UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

February 10, 2009

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

SUBJECT: KEWAUNEE POWER STATION INTEGRATED INSPECTION REPORT 05000305/2008005

Dear Mr. Christian:

On December 31, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Kewaunee Power Station. The enclosed report documents the inspection findings, which were discussed on January 7, 2009, with Mr. S. Scace 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, two NRC-identified findings of very low safety significance were identified. The findings involved 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 the issues as Non-Cited Violations (NCVs) in accordance with Section VI.A.1 of the NRC Enforcement Policy. Additionally, one licensee-identified violation is listed in Section 4OA7 of this report.

If you contest the subject or severity of any NCV, 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 a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Kewaunee Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (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/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000305/2008005
w/Attachment: Supplemental Information

cc w/encl: S. Scace, Site Vice President
M. Wilson, Director, Nuclear Safety and Licensing
C. Funderburk, Director, Nuclear Licensing and Operations Support
T. Breene, Manager, Nuclear Licensing
L. Cuoco, Senior Counsel
D. Zellner, Chairman, Town of Carlton
J. Kitsembel, Public Service Commission of Wisconsin
P. Schmidt, State Liaison Officer

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Letter to D. Christian from M. Kunowski dated February 10, 2009

SUBJECT: KEWAUNEE POWER STATION NRC INTEGRATED INSPECTION REPORT 05000305/2008005

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-305
License No:	DPR-43
Report No:	05000305/2008-005
Licensee:	Dominion Energy Kewaunee, Inc.
Facility:	Kewaunee Power Station
Location:	Kewaunee, WI
Dates:	October 1, 2008, through December 31, 2008
Inspectors:	S. Burton, Senior Resident Inspector P. Higgins, Resident Inspector K. Barclay, Resident Inspector C. Brown, Reactor Inspector J. Cassidy, Senior Health Physicist J. Jandovitz, Project Engineer D. McNeil, Senior Operations Engineer C. Moore, Operations Engineer R. Ruiz, Resident Inspector R. Russell, Emergency Preparedness Inspector
Approved by:	Michael A. Kunowski, Chief Branch 5 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000305/2008005; 10/01/2008 – 12/31/2008; Kewaunee Power Station; Component Design Bases Inspection; and Identification and Resolution of Problems.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two Green findings were identified by the inspectors. The findings were considered Non-Cited Violations (NCVs) of NRC regulations. 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 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green. A finding of very low safety significance and associated Severity Level IV NCV of 10 CFR 50.71, "Maintenance of records, making of reports," was identified by the inspectors for the licensee's failure to adequately update the Kewaunee Power Station Updated Safety Analysis Report (USAR). Specifically, the inspectors identified that the licensee had not updated the USAR completely when they relocated the turbine valve testing requirements from technical specifications to the USAR in License Amendment No. 121. Proposed corrective actions include performing an apparent cause evaluation and USAR changes as appropriate.

  This finding was more than minor because it had a material impact on licensed activities in that the incorrect USAR allowed the licensee to schedule periodic testing of the reheat and interceptor valves at an interval beyond one year. The inspectors evaluated the finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 3b, for the Initiating Events Cornerstone, dated January 10, 2008. Using information provided by the licensee, the inspectors answered "no" to the transient initiator contributor questions in this cornerstone column; therefore, the finding was determined to be of very low safety significance (Green). Additionally, the inspectors determined that the finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to accurately identify the issue when conducting corrective actions for Condition Report CR040457, "Discrepancy in Turbine Valve Testing Requirements and Acceptance Criteria," [P.1(a)]. (Section 4OA2.5)

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to verify the ventilation flow rate for the emergency diesel generator (EDG) rooms and for using an incorrect EDG heat load in the design basis calculation of record. As part of corrective actions, the licensee remeasured flow rates and duct dimensions and recalculated post-accident temperature values.

