May 2, 2006

Mr. David A. Christian
Senior Vice President and
Chief Nuclear Officer
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: KEWAUNEE POWER STATION - NRC INTEGRATED INSPECTION REPORT 05000305/2006002

Dear Mr. Christian:

On March 30, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Kewaunee Power Station. The enclosed integrated inspection report documents the inspection findings which were discussed on April 5, 2006, with Mr. M. Gaffney 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, six NRC-identified findings of very low safety significance (Green) were identified. Three of the findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because the issues were entered into your corrective action program, the NRC is treating these issues as non-cited violations, in accordance with Section VI.A.1 of the NRC Enforcement Policy. If you contest any 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 - 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 at the Kewaunee Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Patrick L. Louden
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000305/2006002
w/Attachment: Supplemental Information

cc w/encl: M. Gaffney, Site Vice President
C. Funderburk, Director, Nuclear Licensing
and Operations Support
T. Breene, Manager, Nuclear Licensing
L. Cuoco, Esq., Senior Counsel
D. Zellner, Chairman, Town of Carlton
J. Kitsembel, Public Service Commission of Wisconsin

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-305
License No:	DPR-43
Report No:	05000305/2006002
Licensee:	Dominion Energy Kewaunee, Inc.
Facility:	Kewaunee Power Station
Location:	N490 Highway 42 Kewaunee, WI 54216
Dates:	January 1 through March 31, 2006
Inspectors:	S. Burton, Senior Resident Inspector P. Higgins, Resident Inspector T. Ploski, Senior Emergency Preparedness Analyst T. Bilik, Reactor Engineer
Approved by:	Patrick L. Louden, Chief Projects Branch 5 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000305/2006002; 01/01/2006 - 03/31/2006; Kewaunee Power Station. Adverse Weather Protection, Operability Evaluations, Permanent Plant Modifications, Problem Identification and Resolution.

The baseline inspection was conducted by regional reactor inspectors and resident inspectors. Three Green findings and three Green findings with associated non-cited violations (NCVs) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP 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: Initiating Events

- Green. A finding of very low safety significance was identified by the inspectors for the licensee's failure to control loose materials within the protected area south of the transformer bays in response to adverse weather conditions. The material could have been blown into the transformers and initiate a transient. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for the failure to implement effective corrective actions in response to a similar, previous inspection finding (Inspection Report 05000305/2005008). No violation of regulatory requirements occurred.

  The licensee entered this issue into its corrective action program and removed the loose material from the transformer bays.

  The finding is more than minor because, if left uncorrected, the loose items would become a more significant safety concern by becoming missile hazards; thereby, increasing the likelihood of an initiating event. Additionally, the inspectors determined that this issue was associated with the procedure quality attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations because the station procedure used to control potential airborne material was too narrow in scope. The finding was of very low safety significance because the inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet under the Initiating Events column. (Section 1R01)

- Green. A finding of very low safety significance was identified by the inspectors for the failure to adequately evaluate an inoperative indicating lamp associated with the turbine control valves. The primary cause of this finding was attributed

to the cross-cutting area of human performance because procedures were available, but not followed, that would have facilitated proper performance of the task.

The licensee entered this item into its corrective action program and reviewed open work orders, provided a status update to management, and increased communications of related expectations.

The finding is greater than minor because the failure to adequately evaluate deficient conditions, if left uncorrected, would become a more significant safety concern. The finding was of very low safety significance because the inspectors answered "no" to all the questions in the Significance Determination Process Phase 1 Screening Worksheet under the Initiating Events column. (Section 4OA2.3b.ii)

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the inspectors for ineffective identification and the initiation of corrective actions to resolve boric acid leakage from the 1A residual heat removal (RHR) pump flange studs and nuts. The primary cause of this finding was attributed to the cross-cutting area of problem identification and resolution. During a review of corrective actions associated with the licensee's identification of a moderate amount of boric acid around various pump flange studs and nuts, the inspectors found that numerous prior occasions existed where the licensee had identified similar conditions yet failed to adequately identify and initiate actions to evaluate or correct this condition adverse to quality.

  The licensee entered this item into its corrective action program and wrote a work order to replace the pump casing flange gasket.

  The finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating System cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Additionally, failure to correct a condition adverse to quality in a safety-related system, if left uncorrected, would become a more significant safety concern. The finding was of very low safety significance because the inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet under the Mitigating Systems column. (Section 1R15)

- Green. A finding of very low safety significance and an associated non-cited violation of the Kewaunee Technical Specifications, Section 6.8, "Procedures," was identified by the inspectors during a review of plant modification Design Change Request 3490, which replaced the existing Technical Support Center diesel generator fuel oil day tank level switches with new level switches of a

different design. The inspectors determined that, in accordance with procedure GNP-01.01.01, "Determination of Nuclear Safety Designed Classifications, QA [Quality Assurance] Type and EQ [Environmental Qualification] Type," the new level switches should have been designated as "Augmented Quality." Contrary to this, the new switches were not designated as augmented quality. The primary cause of this finding was attributed to the cross-cutting area of problem identification and resolution because of the licensee's failure to take effective corrective actions for previously identified problems with its quality assurance program.

The licensee entered this item into its corrective action program and conducted supplemental audits of quality-designated equipment, added additional related elements to an upcoming quality assurance group audit of the quality assurance program, and the conduct of a cause evaluation of related issues.

The finding is greater than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Additionally, failure to comply with the provisions of nuclear safety-related procedures, if left uncorrected, would become a more significant safety concern. The finding is of very low safety significance because the inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet under the Mitigating Systems column. (Section 1R17)

- Green. A finding of very low safety significance was identified by the inspectors for the failure to adequately evaluate the extent-of-condition relative to installed equipment for a 10 CFR Part 21 notification for degraded Bussmann® fuses. The primary cause of the finding was attributed to the cross-cutting area of human performance because procedures were available, but not followed, that would have facilitated proper performance of the task.

  The licensee entered this item into its corrective action program and planned to review other installed fuses and to conduct an evaluation of original problem.

  The finding was greater than minor because the failure to adequately evaluate the impact of potentially degraded safety-related fuses on installed equipment, if left uncorrected, would become a significant safety concern. Specifically, the condition could cause premature circuit interruptions of safety-related or risk significant mitigating components, when called upon to perform the related functions, and this is an undesirable condition. The finding was of very low safety significance because the inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet under the Mitigating Systems column. (Section 4OA2.3b.i)

Cornerstone: Public Radiation Safety

- Green. A finding of very low safety significance and an associated non-cited violation of the Kewaunee Technical Specifications, Section 6.8, "Procedures," was identified by the inspectors for the failure to adequately evaluate degraded flow in a service water system radiation monitor. The primary cause of this finding was attributed to the cross-cutting area of human performance because procedures were available, but not followed, that would have facilitated proper performance of the task.

  The licensee entered this item into its corrective action program and planned to conduct inspections of other radiation monitor sample chambers, assess the need for an in-line filter, and assess the need for a modification to correct the recurring problem with the service water radiation monitor.

  The finding was greater than minor because the finding involved conditions contrary to those required by the offsite dose calculation manual. Specifically, sampling requirements that were required to be initiated when the related radiation monitoring instrumentation should have been declared inoperable were not accomplished. The finding was of very low safety significance because no radiological releases were possible from the indicated pathways when the condition existed. (Section 4OA2.3b.iii)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Kewaunee operated at full power for the entire inspection period except for brief downpowers to conduct planned surveillance testing activities with the following exception:

- From February 9 through February 13, 2006, reactor power was reduced to approximately 35 percent to facilitate condenser tube plugging, equipment maintenance, and surveillance testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

Prior to the onset of conditions addressed in a high wind advisory, when the potential existed in the area for gusts and high winds, the inspectors reviewed the facility's design and the licensee's procedure to verify that structures, systems, and components would remain functional when challenged by the adverse weather conditions. The inspectors walked down selected plant areas to ensure that licensee actions maintained the readiness of essential systems and that the equipment would be maintained during these adverse weather conditions. Additionally, the inspectors verified proper implementation of the licensee's preparatory procedure. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors evaluated readiness for susceptibility to adverse weather conditions for the following areas for a total of one sample:

- transformer bays;
- protected area south of the transformer bays;
- protected area east of turbine building; and
- substation.

b. Findings

Introduction: The inspectors identified a Green finding for the licensee's failure to control loose materials within the protected area south of the transformer bays in response to adverse weather conditions. The material could have been blown into transformers and initiate a transient. The primary cause of this finding was attributed to the cross-cutting area of problem identification and resolution for the failure to implement effective corrective actions in response to a similar, previous inspection finding (Inspection Report (IR) 05000305/2005008). No violation of regulatory requirements occurred.

Discussion: On January 23, 2006, the licensee responded to a high winds advisory by performing a walkdown of site areas using procedure GMP-172, "Tornado Missile Hazard Monthly Inspection," as guidance. The licensee used this procedure, written for tornados, because a specific procedure for a high wind advisory did not exist. On January 24, the inspectors conducted a walkdown of the protected area south of the transformer bay area, the protected area east of the turbine building, and the switchyard to assess the licensee's preparations to preclude or minimize potential damage to structures, systems, and components from high winds associated with the high wind advisory. The inspectors' review included the transformer bays and areas adjacent to the transformer bays that were not specifically addressed in procedure GMP-172. The inspectors found, next to one transformer, a wooden pallet topped with plywood upon which were piled a number of small, metal, scaffolding parts. Additionally, the inspectors noted that each transformer bay contained a metal handled bucket. The inspectors concluded that high winds combined with the close proximity of the metallic items to the transformers led to an increased potential for damage from wind-blown material to the transformers and the initiation of a transient.

