLA-28

CAP020564; Measured Full Power Delta-Ts Different from Predicted Delta-Ts for Power Uprate

CAP020555; Control Room Received Annunciator 47063-T (FE HTR 14A/B Level High)

CAP020562; Briefings for Uprate Fell Short of Procedure Expectations

CAP020538; Applicability of WCAP-10325 to KNPP

CAP019932; 50.59 Process Not Considered While Performing Calculations/Evaluations

CAP019931; Control Rod D04 IRPI Erratic Behavior

1R15 Operability Evaluations

OPR000061; SI Pump Operability; January 27, 2004

OPR000059; Consider affect of Peak Containment Accident Temperature on Annulus Analysis

OPR000060; Consider affect of Peak Containment Accident Temperature on Evaluation No. C10955

OPR000061; Discrepancy Between Predicted and Observed Performance of New SI Pump Oil Coolers

OBD015324; Lighting and Receptacle Panel LRPB1 Transformer No. 1-916, not Protected per National Electric Code

OPR000063; CREZ Potential Design and Analysis Weaknesses.

SP-87-125; Shift Instrument Channel Checks - Operating, Page 9; January 30, 2004

GNP-11.08.03; Operability Determination; Revision C; October 10, 2003

Corrective Action CAP019566; Consider Affect of Peak Containment Accident Temperature on Annulus Analysis; January 17, 2004

Corrective Action CAP019567; Consider Affect of Peak Containment Accident Temperature on Evaluation C10955; January 17, 2004

Operability Determination OBD000059 and OBD000060; Form GNP-11.08.03-1; Revision C; completed January 23, 2004

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

Safety Evaluation by the Office of Nuclear Reactor Regulation relating to Amendment 166; dated March 17, 2003

Safety Evaluation by the Office of Nuclear Reactor Regulation relating to Amendment 167; dated April 4, 2003;

Technical Specifications 3.1 RCS

Technical Specifications 3.12 Control Room Post-Accident Recirulation System

CAP 020027; CREZ Potential Design and Analysis Weaknesses; dated 2/17/2004;

NMC Letter Subject: Generic Letter 2003-01 Control Room Habitability- Response to Commitments; dated November 25, 2003;

1R16 Operator Work-Arounds

General Nuclear Procedure GNP-01.31.01 - Plant Cleanliness and Storage; Revision E; October 17, 2002

Operator Work-Around 01-15; Tagout 98-460 SAP Refrigeration Unit is Ineffective, DCR-3333

Operator Work-Around 01-16; Generic Letter 96-06

Operator Work-Around 03-06; Caustic Dilution Heat Exchanger Warm-Up Relay Locks In; W.O. No. 01-55

1R17 Permanent Plant Modifications

DCR-3518; Design Change Request 3518 - SI Pump Lube Oil Cooler Replacement and associated 10 CFR 50.59 Documentation

Regulatory Guide 1.187; Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments; November 2000

GNP-04.03.04; Calculation - Preparation, Review and Approval; Revision E

CAP020130; SI (SI) Pump Recirculation Flow - EWR3182

CAP019574; SI Pump Stuffing Box Questions

CAP019709; Discrepancy Between Predicted and Observed Performance of New SI Pump Coolers

CAP019721; 50.59 Review Inconsistent With Procedural Requirements and Guidance

CAP019716; Defective SI Lube Oil Cooler Installed - Potential Part 21 Reportable

CAP019785; 50.59 Screening Does Not Address Design Functions

1R19 Post-Maintenance Testing

Operating Procedure RT-CVC-35E; Charging Pump Operability Test; Revision A; September 30, 2003

Work Order 03-014103-000, DCR 3398; Phase III (6 percent Power Uprate) - support modification of ARTO computer programs per Section 4 of DC/PM 3398-6 to allow trending up to 1772 MWT

Work Order 03-014104-000; DCR 3398; Phase III (6 percent Power Uprate) - support modification of UFMD computer program values per DC/PM 3398-6; Attachment 2 (full power feedwater flow, CoeffFvMin value, and transmit data for verification)

Work Order 03-014105-000; DCR 3398; Phase III (6 percent Power Uprate) - support computer group to change listed computer program constants per DC/PM 3398-6; Attachment 2