This finding was more than minor because a revision to the design calculation was necessary to demonstrate EDG cubicle temperatures would remain under the design basis 120 degrees Fahrenheit (ºF) equipment qualification limit under any accident conditions. The finding was of very low safety significance (Green) based on a Phase 1 screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," dated January 10, 2008, because the revised calculation showed that the diesel generators had remained operable in all circumstances. There was no cross-cutting aspect associated with this finding. (1R21)

B. Licensee-Identified Violations

A violation of very low safety significance that was identified by the licensee has been reviewed by inspectors. Corrective actions planned or taken by the licensee have been entered into the licensee's corrective action program. This violation and the corrective action tracking number is listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Kewaunee operated at full power during the inspection period except for brief downpowers to conduct planned surveillance testing activities.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Winter Seasonal Readiness Preparations

a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Safety Analysis Report (USAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Cold weather protection, such as heat tracing and area heaters, was verified to be in operation where applicable. The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into the CAP in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the Attachment to this report. The inspectors' reviews focused specifically on the following plant systems due to their risk significance or susceptibility to cold weather issues:

- external fire protection and technical support center diesel generator.

This inspection constituted one winter seasonal readiness preparations sample as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- emergency diesel generator (EDG) “A” when EDG “B” was out-of-service;
- safety injection system train “A” when train “B” was out-of-service; and
- containment spray system train “A” after return to service from testing.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, USAR, Technical Specification (TS) requirements, outstanding work orders, condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted three partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- fire zone TU-97, battery room 1A;
- fire zone TU-98, battery room 1B;
- fire zone TU-95B, 480V switchgear bus 1-61 and 1-62 room; and
- fire zone TU-95C, auxiliary feedwater pump area.

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 in accordance with the licensee's fire plan. 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 with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. The inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

These activities constituted four quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings of significance were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On October 28, 2008, the inspectors observed a fire brigade activation for an unannounced fire drill. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies, openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were: (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient firefighting equipment brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of pre-planned strategies; (9) adherence to the pre-planned drill scenario; and (10) drill objectives. Documents reviewed are listed in the Attachment to this report.

These activities constituted one annual fire protection inspection sample as defined in IP 71111.05-05.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On November 4, 2008, the inspectors observed a crew of licensed operators in the plant's simulator during a licensed operator requalification examination (Annual Exam Scenario) to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program sample as defined in IP 71111.11.

b. Findings

No findings of significance were identified.

.2 Facility Operating History (71111.11B)

The inspectors reviewed the plant's operating history from January 2007 through November 2008 to identify operating experience that was expected to be addressed by the Licensed Operator Requalification Training (LORT) program. The inspector verified that the identified operating experience had been addressed by the facility licensee in accordance with the station's approved Systems Approach to Training (SAT) program to satisfy the requirements of 10 CFR 55.59(c). The documents reviewed during this inspection are listed in the Attachment to this report.

Completion of sections 1R11.2 through 1R11.10 constitutes one biennial licensed operator requalification inspection sample as defined in IP 71111.11B.

a. Findings

No findings of significance were identified.

.3 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed an inspection of the licensee's LORT test/examination program for compliance with the station's SAT program which would satisfy the requirements of 10 CFR 55.59(c)(4). The reviewed operating examination material consisted of six operating tests, each containing two or three dynamic simulator scenarios and six job performance measures (JPMs). The written examinations reviewed consisted of six written examinations. Each examination contained approximately 35 to 40 questions. The inspectors reviewed the annual requalification operating test and biennial written examination material to evaluate general quality, construction, and difficulty level. The inspectors assessed the level of examination material duplication from week-to-week during the current year operating test. The examiners assessed the amount of written examination material duplication from week-to-week for the written examination administered in 2006. The inspectors reviewed the methodology for developing the examinations, including the LORT program two-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.4 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed the administration of a requalification operating test to assess the licensee's effectiveness in conducting the test to ensure compliance with 10CRF 55.59(c)(4). The inspectors evaluated the performance of one operating crew in parallel with the facility evaluators during two dynamic simulator scenarios and evaluated various licensed crew members concurrently with facility evaluators during the administration of several JPMs. The inspectors assessed the facility evaluators' ability to determine adequate crew and individual performance using objective, measurable standards. The inspectors observed the training staff personnel administer the operating test, including conducting pre-examination briefings, evaluations of operator performance, and individual and crew evaluations upon completion of the operating test. The inspectors evaluated the ability of the simulator to support the examinations. A specific evaluation of simulator performance was conducted and documented in the section below (1R11.8) titled, "Conformance with Simulator Requirements Specified in 10 CFR 55.46." The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.5 Examination Security