A similar and nearly identical condition identified by inspectors in May 2005 resulted in a finding for a failure to control loose material (IR 05000305/2005008). Procedure GMP-172 was generated as a corrective action for this finding. It was previously determined by inspectors that no other procedures existed to prepare the site for adverse weather conditions with respect to tornado or high wind conditions, nor had the inspectors identified any preparatory procedures to control loose materials in the protected area or substation.

In 2005, the inspectors found no specified actions or pro-active elements which required the licensee to minimize the number of missile hazards prior to seasonable susceptibilities. Additionally, the inspectors had previously determined that the licensee had not effectively implemented industry experience with regard to this issue. During this inspection, the inspectors found that the licensee's Operational Quality Assurance Plan committed the licensee to American National Standards Institute (ANSI) N45.2.3-1973, "Housekeeping During the Construction Phase of Nuclear Power Plants," during the plant operational phase; and this standard requires scheduled inspections of work areas and construction practices to ensure protection of installed equipment from weather-related movement of stored items.

The inspectors determined that the corrective actions for the May 2005 issue was the development of a narrowly focused, routine, monthly surveillance procedure (GMP-172) for a site tornado hazard inspection. The procedure's scope specifically focused on tornados and limited inspections to the switchyard, the protected area east of the turbine building, and the protected area south of the transformer bays. The inspectors concluded that the related corrective actions failed to include, as an extent-of-condition, other weather-related conditions that could initiate a transient, or areas of the plant susceptible to weather-induced transients. The licensee concurred with the inspectors' observations and issued corrective action program (CAP) document CAP031041 to address deficiencies in procedure GMP-172.

Analysis: The inspectors determined that the failure of licensee personnel to implement effective corrective actions to control loose material near risk significant equipment, in response to a previous inspection finding, is a performance deficiency and is related to the cross-cutting area of problem identification and resolution. The inspectors concluded that procedure GMP-172 was narrow in scope because it did not adequately address housekeeping standards for risk significant equipment. Specifically, the purpose/scope of the procedure mentioned high winds, but procedure subsequently focused activities solely on tornados, confined the use of the procedure to a monthly surveillance, and was limited and nonspecific with respect to areas requiring inspection. The procedure offered no criteria to address other conditions, such as high winds, that are potentially detrimental to risk significant equipment. The inspectors also concluded that the licensee had the time and opportunity to have previously identified and addressed the deficiencies of this procedure.

The inspectors reviewed this finding using the guidance contained in IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening." The inspectors determined that the finding was more than minor because, if left uncorrected, the loose items would become a more significant safety concern by becoming missile hazards thereby increasing the likelihood of an initiating event. Additionally, in that procedure GMP-172 was too narrow in scope, the inspectors determined that this issue was associated with the procedure quality attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations.

The inspectors determined that the finding warranted evaluation using the SDP because the finding was associated with an increase in the likelihood of an initiating event. Using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," the inspectors answered "no" to all the screening questions in the Phase 1 Screening Worksheet under the Initiating Events column; therefore, this finding is of very low safety significance (Green).

Enforcement: The inspectors concluded that the procedure used as guidance in performing inspections for loose materials capable of becoming missile hazards during adverse weather conditions was too narrow in scope and did not adequately address housekeeping standards for risk significant equipment. Because no 10 CFR Part 50, Appendix B, components were impacted by the finding, no violation of regulatory requirements occurred (Finding, FIN 05000305/2006002-01). The licensee included this finding in its corrective action program as CAP031064. Corrective actions performed to date included immediate removal of items from the operating transformer bays that were not required.

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of trains of risk-significant mitigating systems equipment. The inspectors reviewed equipment alignment to identify any discrepancies that could impact the function of the system and potentially increase risk. Identified equipment alignment problems were verified by the inspectors to be properly resolved. The inspectors selected redundant or backup systems for inspection during times when equipment was of increased importance due to unavailability of the redundant train or other related equipment. Inspection activities included, but were not limited to, a review of the licensee's procedures, verification of equipment alignment, and an observation of material condition, including operating parameters of equipment in-service. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following equipment trains to assess operability and proper equipment line-up for a total of two samples:

- Nuclear Power Range Channel 1 (Red) N41 with Reactor Coolant Channel 4 (Yellow) Temperature and Pressurizer Pressure Instrumentation out-of-service for maintenance; and
- Reactor Protection System Channel 4 (Yellow) with Reactor Coolant Channel 4 (Yellow) Temperature and Pressurizer Pressure Instrumentation out-of-service for maintenance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Quarterly Fire Zone Walkdowns (71111.05Q)

a. Inspection Scope

The inspectors walked down risk-significant fire areas to assess fire protection requirements. The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and had implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events, or the potential to impact equipment which could initiate or mitigate a plant transient. The inspection activities included, but were not limited to, the control of transient combustibles and ignition sources, fire

detection equipment, manual suppression capabilities, passive suppression capabilities, automatic suppression capabilities, compensatory measures, and barriers to fire propagation. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following areas for review for a total of 11 samples:

- Fire Zone AX-24, Spent Fuel Pool Area and Truck Bay;
- Fire Zone TU-97, 1B Battery Room;
- Fire Zone TU-98, 1A Battery Room;
- Fire Zone TU-96, Turbine Oil Storage Room;
- Fire Zone TU-22, Turbine Building Operating Floor;
- Fire Zone TU-22, Turbine Building Mezzanine;
- Fire Zone TU-22, Turbine Building Basement;
- Fire Zone TU-94, CO_2 (carbon-dioxide) Storage Tank Room;
- Fire Zone AX-22, Steam Generator Blowdown Tank Room;
- Fire Zone AX-33, Reactor Makeup Water Storage Tank and Condensate Storage Tank area; and
- Fire Zone AX-39, Gas Bottle Storage area.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors performed an annual review of flood protection barriers and procedures for coping with external flooding. The inspection focused on determining whether flood mitigation plans and equipment were consistent with design requirements and risk analysis assumptions. The inspection activities included, but were not limited to, a review and/or walkdown to assess design measures, seals, drain systems, contingency equipment condition and availability of temporary equipment and barriers, performance and surveillance tests, procedural adequacy, and compensatory measures. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following equipment for a total of two samples:

- Screenhouse Structure and Equipment; and
- Forebay Structure.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

The inspectors performed a quarterly review of licensed operator requalification training. The inspection assessed the licensee's effectiveness in evaluating the requalification program, ensuring that licensed individuals operate the facility safely and within the conditions of their license, and evaluated licensed operator mastery of high-risk operator actions. The inspection activities included, but were not limited to, a review of high-risk activities, emergency plan performance, incorporation of lessons learned, clarity and formality of communications, task prioritization, timeliness of actions, alarm response actions, control board operations, procedural adequacy and implementation, supervisory oversight, group dynamics, interpretations of Technical Specifications (TSs), simulator fidelity, and licensee critique of performance. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors observed the following requalification activity for a total of one sample:

- a training crew during an evaluated simulator scenario that included a feedwater line break inside containment, an anticipated transient without scram, and fuel damage which resulted in entry into the emergency operating procedures, reduced reactor level, and control rod insertion using alternate methods.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the following system to assess maintenance effectiveness, including maintenance rule activities, work practices, and common cause issues. Inspection activities included, but were not limited to, the licensee's categorization of specific issues including evaluation of performance criteria, appropriate work practices, identification of common cause errors, extent-of-condition, and trending of key parameters. Additionally, the inspectors reviewed implementation of the Maintenance Rule (10 CFR 50.65) requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with reviewed corrective action program documents, and current equipment performance status. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors performed the following maintenance effectiveness review for a total of one sample:

- an issue/problem-oriented review of the Technical Support Center (TSC) Diesel Generator because the licensee designated it as risk significant under the Maintenance Rule and the system experienced component failures during routine inspections and failures to start during monthly surveillance tests.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed maintenance activities to review risk assessments (RAs) and emergent work control. The inspectors verified the performance and adequacy of RAs, management of resultant risk, entry into the appropriate licensee-established risk bands, and the effective planning and control of emergent work activities. The inspection activities included, but were not limited to, a verification that licensee RA procedures were followed and performed appropriately for routine and emergent maintenance, that RAs for the scope of work performed were accurate and complete, that necessary actions were taken to minimize the probability of initiating events, and that activities to ensure that the functionality of mitigating systems and barriers were performed. Reviews also assessed the licensee's evaluation of plant risk, risk management, scheduling, configuration control, and coordination with other scheduled risk-significant work for these activities. Additionally, the assessment included an evaluation of external factors, the licensee's control of work activities, and appropriate consideration of baseline and cumulative risk. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors observed maintenance or planning for the following activities or risk significant system undergoing scheduled or emergent maintenance for a total of eight samples:

- extending out-of-service time for the ‘A’ air compressor due to extended maintenance;
- extending out-of-service time for the turbine-driven auxiliary feedwater pump due to extended maintenance activity;
- delay in completing turbine first stage pressure instruments channel test;
- delay in performing quarterly containment inspection due to entry procedural issues;
- extending out-of-service time for SD-3B, steam generator PORV (power operated relief valve) 3B, due to additional post-maintenance testing required;
- risk assessment for emergent work on ‘C’ CCP (coolant charging pump);
- removal of air compressor ‘F’ due to air leak; and
- identification of an inoperable steam exclusion boundary in the ‘B’ battery room.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed personnel performance to planned and unplanned non-routine evolutions to review operator performance and the potential for operator contribution to the evolution, transient, or event. The inspectors observed or reviewed records of operator performance during the evolution. Reviews included, but were not limited to, operator logs, pre-job briefings, instrument recorder data, and procedures. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors evaluated the following evolutions for a total of six samples:

- reactor coolant pump 'A' No. 1 seal leak off increasing;
- fire in the owner controlled area;
- planned power reduction to repair a condenser tube leak;
- operator response to a loss of component cooling water expansion tank level indication;
- operations response to trip of the 'C' charging pump when the 'B' charging pump was out-of-service for maintenance; and
- unplanned rapid load shed.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability evaluations which affected mitigating systems or barrier integrity to ensure that operability was properly justified and that the component or system remained available. The inspection activities included, but were not limited to, a review of the technical adequacy of the operability evaluations to determine the impact on TSs, the significance of the evaluations to ensure that adequate justifications were documented, and that risk was appropriately assessed. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors reviewed the following operability evaluations for a total of five samples:

- service water (SW) flow through component cooling water heat exchanger may exceed design rating;
- cracked expansion joint in the steam exclusion boundary in the 'B' battery room;
- excessive seal leakage on the 'B' RHR pump;

- pump flange gasket leakage on the 'A' RHR pump; and
- incorrect mounting brackets installed on the pressurizer pressure transmitter.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to identify and correct a condition adverse to quality. The finding was identified during the inspectors' review of licensee actions taken following the identification of a moderate amount of dry white boric acid at the seal area and a small amount of dry boric acid at about eight of the 1A RHR pump flange studs and nuts. This finding was attributed to the cross-cutting area of problem identification and resolution.

Description: On January 18, 2006, the licensee identified a moderate amount of dry white boric acid at the seal area and a small amount of dry boric acid at several of the 1A RHR pump flange studs and nuts while inspecting the pump. The boric acid deposits appeared to be coming from a leaking pump casing flange gasket which allowed fluid to flow past that pressure boundary and travel along the studs resulting in a boric acid deposit at the stud and nut locations. The licensee identified in the related CAP030959 that the stud material was carbon steel. The inspectors noted that carbon steel is very susceptible to boric acid corrosion.

A review of the leakage history on the 1A RHR pump revealed that on November 1, 2004, leakage past this gasket was identified to be the cause of boric acid deposits on two of the pump flange studs and nuts. At that time, Work Request (WR) 04-3229 was written to clean the boric acid from the stud and nut area. However, this WR was not performed because the Boric Acid Corrosion Control Program owner was not informed of the condition in need of evaluation. Additionally, no WR was generated at that time to replace the leaking gasket in order to correct the condition adverse to quality.

During February 2006, the licensee performed an analysis of potential boric acid corrosion on the studs in conjunction with stud inspections, which included visual and dimensional inspections of several studs. The licensee's inspection found that no significant stud degradation had taken place. The licensee concluded that the pump had remained operable during the time frame when the pump casing flange gasket had been leaking. Additionally, the licensee concluded that the pump would remain operable until the next refueling outage at which time the leaking gasket replacement was scheduled to correct this condition adverse to quality.

Analysis: The inspectors determined that the licensee's failure to initiate corrective actions for leakage from the flange gasket of the safety-related 1A RHR pump casing flange is a performance deficiency warranting a significance evaluation. The inspectors determined that the finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating System cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that

respond to initiating events to prevent undesirable consequences (i.e., core damage). Additionally, the failure to identify and correct a condition adverse to quality in a safety-related system, if left uncorrected, would become a more significant safety concern.

The inspectors evaluated the finding using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors answered "no" to all the screening questions in the Mitigating Systems column of the SDP Phase 1 Screening Worksheet; therefore, this finding is of very low safety significance (Green).

The inspectors also determined that the finding affected the cross-cutting area of problem identification and resolution, because of the licensee's failure to take effective corrective actions to address previously identified problems with the safety-related 1A RHR pump.

Enforcement: 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to this, on multiple occasions between November 1, 2004, and January 18, 2006, the licensee failed to initiate corrective actions to repair a leaking 1A RHR pump casing flange gasket. The licensee entered this issue into its corrective action program as CAP031522. Corrective actions already taken by the licensee included inspection of several of the studs, analysis of projected corrosion rates under normal and accident pump conditions, and generation of a Work Order (WO) to replace the pump casing flange gasket during the September 2006 refueling outage. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program, this violation is being treated as an NCV consistent with Section VI.A of the NRC enforcement policy (NCV 05000305/2006002-02).

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors' review of permanent plant modifications focused on verification that the design bases, licensing basis, and performance capability of related structures, systems or components were not degraded by the installation of the modification. The inspectors also verified that the modifications did not place the plant in an unsafe configuration. The inspection activities included, but were not limited to, a review of the design adequacy of the modification by performing a review, or partial review, of the modification's impact on plant electrical requirements, material requirements and replacement components, response time, control signals, equipment protection, operation, failure modes, and other related process requirements. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following permanent plant modification for review for a total of one sample:

- modification to the TSC diesel generator fuel oil day tank level indication.

b. Findings

Introduction: A finding of very low safety significance (Green) and an associated NCV of the Kewaunee Nuclear Power Plant (KNPP) TSs, Section 6.8, "Procedures," was identified by the inspectors during a review of plant modification, design change request DCR 3490. This modification replaced the existing TSC diesel generator fuel oil day tank level switches with new level switches of a different design. The inspectors determined that, in accordance with procedure GNP- 01.01.01, "Determination of Nuclear Safety Designed Classifications, QA [Quality Assurance] Type and EQ [Environmental Qualification] Type," the new level switches should have been designated as "Augmented Quality." The inspectors identified that the augmented quality designation was not applied to the new level switches.

The inspectors also determined from a review of the licensee's corrective action program that subsequent to 2004, multiple corrective action documents had been initiated that identified concerns with various aspects of the KNPP QA program, including a lack of guidance to determine augmented quality requirements and a lack of ownership for development and maintenance of a "Quality List" program. However, past corrective actions had not been effective to correct these conditions adverse to quality or the procedures associated with them. Therefore, the issue with DCR 3490 was attributed to the cross-cutting area of problem identification and resolution.

Description: In January 2006, the inspectors reviewed plant modification DCR 3490, "TSC Diesel Generator Fuel Oil Day Tank Level Gauge/Switch Replacement," during the implementation of the modification. This modification replaced the existing sightglass and pressure switches on the TSC diesel generator fuel oil day tank with new level switches of a different design.

During review of the design documentation, the inspectors noted that the modification was classified as "Augmented Quality" since the TSC diesel was required for station blackout. It was also noted that augmented quality requirements were not applied to the new level switches. Kewaunee Nuclear Power Plant nuclear safety-related procedure GNP-01.01.01, "Determination of Nuclear Safety Designed Classifications, QA Type and EQ Type," required that the application of one or more portions of the Operational Quality Assurance Program for a non-safety-related item be applied when the function that an item performed was essential to satisfy a licensing or management commitment and that the augmented quality designation should be applied.

In a letter dated September 18, 1992, regarding KNPP implementation of the Station Blackout Rule, 10 CFR 50.63, the licensee stated that the TSC diesel generator and associated equipment were installed as QA Type 2 and that the remaining equipment that was being installed to meet the Station Blackout rule would be in accordance with the QA Type 2 program. In a letter dated November 19, 1992, the NRC transmitted a Supplemental Safety Evaluation to the licensee regarding KNPP responses to the

Station Blackout rule. This evaluation accepted the licensee's response that the TSC diesel and associated equipment would be given a QA Type 2 designation. In classifying the diesel and associated equipment as QA Type 2, the licensee committed to the NRC to apply one or more portions of the Operational Quality Assurance Program for a non-safety-related item. Therefore, in accordance with GNP-01.01.01, equipment associated with the TSC diesel generator, such as the fuel oil day tank level switches, should have been designated for an augmented quality requirement. Additionally, the inspectors determined from a review of the plant equipment databases that, contrary to licensee commitments to the NRC, numerous components in the TSC diesel generator and associated equipment had been designated as QA Type 3.

Because components were installed at a lower quality type than indicated in correspondence, the inspectors reviewed the licensee's corrective action program to determine if similar conditions existed. The inspectors determined that several documents (CAP024742, CAP029844, CAP031182, Plant Change Request 21282) had been initiated since 2004 identifying concerns with various aspects of the KNPP QA program, including a lack of guidance to determine augmented quality requirements and a lack of ownership for development and maintenance of a "Quality List" program. The inspectors concluded that past corrective actions were not effective in correcting these conditions. As a result of this and other activities related to the licensee's QA program, the inspectors determined that uncertainty existed, dating back to 2004, among both engineering and management personnel with regard to implementation of the KNPP QA program. The licensee concurred with the inspectors observations and entered this item into its corrective action program as CAP031927.