Work Order 03-014069-000; DCR 3398; Phase III (6 percent Power Uprate) - general support for DC/PM 3398-6; KNPP 6 percent Stretch Power Uprate Implementation Plan

PMP-33-01; Preventive Maintenance Procedure - SI (QA-1) Pump Maintenance; Revision 0

SP-33-098B; Surveillance Procedure - Train B SI Pump and Valve Test; Revision A

RT-MS-06; Main Steam Isolation Valve Solenoid Test performed March 1, 2004; Revision C

Work Order 03-012985-000; Replace Turbine Driven AFW Pump Low Discharge Pressure Switch

SP-05B-307; Turbine Driven AFW Pump Low Discharge Pressure Switch 15504J Calibration and Functional Test

C10445; Calculation - Turbine Driven AFW Pump Room Heat-up Following Station Blackout; Revision 0

1231.M2; Turbine Driven AFW Pump Enclosure Heat Loads; Revision 0

NUMARC 87-00; Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors; Revision 1

NRC Correspondence to Wisconsin Public Service; KNPP Unit No. 1; Station Blackout Rule (10 CFR 50.63) (TAC No. M84521); dated November 19, 1992

1R20 Refueling and Outage Activities

N-O-01; Plant Startup from Cold Shutdown Condition to hot Shutdown Condition; Revision AW

N-O-01-CLC; Plant Requirements Before Exceeding 350 degrees; Revision Y

N-O-02; Plant Startup from Hot Shutdown to 35 Percent Power; Revision AL

N-O-02-CLA; Plant Prestartup Checklist; Revision L

N-O-02-CLB; Precritical Checklist; Revision AP

N-O-03; Plant Operation Greater than 35 Percent Power; Revision AQ

N-O-04; 35 Percent Power to Hot Shutdown Condition; Revision X

A-O-03; Rapid Power Reduction; Revision B

1R22 Surveillance Testing

Surveillance Procedure SP-42-312A; Diesel Generator A Availability Test; Revision S (Freq. M); July 29, 2003

Preventive Maintenance Procedure PMP-42-03; DGE - Train A Auto Sequencing Test With Diesel A in Pullout (QA-1); Revision P; December 16, 2003

Surveillance Procedure SP-23-100A; Train A Containment Spray Pump and Valve Test - IST; Revision E; November 6, 2003

Surveillance Procedure SP-31-168A; Train A Component Cooling Pump and Valve Test - IST; Revision C; November 18, 2003

Surveillance Procedure SP-55-155A; Engineered Safeguards Train A Logic Channel Test; Revision O; September 23, 2003

SP 02-138B; Train B SW Pump and Valve Test - IST; Revision F

KNPP Updated Safety Analysis Report; Section 9.6.2; Revision 18

KNPP TSs; Section 3.3.e; SW System; Amendment 116

Kewaunee Flow Diagram OPERM-547; SW System - Containment Cooling; Revision R

Kewaunee Flow Diagram OPERM-202; Page 1; SW System; Revision BV

Kewaunee Flow Diagram OPERM-202 Page 2; SW System; Revision CE

Kewaunee Flow Diagram OPERM-202; Page 3; SW System; Revision CP

CAP 012616; AFW Pump A Declared OOS Based On Radiography Results

CAP 012617; Perform Extent of Condition Related To CAP 012616 Related To SW To AFW Pump A

CAP 012618; Radiography Determines Pipe Thinning Occurring In The SW To AFW Pump A

CAP 012621; Sedimentation In The SW Supply To B AFW Pump

CAP 012707; Capturing Lessons Learned

CAP 013151; Less Than Adequate Extent of Condition Assessments

CAP 018784; Sedimentation in the SW Supply To B AFW Pump

CAP 018869; Radiography Determines Silting Occurring In SW to AFW Pump A

ACE 001959; Less Than Adequate Extent of Condition Assessments

CA 010408; Sedimentation In The SW Supply To B AFW Pump

CA 014365; Radiography Determines Silting Occurring In SW to AFW Pump A

CA 014366; Radiography Determines Silting Occurring In SW to AFW Pump A

CE 010543; Sedimentation In The SW Supply To B AFW Pump

CE 010603; Capturing Lessons Learned

Work Order 03-015218-000; I&C technicians to support calibration of Channel 2 (White) instruments per DCR-3398-6; KNPP 6 percent Stretch Power Uprate Implementation Plan