a. Inspection Scope

The inspectors observed and reviewed the licensee's overall licensed operator requalification examination security program related to examination of physical security (e.g., access restrictions and simulator considerations) and integrity (e.g., predictability and bias) to verify compliance with 10 CFR 55.49, "Integrity of examinations and tests." The inspectors also reviewed the facility licensee's examination security procedure, any corrective actions related to past or present examination security problems at the facility, and the implementation of security and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the examination process. The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.6 Licensee Training Feedback System

a. Inspection Scope

The inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT Program up-to-date, including the use of feedback from plant events and industry experience information. The inspectors reviewed the licensee's quality assurance oversight activities, including licensee training department self-assessment reports. The inspectors evaluated the licensee's ability to assess the effectiveness of its LORT program and the ability to implement appropriate corrective actions. This evaluation was performed to verify compliance with 10 CFR 55.59(c) and the licensee's SAT program. The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.7 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous biennial requalification examinations and the training from the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans. This evaluation was performed in accordance with 10 CFR 55.59(c) and with respect to the licensee's SAT program. The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.8 Conformance With Operator License Conditions

a. Inspection Scope

The inspectors reviewed the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators and which control room positions were granted watch-standing credit for maintaining active operator licenses. The inspectors reviewed the facility licensee's LORT program to assess compliance with the requalification program requirements as described by 10 CFR 55.59(c). Additionally, medical records for 12 licensed operators were reviewed for compliance with 10 CFR 55.53(l). The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified. However, the inspectors determined that an operator's license was expired at facility request because of a violation of NRC requirements. The NRC is reviewing the circumstances surrounding the operator's violation of NRC requirements with respect to 10 CFR Part 26, Fitness-for-Duty Program and the facility's response to the licensed operator medical program in accordance with 10 CFR 55.25, "Incapacitation because of disability or illness". Until the circumstances are reviewed and compared with the facility's performance in dealing with this issue, a final determination of the facility's response to this issue cannot be made. This issue is an Unresolved Item (URI) pending further review and assessment by the NRC. (URI 05000305/2008005-01).

.9 Conformance With Simulator Requirements Specified in 10 CFR 55.46

a. Inspection Scope

The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation facilities." The inspectors also reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, steady state tests, and core performance tests), simulator discrepancies, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy process to ensure that simulator fidelity was maintained. Open simulator discrepancies were reviewed for importance relative to the impact on 10 CFR 55.45 and 55.59 operator actions as well as on nuclear and thermal hydraulic operating characteristics. The inspectors conducted interviews with members of the licensee's simulator staff about the configuration control process and completed the IP 71111.11, Appendix C, checklist to evaluate whether or not the licensee's plant-referenced simulator was operating

adequately as required by 10 CFR 55.46(c) and (d). The documents reviewed during this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.10 Annual Operating Test Results

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the biennial written examination, the individual JPM operating tests, and the simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee from October 2008 through December 2008 as part of the licensee's operator licensing requalification cycle. These results were compared to the thresholds established in IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process ." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines established in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," and IP 71111.11, "Licensed Operator Requalification Program." The documents reviewed during this inspection are listed in the Attachment to this report.

Completion of this section constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11B.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant system:

- turbine building fan coil units.

The inspectors reviewed events, such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems, and independently verified the licensee's actions to address system performance or condition problems in terms of the following: implementing appropriate work practices, identifying and addressing common cause failures, scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule, characterizing system reliability issues for performance, charging unavailability for performance, trending key parameters for condition monitoring, ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification, and verifying appropriate performance criteria for structures, systems,

and components/functions classified as (a)(2) or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one maintenance effectiveness sample as defined in IP 71111.12-05.

b. Findings

No findings of significance were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- risk management during bearing pre-lube of safety injection pumps; and
- transformer T-10 repair – unusual electrical lineup.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Documents reviewed are listed in the Attachment to this report.

These maintenance risk assessments and emergent work control activities constituted two samples as defined in IP 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- containment fan coil unit “A” – high vibrations;
- crack in masonry block wall; and
- drain air box filter assemblies installation without equivalency evaluation.