Analysis: The inspectors determined that the licensee's failure to comply with the provisions of nuclear safety-related procedure GNP-01.01.01 is a performance deficiency warranting a significance evaluation. The inspectors determined that the finding is greater than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the installation of parts in equipment with a lower quality designation than required potentially impacted equipment reliability. Additionally, failure to comply with the provisions of nuclear safety-related procedures, if left uncorrected, would become a more significant safety concern.

The inspectors evaluated the finding using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet in the Mitigating Systems column; therefore, this finding is of very low safety significance (Green).

The inspectors also determined that the finding affected the cross-cutting area of problem identification and resolution, because of the licensee's failure to take effective corrective actions to address previously identified problems with the KNPP QA program.

Enforcement: The KNPP Facility Operating License states that "the licensee shall operate the facility in accordance with the Technical Specifications." Technical Specification Section 6.8, Subsection (a) states that "written procedures and administrative policies shall be established, implemented and maintained that meet the requirements and recommendations of Section 5.2.2, 5.2.5, 5.2.15, and 5.3 of ANSI N18.7-1976." American National Standards Institute, N18.7-1976, Section 1, indicates that the standard is directed primarily towards administrative controls and quality assurance associated with safety-related activities, equipment and procedures. Section 5.2.2 of ANSI N18.7-1976, requires that "Procedures shall be followed, and the requirements for use of procedures shall be prescribed in writing." Contrary to the requirements of nuclear safety-related procedure GNP-01.01.01, "Determination of Nuclear Safety Designed Classifications, QA Type and EQ Type," the modification for the TSC diesel generators were not designated and purchased "Augmented Quality." The licensee entered this item into its corrective action program as CAP031927. Corrective actions to date included supplemental audits of level one equipment, addition of related elements to a planned Nuclear Oversight (quality assurance) audit of the QA program, and an apparent cause evaluation of some of the related issues. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program, this violation is being treated as a NCV consistent with Section VI.A of the NRC enforcement policy (NCV 05000305/2006002-03).

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors verified that the post-maintenance test procedures and activities were adequate to ensure system operability and functional capability. Activities were selected based upon the structure, system, or component's ability to impact risk. The inspection activities included, but were not limited to, witnessing or reviewing the integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use and compliance, control of temporary modifications or jumpers required for test performance, documentation of test data, system restoration, and evaluation of test data. Also, the inspectors verified that maintenance and post-maintenance testing activities adequately ensured that the equipment met the licensing basis, TS, and Updated Safety Analysis Report design requirements. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors reviewed post-maintenance activities associated with the following components, for a total of seven samples:

- system and instrument air compressor 1A;
- TSC diesel generator cooling fan motor;
- TSC in diesel generator fuel oil day tank level switches;
- battery room inverters;
- RHR pump A;
- RHR pump B; and
- valve SI-351B.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed surveillance testing activities to assess operational readiness and to ensure that risk-significant structures, systems, and components were capable of performing their intended safety function. Activities were selected based upon risk significance and the potential risk impact from an unidentified deficiency or performance degradation that a system, structure, or component could impose on the unit if the condition was left unresolved. The inspection activities included, but were not limited to, a review for preconditioning, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, control of temporary modifications or jumpers required for test performance, documentation of test data, TS applicability, impact of testing relative to performance indicator reporting, and evaluation of test data. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following surveillance testing activities for review for a total of seven samples, including one reactor coolant leak rate sample and three inservice inspection (ISI) samples:

- Emergency Diesel Generator 'B' availability test ;
- Reactor Protection Logic Train 'A' test;
- RHR pump 'A' to detect seal or gasket leakage (ISI);
- RHR pump 'B' to detect seal or gasket leakage (ISI);
- TSC diesel generator;
- SW Train 'A' pump and valve test (ISI); and
- Reactor Coolant System leak rate check.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed a screening review of Revision 28 of the KNPP Emergency Plan to determine whether the changes made in Revision 28 decreased the effectiveness of the licensee's emergency planning. The screening review of this revision did not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection to ensure that the emergency plan continues to meet NRC regulations.

These activities completed one inspection sample:

- Kewaunee Power Station Emergency Plan; Revision 28.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors selected emergency preparedness exercises that the licensee had scheduled as providing input to the Drill/Exercise Performance Indicator. The inspection activities included, but were not limited to, the classification of events, notifications to offsite agencies, protective action recommendation development, and drill critiques. Observations were compared with the licensee's observations and corrective action program entries. The inspectors verified that there were no discrepancies between observed performance and performance indicator reported statistics. As part of this inspection, the documents listed in the Attachment were reviewed.

The inspectors selected the following emergency preparedness activity for review for a total of one sample:

- a TSC tabletop exercise performed on February 7, 2006. Drill notifications were simulated with state, county, and local agencies for a site area emergency and general emergency classification.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, and Public Radiation Safety

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the routine inspections documented earlier in this report, the inspectors verified that the licensee entered the problems identified during the inspection into its corrective action program. Additionally, the inspectors verified that the licensee was identifying issues at an appropriate threshold and entering them in the corrective action program, and verified that problems included in the program were properly addressed for resolution. Attributes reviewed included: complete and accurate identification of the problem; timeliness was commensurate with the safety significance; evaluation and

disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and the classification, prioritization, and focus were commensurate with safety and sufficient to prevent recurrence of the issue.

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by reviewing daily CAP summary reports and attending corrective action review board meetings.

b. Findings

No findings of significance were identified.

.3 Selected Issue Follow up (Annual Sample): Adequacy of Evaluations of Degraded or Non-conforming Conditions

Introduction: The inspectors reviewed selected elements related to operability from the licensee's Kewaunee Power Station improvement letter to the NRC, dated November 14, 2005. Elements selected were items 2.a, "Improve the quality of Operability Determinations," 2.b, "Validate the quality of existing open Operability Determinations," and elements of 7.a, "Improve the quality of engineering products," specifically operability recommendations.

The inspectors selected these elements of the licensee's improvement initiative because several CAPs were identified during the review of other inspection activities that appeared to be incomplete or inadequate. To facilitate this review, the inspectors reviewed CAPs related to current inspection activities and emergent work that identified potentially degraded or nonconforming conditions.

The inspectors found that the licensee had not established standards to indicate when improvement objectives were accomplished. Additionally, interviews with licensee staff indicated that recent site and industry feedback showed that many of the improvement objectives remained open even though all of the associated actions identified in the related commitment letter were completed. Because standards were not developed for the improvement objectives, the inspectors focused their review on risk and safety significant inspections performed as part of the baseline program.

The inspectors elected to focus their review on inspection samples because these samples represented both compliance and risk significant issues that should have received a rigorous review. The inspectors concluded that challenges remain in this area as evidenced by the following findings.

a. Inspection Scope

The inspectors reviewed the licensee's closure documents for each of the above areas to assess the commitment activities, the methods to verify that the commitment was met and the standards by which the improvement objective was evaluated. The inspectors also reviewed recent CAPs, selected CAPs that potentially related to operability, and assessed the actual report against both the licensee procedures and the improvement objectives.

b. Issues and Findings

i. Failure to Adequately Assess Impact of Degraded Fuses on Plant Equipment

Introduction: The inspectors identified a finding of very low safety significance (Green) for the failure to adequately evaluate the extent-of-condition relative to installed equipment for a 10 CFR Part 21 notification for degraded Bussmann® fuses. The cause of the finding was attributed to the cross-cutting area of human performance because procedures were available, but not followed, that would have facilitated proper performance of the task.

Description: During the review of a 'C' coolant charging pump failure, the licensee identified that the cause was a blown fuse. As part of the inspection of this failure, the inspectors reviewed recent 10 CFR Part 21 reports related to fuse issues to ascertain if the blown fuse was a condition that could have been prevented. The inspectors determined that the fuse was not a type identified in recent notifications. During this assessment, the inspector identified that the licensee had recently reviewed a Part 21 notification related to Bussmann® fuses and that the assessment was inadequate. Specifically, the licensee's review, documented in CAP029887, indicated that an operability evaluation was not required. The associated condition evaluation, CE016554, reviewed warehouse stores to assess the presence of any fuses, and because no suspect fuses were currently in the warehouse, the review was not extended to installed items.

Subsequent to the inspectors' questions about the impact on installed components, the licensee took immediate corrective actions and identified one safety-related in-plant component protected by a susceptible fuse and corrective actions were initiated to perform an assessment of the in-plant installation. Additionally, the licensee's assessment of other potentially non-safety-related, but potentially risk significant fuses was limited to the in-stores supply. Associated with the non-safety-related fuses, the licensee did not perform a review of the potential for impact on risk significant in-plant equipment nor was a basis provided for exempting such a review.

Analysis: The inspectors determined that the failure to evaluate the extent-of-condition relative to installed equipment is a performance deficiency because procedure GNP-11.08.01, "Action Request Process," required that the supervisor ensure that the condition evaluation addressed the required action and that the resolution of the issue adequately addressed the problem. Additionally, the failure to determine if in-plant equipment subject to the maintenance rule could be subject to failure, or the acceptability of running said equipment to failure, was contrary to the requirements of 10 CFR 50.65(a)(3), performance and condition monitoring; and, therefore, the evaluation was similarly deficient. The inspectors determined that the issue is more than minor because failure to adequately evaluate deficient conditions would become a more significant safety concern if left uncorrected. Specifically, premature circuit interruptions of safety-related or risk significant mitigating components, when called upon to perform the related functions, is an undesirable condition.