SP-47-011B; Reactor Coolant Temperature and Pressurizer Pressure Instrument Channel (White) Calibration; Revision L; March 21, 2004

SP-47-316B; Channel 2 (White) Instrument Channel Test; Revision R; March 21, 2004

GIP-004B; Loop A Channel 2 and Channel 4 Delta T Scaling Resistor Replacement and Setpoint Restoration; Revision H; March 21, 2004

SP-48-004H; Nuclear Power Range Channel 2 (White) N42 Quarterly Calibration; Revision D; December 23, 2003

CAP020523; Blue Channel Instruments OOS during SP-87-125; March 23, 2004

SP-34-285; Surveillance Procedure - RHR Pumps Full Flow Test - IST; Revision dated October 7, 2003

N-RHR-34; RHR System operation; dated November 18, 2003

SP 34-145D; Surveillance Procedure - RHR Valve RHR-11 RCS Interlock Test; Revision J

WO 04-000364; Work Order - Perform Post Modification Testing for SI Pump A
WO 04-000365; Work Order - Perform Post Modification Testing for SI Pump B

SP-33-098B; Surveillance Procedure - Train B SI Pump and Valve Test; Revision A

SP-33-098A; Surveillance Procedure - Train A SI Pump and Valve Test; Revision A

1R23 Temporary Plant Modifications

TCR 04-03; Temporary Change Request - Circulating Water Intake/Recirculating Heating

1EP6 Drill Evaluation

Drill Paperwork associated with Control Room Simulator Drill held on March 16, 2004

CAP020554; Two PIs Unsuccessful During LOR Dynamic Scenarios

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

KSA-CHM-03-03; Assessment of Chemistry Performance; 2003

Tech Spec Air Filter Testing as of February 12, 2004

Discharge Permit No. 03-0002; Batch Liquid Release; dated February 21, 2003

Discharge Permit No. 03-0013; Batch Liquid Release; dated March 21, 2003

Discharge Permit No. 03-0022; Batch Liquid Release; dated April 21, 2003

Effluent Monitor Calibrations; Report of Calibration Dates as of February 9, 2004

Annual Radioactive Effluent Release Report; January 1 - December 31, 2002

2003 Gross Gamma Comparison; Kewaunee and Analytics

2003 Gross Alpha Comparison; Kewaunee and Analytics

2003 Tritium Comparison; Kewaunee and Analytics

Offsite Dose Calculation Manual; Revision 8

Effluent Dose Limit Verification Data Sheet A 01/31/03 - 03/31/03; dated April 23, 2003

Effluent Dose Limit Verification Data Sheet A 04/01/03 - 06/30/03; dated July 15, 2003

Effluent Dose Limit Verification Data Sheet A 07/01/03 - 09/30/03; dated October 14, 2003

Effluent Dose Limit Verification Data Sheet A 10/01/03 - 12/33/03; January 14, 2004

Monthly Dose Update - Liquid Effluents; 2003

Liquid Effluents Dose Projection Monthly Data Sheets; 2003

CAP 014205; Discharge Permit Generated with Wrong Permit Number on it; dated January 3, 2004

CAP 019929; TLA-15 RMS Above Normal Alarm on R-43; dated May 29, 2000

RMS R-11; Containment System Vent Calibration; dated July 9, 2003

RMS R-13; Aux Building Ventilation Exhaust Vent A Calibration; dated July 2, 2003

RMS R-18; Waste Discharge Liquid Radiation Monitor Calibration; dated August 8, 2003

RMS R-19; Steam Generator Blowdown Sample Radiation Monitor Calibration; January 1, 2003

169-081/082; Auxiliary Building Zone SV Filter Laboratory Testing Trains A and B; January 31, 2003

169-151/152; Control Room Post Accident Recirculation Filter Laboratory Testing Trains A and B; January 27, 2003

169-091/092; Shield Building Vent Filter Laboratory Testing Trains A and B; January 28, 2003

4OA1 Performance Indicator Verification

CAP 016576; NRC DEP PI [PI]