The inspectors selected these potential operability issues based on the risk-significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and USAR to the licensee’s evaluations, to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted three samples as defined in IP 71111.15-05.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- post-maintenance test for manual valve replacement; SA-100B on instrument air compressor “C”;
- post-maintenance test for technical support center diesel generator fuel oil leak repair, maintenance, and overhaul; and
- post-maintenance test for control room air conditioning “B” chiller maintenance.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable):

the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted three post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings of significance were identified.

1R21 Component Design Bases Inspection (71111.21)

(Closed) Unresolved Item (URI) (05000305/2007006-14), "Emergency Diesel Generator Room Cooling Fan Testing Deficiencies"

a. Inspection Scope

In following up on URI 05000305/2007006-14, the inspectors reviewed the licensee's evaluation and corrective actions associated with the adequacy of design analyses for the EDG rooms' ventilation. The inspection consisted of review of documentation related to the licensee's corrective actions, design and licensing basis requirements for EDG room ventilation, design calculations, and testing. The inspectors reviewed the documentation to ensure that the EDG room ventilation system flow rates and temperatures were consistent with the design and licensing bases. Documents reviewed are listed in the Attachment to this report. This review did not represent an inspection sample.

b. Findings

Emergency Diesel Generator Room Cooling Fan Testing Deficiencies

Introduction: The inspectors identified a finding of very low significance (Green) and an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to verify the EDG rooms' ventilation flow rate and for using an incorrect EDG heat load in the design basis calculation of record.

Description: During the 2007 Component Design Bases Inspection (Inspection Report 05000305/2007006(DRS), dated June 1, 2007, ML 071550470), the inspectors identified a URI regarding the ability of the EDG room cooling fan to maintain the room below its

design temperature—at Kewaunee, there is one room with one cooling fan for each of two EDGs. Specifically, while reviewing the EDG room cooling calculations, the inspectors noted the design flow rate for the EDG rooms cooling fan was 60,000 cubic feet per minute (cfm) and the calculated required flow rate for this fan was 60,303 cfm in order to maintain the associated room at or below its design temperature of 120 ºF. The inspectors had several concerns:

- The inspectors determined that during a preoperational test, the licensee measured the flow velocity of the EDG room cooling fans and multiplied the velocity by the cross sectional area of the duct to determine the fan flow rate. During the pre-operational test, it was determined that the cross sectional area of the fan's duct was 18.6 square feet, and based on this value, the flow rate was calculated to be 60,200 cfm using anemometer readings and 59,300 cfm using velometer readings. However, the inspectors reviewed the manufacturer's certified performance test and noted that the cross sectional area of the fan's circular duct (54-inch diameter) was 15.9 not 18.6 square feet. In addition, the licensee calculated the cross sectional area of the duct by multiplying three linear dimensions (in feet) to arrive at a "square feet" answer.

- The licensee confirmed that the actual cross sectional area of the circular duct was 15.9 square feet. Using the correct cross sectional area and the originally measured flow velocities, the licensee recalculated the flow rate as 51,468 cfm using the anemometer readings and 50,689 cfm using the velometer readings. The values were significantly lower than the original assumed design flow rates.

- The licensee did not account for a very large instrument uncertainty associated with the readings. The velometer readings, which were later averaged, varied from 900 to 3600 feet per minute, a difference of 24 percent (with respect to the smaller value). The anemometer readings, which were later averaged, varied from 3050 to 3456 feet per minute, a difference of 13 percent (with respect to the smaller value).

- The original calculation used an EDG heat load assuming a 2600 kiloWatt (kW) rating instead of the heat load assuming a 2864 kW rating.

Based on calculation C10044, Revision 1, the licensee determined the EDGs to be operable but non-conforming and limited the outside temperature to less than the design 95 ºF. Subsequently, the licensee initiated work orders and determined the flow rates for EDGs "A" and "B" were 51,354 cfm and 48,243 cfm, respectfully. These values were less than the 54,000 cfm used in calculation C10044, Revision 1. The licensee initiated CAP document CAP044276, "Diesel Generator (DG) A Ventilation Measured Flow Readings less than assumed in calc C10044, Revision 1," on April 26, 2007, and CAP044506, "DG B Ventilation Flow Readings lower than assumed in calculation C10044, Revision 1," on May 3, 2007, to document the less than design basis flow rates. The licensee also attained temperature data to substantiate the inputs for a GOTHIC [Generation of Thermal-Hydraulic Information for Containments] computer code study.