The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," because the finding was associated components that support the mitigating systems cornerstone. The inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet in the Mitigating Systems column; therefore, this finding is of very low safety significance (Green). Additionally, the inspectors determined that the cause of the finding was attributed to the cross-cutting area of human performance because procedures were available, but not followed, that would have facilitated proper performance of the task.

Enforcement: The inspectors determined that the issue did not affect components covered by Appendix B of 10 CFR Part 50; therefore, the inspectors determined that the issue was a finding but not a violation (FIN 05000305/2006002-04). This item was entered into the licensee's corrective action program as CAP031264. Proposed corrective actions included a review of installed fuses and a condition evaluation of the issue.

ii. Failure to Adequately Assess Impact of Inoperative Indicating Lamp on Plant Equipment Functionality

Introduction: The inspectors identified a finding of very low safety significance (Green) for the failure to adequately evaluate an inoperative indicating lamp associated with the turbine control valves. The cause of the finding was attributed to the cross-cutting area of human performance because procedures were available that would have facilitated proper performance of the task.

Description: While reviewing an unanticipated plant transient that occurred during the performance of main turbine valve testing, the inspectors identified that a primary cause was an inadequate evaluation of a prior CAP. Specifically, on December 3, 2005, the licensee identified that the electro-hydraulic control panel indication for turbine control valve 3 was not lit. The CAP was closed to a WO that requested troubleshooting and repair of the out-of-service indicating lamp. Subsequently, on February 10, 2006, turbine valve testing was performed with the associated WO remaining open and without a full understanding of what the out-of-service indication meant.

The inspectors noted that the related CAP indicated that the lamp was possibly blown out and, as a result, corrective actions failed to consider other related features. The CAP was closed to a WO and the WO was not prioritized to be completed prior to the next scheduled surveillance test. The licensee's apparent cause evaluation identified that the licensee missed a opportunity to determine that the lamp provided indication that the associated relay was not functional. More importantly, the lamp was later identified to be a light emitting diode and was highly unlikely to failure.

Subsequently, licensee personnel indicated that had they known that the indicator was a light emitting diode, versus a lamp, they would have taken different actions. Nevertheless, the issue illustrated that licensee personnel failed to believe indications and question assumptions.

Analysis: The inspectors determined that the CAP initiator's presumption that the lamp was blown without an understanding of the functions of the lamp is a performance deficiency. Similarly, the assumption that the lamp was blown and the failure of a team of multi-disciplinary personnel, the CAP screening team, to assess other common failure modes of indicating lamps is also a performance deficiency. Specifically, the screening committee recommended closing this issue to the WR without appropriately understanding the issue. Procedure GNP-11.08.01, "Action Request Process," Attachment D, "CAP Screening Team Checklist," indicated that as part of the screening the team answer the question, "What is the worst that could happen?" Additionally, if the team was uncomfortable with the answer to the question, the team should consider acquiring additional information or requiring additional actions. Contrary to this, the licensee failed to adequately evaluate the degraded condition. Because of this, the inspectors determined that the cause of the finding was attributed to the cross-cutting area of human performance because the GNP procedure was available that would have facilitated an understanding of the functions of the blown lamp and proper performance of a common failure mode assessment. The inspectors determined that the issue was more than minor because failure to adequately evaluate deficient conditions, if left uncorrected, would become a more significant safety concern.

The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," because the finding was associated with components that support the Initiating Events cornerstone. The inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet in the Initiating Events column; therefore, this finding is of very low safety significance (Green).

Enforcement: The inspectors determined that the issue did not affect components covered by Appendix B of 10 CFR Part 50; therefore, the issue was a finding but not a violation (FIN 05000305/2006002-05). This item was entered into the licensee's corrective action program as CAP031350. Short-term corrective actions included a review of open work orders, a status update to management, and increased communications of related expectations. Proposed corrective actions included performing a training needs assessment, a review of the work request screening process, procedure changes to provide barriers to prevent recurrence in related work control procedures, and the incorporation of operating experience into a new standard testing package.

iii. Failure to Assess Flow Degradation Impacts on Operability of Radiation Monitor

Introduction: The inspectors identified a finding of very low safety (Green) and an associated NCV for the failure to adequately evaluate degraded flow conditions associated with SW system process radiation monitor instrumentation. The cause of the finding was attributed to the cross-cutting area of human performance because procedures were available that would have facilitated proper performance of the task.

Description: On January 2, 2006, during operator rounds, the licensee identified that the flow indicator for radiation monitor instrument R-20 was stuck; thereby, impairing the operators ability to assess flow through the instrument. This instrument monitors for radioactive material in the SW return lines from the spent fuel pool and component cooling water systems. The licensee indicated the instrument remained operable because the operator was able to detect flow even though the flow indicator was not rotating. No evaluation was performed to assess the amount of flow necessary to maintain the instrument operable.

Between February 9 and February 20, 2006, the resident inspectors questioned the impact of reduced flow on the operability of the associated instrumentation. As a result, the licensee reviewed the system design and determined that under reduced flow conditions proper operation of the related instruments could not be assured and declared the instruments inoperable. Subsequently, manual sampling requirements were initiated as required by the licensee's Offsite Dose Calculation Manual (ODCM).

The inspectors reviewed CAPs generated since 2001, associated with this or similar stuck or inoperable flow indicators and found multiple examples where this condition had existed since 2001. Additionally, the inspectors identified that the corrective actions to date were only to clean the instrument; no actions were taken to prevent recurrence of the condition.

The inspectors also found that procedure GNP-11.08.03, "Operability Determinations," Section 6.1.3.3.1, required an operability evaluation for equipment subject to the requirements of the ODCM. Additionally, GNP-11.08.03 provided guidance in Appendix B which contained an operability example where a FCU (fan coil unit) was found to have flow below its normal range and stated that the unit should be declared inoperable or a supporting calculation demonstrating operability should be performed.

Analysis: The inspectors determined that the failure to properly evaluate operability of SW radiation monitoring instrumentation is a performance deficiency. Additionally, the inspectors determined that this performance deficiency had existed for at least 5 years and that multiple opportunities to evaluate the condition had occurred. The inspectors determined that this condition related to the Public Radiation Safety cornerstone and is more than minor because it involved conditions contrary to those required by the ODCM. Specifically, sampling requirements that were required to be initiated when the related radiation monitoring instrumentation should have been declared inoperable were not met.

The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," because the finding was associated with public radiation safety. Because no radiological releases were possible from the indicated pathways when the condition existed, the issue was of very low safety significance (Green). Additionally, the inspectors determined that the cause of the finding was attributed to the cross-cutting area of human performance because procedures were available that would have facilitated proper performance of the task.

Enforcement: Licensee TSs, Section 6.8, requires that procedures be established that meet the requirements and recommendations of Sections 5.2.2, 5.2.5, 5.2.15, and 5.3 of ANSI N18.7-1976. Section 5.2.15 states, in part, that "the administrative controls and quality assurance program shall provide measures to control and coordinate the approval and issuance of documents which prescribe all activities affecting quality." Procedure GNP-11.08.03, "Operability Determinations," Section 6.1.3.3.1, requires an operability evaluation for equipment subject to the requirements of the ODCM. Contrary to this, on January 2, 2006, the licensee failed to properly evaluate the operability of a radiation monitor when degraded flow conditions were identified. This item was entered into the licensee's corrective action program as CAP031525. Proposed corrective actions included sample chamber inspections, assessment of the need for an in-line filter, determination of monitoring requirements, and assessment of the need for a modification to correct the recurring condition. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program, this violation is being treated as an NCV, consistent with Section VI.A of the NRC enforcement policy (NCV 05000305/2005002-06).

4OA3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report (LER) 05000305/2005-004-01, Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design

This revision offers no substantiative changes to LER 05000305/2005-004-00 which was closed in NRC Integrated Inspection Report 05000305/2005011. This LER is closed.

.2 (Closed) LER 05000305/2005-008-01, Turbine-Driven Auxiliary Feedwater Pump Inoperable Due to Insufficient Net Positive Suction Head

This revision offers no substantiative changes to LER 05000305/2005-008-00 which was closed in NRC Integrated Inspection Report 05000305/2005012. This LER is closed.

.3 (Closed) LER 05000305/2005-009-00, Firearm Discovered During Security Search Process

On May 19, 2005, with the KNPP in refueling shutdown mode, a firearm was discovered during the security search process of a new employee at the station's security entrance. The owner of the weapon was searched, questioned, and detained until local law enforcement arrived. The weapon was placed in the station's security arms room. The KNPP management obtained the individual's resignation of employment and the individual's name was placed on the site access review list that will no longer allow the individual past the station's security vehicle checkpoint. The cause of this event was

poor worker practices. The licensee evaluated this instance to be of minimal safety significance and did not constitute a safety system functional failure. The LER was reviewed by the inspectors and no findings of significance were identified. The licensee entered this issue into its corrective action program as CAP027463. Corrective actions included the resignation of the individual, a review of video recordings in the x-ray search area for prior entries by the employee, and interviews with licensee personnel who conducted escort responsibilities for the individual during previous site access. Additionally, the event was shared with the KNPP security team to ensure all security force members understood the event and the actions taken by the officers involved. This LER is closed.