CAP 017332; Lack of Supporting Data To Support EP PI

CAP 017570; PI Problem

CE 012980; NRC DEP PI

CE 013345; Lack of Supporting Data To Support EP PI

Other (OTH) 012317; NRC DEP PI

OTH 012986; PI Problem

Request For Training (RFT) 012316; NRC DEP PI

4OA3 Event Followup

RCE 634; Root Cause Evaluation - R-17 Radiation Detector Pipe Assembly Leakage

NMC Correspondence to NRC; Reportable Occurrence 2003-006-00 LER; dated February 10, 2004

CAP019788; Declaration of Unusual Event

ACE2562; Apparent Causes Evaluation - Declaration of Unusual Event

Event Notification 40489; Declaration of Unusual Event on January 30, 2004

NMC Correspondence to NRC; Reportable Occurrence 2004-001-00 LER; dated March 10, 2004

CAP019999; Safety-Related Heat Exchanger Program Rated Red (GL 89-13)

CAP020000; ISI Program Rated Red Due to R-17 Event

Condition Reports Initiated for NRC Identified Issues

CAP019426; TSC Diesel Generator Compensatory Actions

CAP019441; Failure to Update Operator License for Restricted License Condition

CAP019585; SW Review - AFW and SI LO

CAP019617; NRC Questions Fire Protection System Operability

CAP019646; Emergency Siren Issues at Pilgrim Plant

CAP019663; SW System Minimum Design Temperature

CAP019707; Zebra Mussel Shell of 0.690" long by 0.298" wide in Aux Mez A

CAP019725; NEP 15.32; Seismic Analysis Guidance Deviation - Procedure not followed

CAP019747; Safety Classification of SW Strainers

CAP019830; CAPs Not Being Written as Required

CAP019837; NRC Comments on DCR 3518 Documents

CAP019866; SI Pump Lube Oil Cooler and Stuffing Box SW Sightglasses

CAP019911; NRC Question on KNPP Steam Generators for Stretch Power Uprate (SPU)

CAP019946; NRC Inspection Finds RCS Leak Rate Discrepancy

CAP019953; The NRC Phone in the Shift Manager's Office was Breaking Up Badly 1/30/04 UE

CAP019959; Potential NRC License Exam Security Issue

CAP019960; Mixed Validation Results Obtained for JPM Administered During NRC License Exam

CAP019961; E-CVC-35 Does Not Provide Clear Guidance on Expected Operator Actions

CAP019962; NRC License Exam Surrogate Operator was More Involved Than Allowed at Times

CAP019971; LAR 195; Stretch Power Uprate RAI Question

CAP019996; Possible Inadequate Validation of NRC License Exam JPM

CAP019997; Peer Checking During NRC License Exam was not Consistent

CAP019998; Simulator Shifted to FREEZE Mode During License Examination Scenario

CAP020118; Possible Fire Plan Typographical Error

CAP020151; AFW TS 3.4.b.2 LCOs and Basis Require Review

CAP020177; Question About Frequency of Fire Extinguisher Inspection Frequency

CAP020207; KNPP Stretch Power Uprate Submittal Lessons Learned

CAP020216; PMP-08-20 Does not Meet KNPP Standard of Quality

CAP020222; SW Pump A1 was Taken Out of Service Without a Prior Risk Assessment

CAP020226; Fire Extinguisher Inspection Frequency and Program Evaluation

CAP020259; Inadequate Controls Placed on the Waste Gas Analyzer

CAP020323; Outdated Data Inadvertently Provided to NRC

CAP020362; Non-conforming Condition not Captured in OBD Data-base

CAP020363; Error in MRE Determination

CAP020397; Traveling Water Screen dP Indication

CAP020408; Verifying ESF Test Lamps During the SP-55-155A&B

CAP020470; Station Fire Extinguisher Changed Without Change to Drawing

CAP020480; Question Raised Concerning SBO Calculation C10445

CAP020506; NRC Region III Inspector Requests Additional Questions Regarding OPR 00063

CAP020508; Cross-Cutting Issue in CAP Implementation

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
AR	Action Request
AFW	Auxiliary Feedwater
ANSI/ANS	American Nuclear Standards Institute/American Nuclear Society
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CR	Condition Report
CREZ	Control Room Exclusion Zone
IMC	Inspection Manual Chapter
KNPP	Kewaunee Nuclear Power Plant
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PI	Performance Indicator
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RO	Reactor Operator
SDP	Significance Determination Process
SI	Safety Injection
SRO	Senior Reactor Operator
SW	Service Water
TS	Technical Specification