The licensee completed calculation KPS-04055MG, Revision 0, which replaced calculation C10044, Revision 1, as the design basis calculation of record. During this inspection, the inspectors reviewed the calculation and noted that a GOTHIC, Version 7.2a (QA), model of the DG cubicles was used to evaluate the area temperature

response post-accident. The licensee used the results of the room benchmarking, a corrected EDG heat input based on the maximum expected EDG loading, and a flow rate of 45,000 cfm (about 10 percent less than the as found flow rates) for the inputs to the GOTHIC modeling. The results demonstrated that the 120 ºF room temperature limit would not be exceeded under the design limiting summertime conditions for any transient. The study documented 2.7 ºF margin between the predicted room temperature and the temperature limit. The inspectors reviewed the above calculations and had no further questions on the EDG room ventilation flow rates.

Analysis: The inspectors determined that the licensee's use of an inaccurate EDG ventilation flow measurement and an incorrect EDG load in the original calculation was a performance deficiency. The finding was determined to be more than minor because of the similarity to IMC 0612, Appendix E (dated September 20, 2007), Example 3k -- a significant revision to the design calculation was necessary to demonstrate EDG cubicle temperatures would remain under the design basis 120 ºF equipment qualification limit under any accident conditions. Therefore, this performance deficiency also impacted the Mitigation Systems Cornerstone objective of operability, availability, reliability, or function of a system or train.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening, and Characterization of Findings," Table 4a for the Mitigation System Cornerstone, dated January 10, 2008. The finding screened as of very low safety significance (Green) because the finding was a design or qualification deficiency confirmed not to result in loss of operability or functionality. Specifically, the licensee demonstrated that the ventilation systems supported EDG operability.

The inspectors did not identify a cross-cutting aspect associated with this finding because the use of the inaccurate information occurred several years ago and was not reflective of current performance.

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires in part, that measures be established to assure that applicable regulatory requirements, and the design basis, as defined in Section 50.2, are correctly translated into specifications, drawings, procedures, and instructions. Design bases is information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design.

Contrary to the above, prior to April 8, 2008, the licensee failed to ensure that the design basis was correctly represented in the calculation of record for the diesel generator rooms' ventilation. Because this violation was of very low safety significance and it was entered into the licensee's CAP as Condition Report CR319934, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000305/2008005-02). As part of corrective actions, the licensee remeasured flow rates and duct dimensions and recalculated post-accident temperature values.

Based on the above discussion, URI 5000305/2007006-14 is closed.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- surveillance procedure on bus 6 loss of voltage relay test; and
- motor-driven auxiliary feedwater pump "A" full flow test (inservice testing--IST).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- were the effects of the testing adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency were in accordance with TSs, procedures, the USAR, and other commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers (ASME) code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and

- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one routine surveillance testing sample, and one in-service testing sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

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

.1 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspectors completed a screening review of revisions made to the emergency plan and the emergency action levels and bases to determine whether the changes identified in the revisions may have reduced the effectiveness of the emergency plan. The screening review does not constitute approval of the changes and the changes are subject to future NRC inspection to ensure the emergency plan continues to meet NRC regulations. Documents reviewed are listed in the Attachment to this report.

This emergency action level and emergency plan changes inspection constituted one sample as defined in IP 71114.04-05.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on November 6, 2008, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Technical Support Center to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the CAP. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06-05.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Inspection Planning and Identification of Instrumentation

a. Inspection Scope

The inspectors reviewed the licensee's USAR to identify applicable radiation monitors associated with measuring transient high and very high radiation areas, including those intended for remote emergency assessment. The inspectors identified the types of portable radiation detection instrumentation that were used for job coverage of high radiation area work, including instruments for underwater surveys, portable and fixed area radiation monitors that were used to provide radiological information in various plant areas, and continuous air monitors that were used to assess airborne radiological conditions and work areas with the potential for workers to receive a 50 millirem or greater committed effective dose equivalent (CEDE). Whole body counters that were used to monitor for internal exposure and those radiation detection instruments that were used to conduct surveys for the release of personnel and equipment from the radiologically controlled area (RCA), including contamination monitors and portal monitors, were also identified.