.4 (Closed) LER 05000305/2005-011-00, The Setting of a Permissive (P-10) in the Power Range Channels of the Nuclear Instrumentation System was Outside of Plant Technical Specification Requirements

On June 20, 2005, with the plant in refueling shutdown mode, it was determined that the setting for permissive P-10 did not match the requirement of TS Table 3.5-2. The LER was reviewed by the inspectors and no findings of significance were identified. This issue was evaluated to be a minor issue. Corrective actions include revising the setting for the permissive, revision of training, aligning the TS with the model of the Westinghouse Standard TS, revision of the TS basis, and entry into the corrective action program as CAP028061. This LER is closed.

.5 (Discussion) Unresolved Item URI 05000305/2005008-04, Potential Common Mode Failure of Service Water Pumps, and LER 05000305/2005-010-00, Inadequate Engineering Analysis to Support SW Pump Operability

The inspectors have reviewed URI 05000305/2005008-04 and LER 05000305/2005-10-00. Activities involving CAP027887, issued June 9, 2005, to determine the past operability of the SW pumps and CAP028776 issued August 10, 2005, to generate a supplement to the LER, needed to address these issues, are still ongoing. As a result, the URI and LER remain open at this time.

4OA5 Other Activities

.1 Implementation of Temporary Instruction (TI) 2515/165 - Operational Readiness of Offsite Power and Impact on Plant Risk

a. Inspection Scope

The objective of TI 2515/165, “Operational Readiness of Offsite Power and Impact on Plant Risk,” was to confirm, through inspections and interviews, the operational readiness of offsite power systems in accordance with NRC requirements. From March 20 through March 22, 2006, the inspectors reviewed licensee procedures and discussed the attributes identified in TI 2515/165 with licensee personnel. In accordance with the requirements of TI 2515/165, the inspectors evaluated the licensee’s operating procedures used to assure the functionality/operability of the offsite power system, as well as, the risk assessment, emergent work, and/or grid reliability procedures used to assess the operability and readiness of the offsite power system.

The information gathered while completing this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. Gaffney and other members of licensee management on April 4, 2006. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

An interim exit was conducted for:

- Emergency Preparedness inspection with Mr. S. Wood on January 31, 2006.

4OA7 Licensee-Identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
L. Armstrong, Site Engineering Director
S. Baker, Radiation Protection Manager
T. Breene, Regulatory Affairs Manager
K. Davison, Plant Manager
W. Flint, Chemistry Manager
M. Gaffney, Site Vice-President
L. Hartz, Engineering Improvement Plan Director
W. Henry, Outage and Planning Manager
K. Hoops, Site Operations Director
W. Hunt, Maintenance Manager
J. Ruttar, Operations Director
S. Wood, Emergency Preparedness Manager

Nuclear Regulatory Commission
P. Louden, Chief, Branch 5

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000305/2006002-01	FIN	Failure to Control Loose Materials Within the Protected Area in Response to Adverse Weather Conditions (Section 1R01)
05000305/2006002-02	NCV	Ineffective Corrective Actions to Resolve Boric Acid Leakage from the 1A RHR Pump Flange Studs and Nuts (Section 1R15)
05000305/2006002-03	NCV	Failure to Apply Appropriate Quality Classification to TSC Diesel Generator Modifications as Required by Procedures (Section 1R17)
05000305/2006002-04	FIN	Failure to Adequately Evaluate the Extent-of-Condition of Degraded Fuses in Installed Equipment (Section 4OA2.3b.i)
05000305/2006002-05	FIN	Failure to Adequately Evaluate an Inoperative Indicating Lamp For a Turbine Control Valve (Section 4OA2.3b.ii)
05000305/2006002-06	NCV	Failure to Adequately Evaluate Degraded Flow Conditions on a SW System Radiation Monitor (Section 4OA2.3b.iii)

Closed

05000305/2005-004-01	LER	Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design (Section 4OA3.1)
05000305/2005-008-01	LER	Turbine-Driven Auxiliary Feedwater Pump Inoperable Due to Insufficient Net Positive Suction Head (Section 4OA3.2)
05000305/2005-009-00	LER	Firearm Discovered During Security Search Process (Section 4OA3.3)
05000305/2005-011-00	LER	The Setting of a Permissive (P-10) in the Power Range Channels of the Nuclear Instrumentation System was Outside of Plant Technical Specification Requirements (Section 4OA3.4)

Discussed

05000305/2005008-04	URI	Potential Common Mode Failure of Service Water Pumps (Section 4OA3.5)
05000305/2005-010-00	LER	Inadequate Engineering Analysis to Support Service Water Pump Operability (Section 4OA3.5)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

CAP027631; Cable Reels Left in Substation (post-modification)
CAP027447; No Apparent Process for Misc Storage and Potential Missiles Assessment
CAP030960; Containment Fan Coil Unit Testing
CAP031041; Site Inspection Based on High Winds
CAP031064; Inspections of Transformer Bays; (NRC-Identified)
GMP-172; Tornado Missile Hazard Monthly Inspection; Revision B
NID-01.01; Generic Letter 89-13 Program Document; Revision E

Section 1R04: Equipment Alignment

SP-47-316H; Channel 4 (Yellow) Reactor Protection Logic Test; Revision A
SP-48-004G; Nuclear Power Range Channel 1 (Red) N41 Quarterly Calibration; Revision F

Section 1R05: Fire Protection

Transient Combustible Materials Permit 03-091
Transient Combustible Materials Permit 05-59
Transient Combustible Materials Permit 06-001
Transient Combustible Materials Permit 06-003
Transient Combustible Materials Permit 06-004
Transient Combustible Materials Permit 06-005
Transient Combustible Materials Permit 06-006
Transient Combustible Materials Permit 06-007
Transient Combustible Materials Permit 06-008

Section 1R06: Flood Protection Measures

WPS Letter Response to Supplemental Request for Additional Information Regarding Individual Plant Examination for External Events Submittal; September 28, 1998
Water level Elevation Check Documentation; March 10, 2005

Section 1R11: Licensed Operator Requalification Program

SEG LOR 06-DY101; As Found Simulator Dynamic 06-01; Revision A

Section 1R12: Maintenance Effectiveness

ACE002141; MR Function Emergency Diesel Generator-02 (EDG-02) (a)(1) Evaluation
CAP031068; Maintenance Rule Goals Missed for TSC Diesel Generator
CAP013168; TSC Fuel Oil Transfer Pumps Fail To Automatically Start During Performance of RT
CAP014533; MR Function Emergency Diesel Generator-02 (EDG-02) (a)(1) Evaluation
CAP019767; TSC Diesel Generator Radiator Cooling Fan Did Not Start
CAP019868; NAO Reading for TSC Diesel on the Roof of the TSC Building
CAP019920; TSC Diesel Generator Load Calculation, Starting Versus Running Loads
CAP020070; TSC Diesel Generator Radiator Cooling Fan Failed to Start on January 29, 2004
CAP020159; Recurring Issue With TSC D/G Oil Level Following Routine Runs
CAP020629; RT-DGM-10-TSC, Erratic Indication of KVAR Attempting to Obtain 290 KVAR
CAP020790; TSC DG Expansion Tank Sightglass Hard to Read
CAP021488; Unable to Verify TSC Diesel Generator Expansion Tank Level
CAP022907; Reverse Power Trip of TSC D/G During RT-DGM-10-TSC
CAP022252; Review Generic Letter 89-13 Testing of EDG
CAP022907; Reverse Power Trip of TSC D/G During RT-DGM-10-TSC
CAP024674; TSC Diesel Generator Water Temperature Low
CAP024676; TSC Diesel Generator Cooling Water Leak
CAP029049; TSC Fuel Oil Transfer Pumps Failed to Automatically Start on Prior to Low-Low Level Alarm
CAP028728; TSC D/G Oil Level Low Following
CAP028726; Deferral of TSC D/G Day Tank Level Alarm Switches
CAP029057; TSC Diesel Oil Level Low
CAP029181; TSC D/G Oil Sightglass has an Active Oil Leak
CAP029389; Abnormal TSC Diesel Generator Conditions
CAP029428; TSC Diesel Generator 50.54
CAP029438; TSC D/G Combustion Air Leakage from Turbo Discharge
CAP029792; TSC Diesel Generator KVAR Indication Erratic
CAP029806; A Recurring Problem with TSC D/G Oil Level is Causing Unnecessary Disruptions
CAP029997; TSC Diesel Generator Oil Level High
CAP030008; TSC D/G Lube Oil Filter Selector Valve Mispositioned Following Maintenance
CAP030239; TSC D/G Oil Level 1-1/4" Below the Full Mark 4 Hours after Shutdown
CAP031068; Maintenance Rule Goals Missed for TSC Diesel Generator
Maintenance Rule Evaluation MRE002449; Perform MRE on CAP 22907 - Reverse Power Trip of TSC
MRE002553; Perform an MRE on CAP 24619 - TSC D/G Radiator Cooling Fan Motor Fails to Start
MRE002555; Perform an MRE on WR 04-3932 - TSC D/G Cooling Water Leak
MRE002558; Perform an MRE on WR 04-3930 - TSC D/G Water Temperature Low
MRE002590; Perform an MRE on WR 05-501 - TSC Diesel Trip
MRE002692; Perform an MRE on CAP 28200 - Inadvertent TSC D/G Start
MRE002725; Perform an MRE on WR 05-2578 - TSC D/G Oil Pressure LO-LO Switch Out of Tolerance
MRE002742; Perform an MRE on WR 05-3077 - TSC D/G Emergency Shutdown
OTH010496; MR Function Emergency Diesel Generator-02 (EDG-02) (a)(1) Corrective Action Tracking
Book 5; Steam Exclusion; DG Fuel Oil; TSC DG; ASV

Maintenance Rule (a)(1) Evaluation - TSC DG; May 3, 2005
Maintenance Rule (a)(1) Evaluation - May 13, 2003
Maintenance Rule System Basis; Emergency Diesel Generator; Revision 9
SSC Performance Criterial Sheet; Emergency Diesel Generator System
TSC Diesel Generator Unavailability Graphs; July 2004 - December 2005
TSC Diesel Generator Current Demand Failure Graph Function 1; July 2004 - December 2005
TSC Diesel Generator Current Demand Failure Graph Function 2; July 2004 - December 2005

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

CAP032000; Slight Air Leakage Into 'B' Station Battery Area Through Expansion Joint Noted
Emergent Work Risk Evaluation; January 2, 2006 - March 31, 2006
Safety Monitor Risk Look Ahead - Kewaunee Plant configuration Changes and Relative Core Damage Frequency Chart; January 2, 2006 - March 31, 2006

Section 1R14: Personnel Performance During Non-Routine Plant Evolutions and Events

A-CC-31; Abnormal Component Cooling System Operations; Revision H
CAP030836; RxCP A No. 1 Seal Leakoff Increasing
CAP030850; Component Cooling System Leak
CVC-35; Annunciator 47041-K; Alarm Response for "Regenerative Heat-exchanger Letdown Temperature High" Annunciator; Revision Original
E-3192; Schematic Diagram 480V Breaker 15203; Revision J
E-3194; Schematic Diagram Charging Pump C; Revision J
EDC-38; Annunciator 47024-H; Alarm Response for "CC Surge Tank Level High/Low" Annunciator; Revision D
EDC-38; Annunciator 47022-L; Alarm Response for "SD-100/101 Blown Fuse" Annunciator; Revision A
Computer Plot - Charging Pump Discharge Flow; January 25, 2006
Control Room Logs, January 24 - 25, 2006
RxCP A & B Seal Leakoff Graph; December 8 2005 - January 10, 2006
RxCP A Parameters and VCT Temp Graph; December 8, 2005 - January 10, 2006
Schedule and Scope for Power Reduction Condenser Inleakage; KW T-00 (February 6, 2006 - February 12, 2006)
Sequence of Events Alarm Recorder Records; January 25, 2006

Section 1R15: Operability Evaluations

A-MDS-30; Miscellaneous Drains and Sumps (MDS) Abnormal Operation; Revision S
CAP017657; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP023746; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP029888; Seal Leak on B RHR Pump
CAP030944; Incorrect Mounting Brackets Installed on Pressurizer Pressure Transmitters
CAP030959; Boric Acid leakage From A RHR Pump Seal and Pump Casing Bolting
CAP031051; Questionable Basis for Operability on 1A RHR Pump Bolting Joint
CAP031083; 1B RHR Pump Flange Leakage (Boric Acid)
CAP031248; Service Water Flows Through Component Cooling Water Heat Exchanger May Exceed Design Rating with Valve SW-1300A/B Open
CAP031522; B RHR Pump Seal and Flange Leakage Inspection

CAP031551; B RHR Pump Motor Axial End-play Found Out of Spec
CAP031564; Wire Strands Found Broken at Lug During RHR B Motor Work and Repaired
CAP031568; CAP Written for RHR Wire Strand Was Not Timely
CAP032000; Slight Air Leakage Into 'B' Station Battery Area Through Expansion Joint Noted
CEO14930; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CEO16555; Seal Leak on B RHR Pump
CMP-34-01; RHR-RHR Pump Overhaul; Revision K
GIP-009; Transmitter Specifications, Ordering and Installation; June 25, 1996
GNP-08.06.01; Boric Acid Corrosion Control Inspection and Evaluation; Revision B
OPR000140; Questionable Basis for Operability on 1A RHR Pump Bolting Joint
OPR000142; Service Water Flows Through Component Cooling Water Heat Exchanger May Exceed Design Rating with Valve SW-1300A/B Open
QP-8.2.8; Grayboot Electrical Connector Installation/Replacement; July 30, 1996
SP-34-099B; Train B RHR Pump and Valve Test - IST; February 10, 2006
WO 06-001027-000; Remove and Inspect the Casing Studs/Nuts on the 1A RHR Pump The Studs/Nuts will be Removed One at a Time and Then Re-torqued
WO 05-012081-000; Pump Residual Heat Removal Pump 1B; February 15, 2005
WR Form 210181; Support Replacement of Foxboro Pressurizer Pressure XMTRS With Rosemount XMTRS and Modification of the Power Supplies and Loop Resistors for A 4-20 MA Loop
XK-100-126-1; Drawing - Vertical DSM Pump; Byron Jackson Pump Div.; November 15, 2005
Action Plans - Issues for RHR Pump Seal Resolution; October 27, 2005
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Assessment of 1A and 1B Pump Flange Bolting; OPR-140 and OPR-141; Attachment 2
Assessment of 1A and 1B Pump; Gland Plate Bolting; OPR-140 and OPR-141; Attachment 3
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Control Room Logs; February 2, through February 4, 2006
Emergent Work Risk Evaluation; Extended Outage Times for Charging Pumps 1B and 1C; January 25, 2006
KPS Material for PORC Review; Review of Work That Exceeds 50% of the LCO Duration for the A Train of RHR; February 9, 2006
Quality Control Inspection Record; RHR Pump 'B' Repair Seal Leak; February 20, 2006
Screening Evaluation Work Sheet 21079; Transmitter - Pressurizer Pressure XMTR 1C (PT-431); Revision 1
Screening Evaluation Work Sheet 21081; Transmitter - Pressurizer Pressure XMTR 1A (PT-429); Revision 1

Section 1R17: Permanent Plant Modifications

CAP024742; Senior Management Failed to Establish Ownership and Accountability of a Q-List
CAP029844; OQAP Does Not Exist to Determine Augmented Quality Requirements
CAP031182; 10 CFR Appendix B Equipment List
CAP031927; Processes to Determine Quality Classification
CE015193; Senior Management Failed to Establish Ownership and Accountability of a Q-List
CE016964; 10 CFR Appendix B Equipment List
DCR 3490; TSC Diesel Generator Fuel Oil Day Tank Level Gauge/ Switch Replacement
M-504; Flow Diagram TSC Diesel Generator, Fuel, Oil Exhaust and Cooling Water Piping; Revision Q

NAD-01.01; Quality Assurance Boundary; January 27, 2005
OPERM- 504; Flow Diagram TSC Diesel Generator, Fuel Oil Exhaust and Cooling Water Piping; Revision Q
PCR 018143; Senior Management Failed to Establish Ownership and Accountability of a Q-List
PCR 021282; OQAP Does Not Exist to Determine Augmented Quality Requirements
Kewaunee Power Station, Operational Quality Assurance Program Description; Revision 22.b