This inspection constituted two samples as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.2 Calibration and Testing of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors reviewed radiological instrumentation to determine if it had been calibrated as required by the licensee's procedures, consistent with industry and regulatory standards. The inspectors also reviewed alarm setpoints for selected instruments to determine whether they were established consistent with the USAR or TSs, as applicable, and with industry practices and regulatory guidance. Specifically, the inspectors reviewed calibration procedures and the most recent calibration records for the following radiation monitoring instrumentation and calibration equipment:

- MGP telepole dose rate instrument;
- AMP–100 dose rate instrument;

- SAC–4 alpha counter;
- SAM-11 small article monitor;
- PM–7 portal monitor; and
- PCM-1C personnel contamination monitor.

The inspectors determined what actions were taken when, during calibration or source checks, an instrument was found significantly out of calibration or exceeded as-found acceptance criteria. Should that occur, the inspectors determined whether the licensee's actions would include a determination of the instrument's previous uses and the possible consequences of that use since the prior successful calibration. The inspectors also reviewed the results of the licensee's most recent 10 CFR Part 61 source term (radionuclide mix) evaluations to determine if the radiation sources that were used for instrument calibration and for instrument checks were representative of the plant source term.

The inspectors observed the licensee's use of the portable survey instrument calibration units, discussed calibrator output validation methods, and compared calibrator exposed readings with calculated/expected values. The inspectors evaluated compliance with licensee procedures while radiation protection (RP) personnel demonstrated the methods for performing source checks of portable survey instruments and source checks of personnel contamination and portal monitors.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed licensee CAP documents and any Licensee Event Reports (LERs) or special reports that involved personnel contamination monitor alarms due to personnel internal exposures to determine whether identified problems were entered into the CAP for resolution.

While no internal exposure with a CEDE greater than 50 millirem occurred since the last inspection in this area, the inspectors reviewed the licensee's methods for internal dose assessment to determine if affected personnel would be properly monitored using calibrated equipment and if the data would be analyzed and exposures properly assessed.

This inspection constituted one sample as defined in IP 71121.03-5.

The inspectors reviewed CAP reports related to exposure significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area, as applicable. Members of the RP staff were interviewed and corrective action documents were reviewed to determine whether follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk, based on the following:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- resolution of NCVs tracked in the corrective action system; and
- identification and implementation of effective corrective actions.

This inspection constituted one sample as defined in IP 71121.03-5.

The inspectors determined if the licensee's self-assessment and audit activities completed since the last inspection were identifying and addressing repetitive deficiencies or significant individual deficiencies in problem identification and resolution, as applicable.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.4 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors verified that calibrations for those survey instruments used to perform job coverage surveys and for those currently designated for use had not lapsed. The inspectors determined if response checks of portable survey instruments and checks of instruments used for unconditional release of materials and workers from the RCA were completed prior to instrument use, as required by the licensee's procedure. The inspectors also discussed instrument calibration methods and source response check practices with RP staff and observed staff demonstrate instrument source checks.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.5 Self-Contained Breathing Apparatus (SCBA) Maintenance/Inspection and Emergency Response Staff Qualifications

a. Inspection Scope

The inspectors reviewed the status and surveillance records of SCBAs that were staged in the plant and ready-for-use and evaluated the licensee's capabilities for refilling and transporting SCBA air bottles to-and-from the control room and operations support center during emergency conditions. The inspectors determined if control room staff and other emergency response and RP personnel were trained, respirator fit tested, and medically certified to use SCBAs, including personal bottle change-out. Additionally, the inspectors reviewed SCBA qualification records for numerous members of the licensee's

radiological emergency teams to determine if a sufficient number of staff were qualified to fulfill emergency response positions, consistent with the licensee's emergency plan and the requirements of 10 CFR 50.47.

This inspection constituted one sample as defined in IP 71121.03-5.

The inspectors reviewed the qualification documentation for at least 50 percent of the onsite, or as applicable, offsite contract personnel that performed maintenance on manufacturer designated vital SCBA components. The inspectors also reviewed vital component maintenance records for several SCBA units that were designated as ready-for-use. The inspectors also evaluated, through record review and observations, if the required air cylinder hydrostatic testing was documented and current and if the Department of Transportation required retest air cylinder markings were in place for several randomly selected SCBA units and spare air bottles. The inspectors reviewed the onsite maintenance procedures governing vital component work, as applicable, including those for the low-pressure alarm and pressure-demand air regulator. The inspectors reviewed the licensee's maintenance procedures and the SCBA manufacturer's recommended practices to determine if there were any inconsistencies between them.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program And Radioactive Material Control Program (71122.03)

.1 Unrestricted release of material from the RCA

a. Inspection Scope

The inspectors observed several locations where the licensee monitors potentially contaminated material leaving the RCA, and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use to verify that the work was performed in accordance with plant procedures.

This inspection constituted one sample as defined in IP 71122.03-5.

The inspectors verified that the radiation monitoring instrumentation was appropriate for the radiation types present and was calibrated with appropriate radiation sources. The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material and verified that there was guidance on how to respond to an alarm that indicated the presence of licensed radioactive material. The inspectors reviewed the licensee's equipment to ensure the radiation detection sensitivities were consistent with the NRC guidance contained in NRC Office of Inspection and Enforcement IE Circular 81-07 (Control of Radioactively Contaminated Material) and IE Information Notice 85-92 (Surveys of Waste Before Disposal from Nuclear Reactor Facilities) for surface contamination and NRC Health Physics Position HPPOS-221 for

volumetrically contaminated material. The inspectors verified that the licensee performed radiation surveys to detect radionuclides that decay via electron capture. The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters (i.e., counting times and background radiation levels). The inspectors verified that the licensee had not established a "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high radiation background area.

This inspection constituted one sample as defined in IP 71122.03-5.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours PI for the first quarter 2007 through the third quarter 2008. To determine the accuracy of the PI data, definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC inspection reports for January 2007 through September 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned scrams per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications PI for the fourth quarter 2007 through the third quarter 2008. To determine the accuracy of the PI data, definitions and guidance contained in NEI 99-02, Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC inspection reports for October 2007 through September 2008 to validate the accuracy of the submittals. The inspectors also

reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned scrams with complications sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours PI for the second quarter 2007 through the third quarter 2008. To determine the accuracy of the PI data, definitions and guidance contained in NEI 99-02, Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC inspection reports for April 2007 through September 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned transients per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.4 Reactor Coolant System (RCS) Leakage

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Leakage PI for the third quarter 2007 through the third quarter 2008. To determine the accuracy of the PI data, PI definitions and guidance contained in NEI 99-02, Revision 5, were used. The inspectors reviewed the licensee's operator logs, RCS leakage tracking data, issue reports, event reports, and NRC inspection reports for October 2007 through September 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RCS leakage sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.5 RCS Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Specific Activity PI for May 2007 through September 2008. To determine the accuracy of the PI data, definitions and guidance contained in NEI 99-02, Revision 5, were used. The inspectors reviewed the licensee's RCS chemistry samples, TS requirements, issue reports, event reports, and NRC inspection reports for May 2007 through September 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator, and none were identified. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a RCS sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RCS specific activity sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.6 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors sampled licensee submittals for the Occupational Radiological Occurrences PI for May 2007 through September 2008. To determine the accuracy of the PI data, definitions and guidance contained in NEI 99-02, Revision 5, were used. The inspectors reviewed the licensee's assessment of the PI for occupational radiation safety to determine if indicator related data were adequately assessed and reported. To assess the adequacy of the licensee's PI data collection and analyses, the inspectors discussed with RP staff the scope and breadth of its data review and the results of those reviews. The inspectors independently reviewed electronic dosimetry dose rate and accumulated dose alarm and dose reports and the dose assignments for any intakes that occurred during the time period reviewed to determine if there were potentially unrecognized occurrences. The inspectors also conducted walkdowns of numerous locked high and very high radiation area entrances to determine the adequacy of the controls in place for these areas. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one complete occupational radiological occurrences sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.7 Radiological Effluent TSs/Offsite Dose Calculation Manual Radiological Effluent Occurrences

a. Inspection Scope

The inspectors sampled licensee submittals for the Radiological Effluent Technical Specifications (RETS)/Offsite Dose Calculation Manual (ODCM) Radiological Effluent Occurrences PI for May 2007 through September 2008. The inspectors used PI definitions and guidance contained in NEI 99-02, Revision 5, to determine the accuracy of the PI data. The inspectors reviewed the licensee's issue report database and selected individual reports generated since this indicator was last reviewed to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous effluent summary data and the results of associated offsite dose calculations for selected dates between May 2007 and September 2008 to determine if indicator results were accurately reported. The inspectors also reviewed the licensee's methods for quantifying gaseous and liquid effluents and determining effluent dose. Documents reviewed are listed in the Attachment.