Section 1R19: Post-Maintenance Testing

50.59 Applicability Review; ICP-10-15 Partial Procedure; January 17, 2006
A-MDS-30; Miscellaneous Drains and Sumps (MDS) Abnormal Operation; Revision S
CAP017657; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP023746; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP029888; Seal Leak on B RHR Pump
CAP030959; Boric Acid leakage From A RHR Pump Seal and Pump Casing Bolting
CAP031051; Questionable Basis for Operability on 1A RHR Pump Bolting
CAP031083; 1B RHR Pump Flange Leakage (Boric Acid)
CAP031522; B RHR Pump Seal and Flange Leakage Inspection
CAP031551; B RHR Pump Motor Axial End-Play Found Out of Spec
CAP031564; Wire Strands Found Broken at Lug During RHR B Motor Work and Repaired
CAP031568; CAP Written for RHR Wire Strand was not Timely
CE014930; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CE016555; Seal Leak on B RHR Pump
CMP-34-01; RHR-RHR Pump Overhaul; Revision K
DCR 3565; Upgrade Technical Support Center Diesel Cooling Fan Motor; Revision O
GMP-222; Generic Electric Motor Removal and Installation Instructions (QA-1); Revision J
GMP-251; Common Electrical Preventive Maintenance Tasks; Revision J
GNP-08.06.01; Boric Acid Corrosion Control Inspection and Evaluation; Revision B
ICP-10-15; DGM - Technical Support Diesel Generator Instrumentation Calibration; Revision P
OPR-140; RHR Pump 1A and 1B
PMP-01-03; Station and Instrument Air System Station Air Compressors 1A, 1B, and 1C Maintenance (QA-2); Revision R
PMP-38-08; EDC - DC Supply & Distribution 7.5 KVA Inverter Electrical Maintenance (QA-1); Revision J
SP-34-099B; Train B RHR Pump and Valve Test - IST; February 10, 2006
WO 05-006561-000; Replace Hose Clamps on the TSC Diesel Coolant System
WO 05-012022-000; In Air Compressor A Control Panel, Relabel Conductors of Cable INC0492 to Match Terminal Points as Shown on Drawing E-634
WO 05-012081-000; Pump Residual Heat Removal Pump 1B
WO 05-010608-000; TSC DG Oil Sightglass has an Active Oil Leak
WO 05-010852-000: TSC D/G Lube Oil Level Sightglass Indication Scale May Need Adjustment
WO 06-001027-000; Remove and Inspect the Casing Studs/Nuts on the 1A RHR Pump - The Studs/Nuts will be Removed One at a Time and Then Re-torqued
Action Plans - Issues for RHR Pump Seal Resolution; October 27, 2005
Article IWB-2000; Examination and Inspection
Article IWA-4000; Repair/Replacement Activities
Assessment of 1A and 1B Pump Flange Bolting; OPR-140 and OPR-141; Attachment 2
Assessment of 1A and 1B Pump Gland Plate Bolting; OPR-140 and OPR-141; Attachment 3
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Drawing XK-100-126-1; Vertical DSM Pump; Byron Jackson Pump Div.; November 15, 2005
Emergent Work Risk Evaluation; Extended Outage Times for charging Pumps 1B and 1C; January 25, 2006
KPS Material for PORC Review; Review of Work That Exceeds 50% of the LCO Duration for the A Train of RHR; February 9, 2006
Quality Control Inspection Record; RHR Pump 'B' Repair Seal Leak; February 20, 2006

Section 1R22: Surveillance Testing

A-MDS-30; Miscellaneous Drains and Sumps (MDS) Abnormal Operation; Revision S
CAP017657; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP023746; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CAP029888; Seal Leak on B RHR Pump
CAP030381; Reactor Coolant System Leak Rate Exceeds 0.2 GPM
CAP030478; Identified Leakage Past RC-439
CAP030959; Boric Acid leakage From A RHR Pump Seal and Pump Casing
CAP031051; Questionable Basis for Operability on 1A RHR Pump Bolting Joint
CAP031083; 1B RHR Pump Flange Leakage (Boric Acid)
CAP031522; B RHR Pump Seal and Flange Leakage Inspection
CAP031551; B RHR Pump Motor Axial End-play Found Out of Spec
CAP031564; Wire Strands Found Broken at Lug During RHR B Motor Work and Repaired
CAP031568; CAP Written for RHR Wire Strand Was Not Timely
CE014930; A RHR Pump Boric Acid Leakage at 2 Studs for the Pump
CE016555; Seal Leak on B RHR Pump
CE016724; Reactor Coolant System Leak Rate Exceeds 0.2 GPM
CMP-34-01; RHR-RHR Pump Overhaul; Revision K
RC-437-1 & RC-437-2 (Divert to DDT) From VCT; October 27, 2005
RT-DGM-10-TSC; Technical Support Center Diesel Generator; Revision AD
SP-02-138A; Train A Service Water Pump and Valve Test - IST; Revision K
SP-34-099B; Train B RHR Pump and Valve Test - IST; February 10, 2006
SP-36-082; Reactor Coolant System Leak Rate Check; December 15, 2005
SP-42-312B; Diesel Generator B Availability Test; Revision X
SP-47-062A; Reactor Protection Logic Train A Test; Revision T
ODM021611; Identified Leakage Past RC-439
OPERXK-100-36; Drawing - Flow Diagram Chemical and Volume Control System; Revision AY
OPERXK-100-44; Drawing - Flow Diagram Sampling System; Revision AH
OPR000140; Questionable Basis for Operability on 1A RHR Pump Bolting Joint
OPR-140; RHR Pump 1A and 1B; May 14, 2005
GNP-08.06.01; Boric Acid Corrosion Control Inspection and Evaluation; Revision B
WO 05-012081-000; Pump Residual Heat Removal Pump 1B The Studs/Nuts will be Removed One at a Time and Then Re-torqued
WO 06-001027-000; Remove and Inspect the Casing Studs/Nuts on the 1A RHR Pump
XK-100-126-1; Drawing - Vertical DSM Pump; Byron Jackson Pump Div.; November 15, 2005
Action Plans; RCS Leakage to the DDT via Leakage thru RC-439 (Check Valve)
Action Plans - Issues for RHR Pump Seal Resolution; October 27, 2005
Assessment of 1A and 1B Pump Flange Bolting; OPR-140 and OPR-141; Attachment 2
Assessment of 1A and 1B Pump; Gland Plate Bolting; OPR-140 and OPR-141; Attachment 3
Article IWB-2000; Examination and Inspection
Article IWA-4000; Repair/Replacement Activities
Confined Space Entry Permit 06-002; 1B RHR Pump Pit; February 20, 2006

Diesel Generator 1B Operation Log; January 12, 2006
Drawing OPERM-350; Flow Diagram-Reactor Plant Misc. Vents, Drains, and Sump Pump Piping; Revision AS
Emergent Work Risk Evaluation; Extended Outage Times for charging Pumps 1B and 1C; January 25, 2006
KPS Material for PORC Review; Review of Work That Exceeds 50% of the LCO Duration for the A Train of RHR; February 9, 2006
Quality Control Inspection Record; RHR Pump 'B' Repair Seal Leak; February 20, 2006

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Kewaunee Power Station Emergency Plan; Revision 28

Section 1EP6: Drill Evaluation

TSC Tabletop Drill Evaluation - Site Area Emergency and General Emergency; Scenario ID: TSC Evaluation 1 and Associated Data Viewer Sheets; February 8, 2006

Section 4OA2: Identification and Resolution of Problems

ACE003185; Problem with SV-1 During SP-54-086
CAP029887; EN 42021 - Part 21 - Existence of a Possible Defect in Bussmann KWN-R Fuses
CAP031263; CE016554 is Deficient (NRC-Identified)
CAP031264; Supervisor Review of CE016554 Deficient (NRC-Identified)
CAP031350; Problem with SV-1 During SP-54-086
CAP031525; How Does R-16 & R-20 Pinwheel Blockage Affect Radiation Readings (NRC-Identified)
CA022259; Problem with SV-1 During SP-54-086
CE016554; Condition Evaluation Possible Defect in Bussmann Fuses
MRE002808; Problem with SV-1 During SP-54-086
PCR022558; Problem with SV-1 During SP-54-086

Section 4OA3: Event Follow-up

Letter 05-907; Dominion Energy Kewaunee, Inc. Kewaunee Power Station Reply to a Notice of Violation (EA-05-176) NRC Inspection Report 05000305/2005018; January 18, 2006
CA19017; Past Operability Evaluation for AFW Pump Low Discharge Pressure Trip Switch Design Deficiency; Revision 0
CAP027463; Revolver Discovered During X-Ray Search
Security Force Incident Report (KNPP-26); Revolver Discovered During X-Ray Search; May 19, 2005
CAP028776; Evaluation Not Initiated for the SW Seal Water CUNO Filter Application Event
CAP027887; Inadequate Engineering Design Basis for SW Seal Water CUNO Filter Application
RCE685; Kewaunee Nuclear Power Plant Flooding Mitigation/Control Systems Root Cause Evaluation
RCE690; P-10 Does Not Meet Technical Specification Requirements
Drawing OPERXK-100-18; Flow Diagram Residual Heat Removal System; Revision AR

Section 4OA5: Other

A-EG-43; Abnormal Grid Conditions; Revision E
GNP-08.02.17; KPS Substation and Transformer Bays Maintenance or Modification; Revision B
A-EHV-39; Abnormal 4160V AC Supply and Distribution System; Revision AE
GNP-08.04.01; Shutdown Safety Assessment; Revision P
GNP-08.21.01; Risk Assessment for Plant Configurations; Revision H
CAP027559; Post Trip Voltage Predications (sic)
CAP027554; NRC Question pertaining to A-EG-43
CAP027555; KNP Risk is not communicated to American Transmission Company
CAP027556; Should GNP 08-02-17 apply during Plant Shutdown Conditions
CAP027364; Confusion due to not knowing the reason for Red Grid Condition
Operations Department Instruction Book; Communications between KPS and the Transmission System Operator; August 18, 2005
RTO-OP-03; Midwest ISO Real-Time Operations - Communication and Mitigation Protocols for Nuclear Plant/Electric System Interfaces; Revision 10
SP-87-125; Shift Instrument Channel Checks - Operating; Revision BU (FREQ S)

LIST OF ACRONYMS USED

ANSI	American National Standards Institute
CAP	Corrective Action Program Document
CFR	Code of Federal Regulations
DCR	Design Change Request
DRP	Division of Reactor Projects
EQ	Environmental Qualification
FIN	Finding
IMC	Inspection Manual Chapter
IR	Inspection Report
ISI	Inservice Inspection
KNPP	Kewaunee Nuclear Power Plant
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
QA	Quality Control
RA	Risk Assessment
RHR	Residual Heat Removal
SDP	Significance Determination Process
SW	Service Water
TI	Temporary Instruction
TS	Technical Specification
TSC	Technical Support Center
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order
WR	Work Request