This inspection constituted one RETS/ODCM radiological effluent occurrences sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Items Entered Into the CAP

a. Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: the complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that 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 that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are listed in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings of significance were identified.

.2 Daily CAP Reviews

a. Scope

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 CAP. This review was accomplished through inspection of the station's daily CR packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Semi-Annual Trend Review

a. Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered June 2008 through November 2008, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend inspection sample as defined in IP 71152-05.

b. Findings

No findings of significance were identified.

.4 Selected Issue Follow-Up Inspection: Loss of Power to One Channel of Refueling Water Storage Tank (RWST) Level Instrumentation

a. Scope

While performing a plant status walk-down of the control room, the inspectors noted that the RWST low level alarm was lit. In the licensee's CAP, the inspectors found that this condition was caused by a blown fuse in one of two redundant RWST level instrument channels. The inspectors also identified that a precautionary statement in the licensee emergency operating procedure, ES-1.3, "Transfer to Cold Leg Recirculation," required that charging pumps, safety injection pumps, residual heat removal/low pressure coolant injection pumps, and internal containment spray pumps, be secured upon receipt of this alarm. However, these actions would have been inappropriate with the low level alarm lit because of the blown fuse. The inspectors investigated other licensee procedures, training records, control room briefings, and temporary procedures/standing orders to ascertain the licensee's actions in the event that ES-1.3 was required to be implemented. The inspectors found that the licensee did not include the instrument failure and related contingencies in the pre-shift briefings, nor had any temporary instructions or night orders been established that would heighten the awareness of the operating crew about the potential problem with ES-1.3. The inspectors also reviewed training records to identify if training adequately supported operator response during this or similar conditions. The inspectors found that strengthening of the training might be necessary. The licensee concurred with the inspectors' observations and initiated CR316759, to address training, job briefing, and standing order/temporary procedure practices.

The inspectors' review of this issue also identified another issue. Condition Report CR115738, dated October 24. 2008, concluded that the instrument failure impacted one of two redundant instrument channels and declared the affected instrument non-functional. The inspectors noted that a declaration of non-functional, instead of not operable, implied that the instrument was not in the TSs. The inspectors found that TSs specified a RWST volume; however, the specifications did not identify the instrumentation supporting this specification, nor did the licensee's surveillance program adequately define which instruments fulfilled the TS function. The licensee concurred that no LCO existed for these instruments and, therefore, with one channel of instrumentation out-of-service there did not appear to be a relaxation of the single failure criteria associated with the instruments. The licensee initiated CR116621 to address the need for a TS amendment and to administratively control these instruments in the event an amendment was required.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

No findings of significance were identified.

.5 Selected Issue Follow-Up Inspection: Failure of Reheater Stop and Interceptor Valve to Close During Routine Surveillance

a. Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item documenting the failure of a reheater stop and interceptor valve to close during the completion of a surveillance procedure. Because these valves are discussed in the USAR as being used to protect the turbine during a turbine overspeed condition, the inspectors elected to assess the licensee's corrective actions and compensatory measures related to the issue.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

Failure to Transfer Turbine Valve Testing Requirements into the USAR

Introduction: The inspectors identified a finding and associated Severity Level IV NCV of 10 CFR 50.71, "Maintenance of records, making of reports," for the licensee's failure to adequately update the Kewaunee Power Station USAR. Specifically, the inspectors identified that the licensee had not updated the USAR completely when they relocated the turbine valve testing requirements were relocated from the TSs to the USAR in License Amendment No. 121.

Description: While the inspectors were conducting daily CAP reviews, they selected CR114680, "SP-54-086, Failure During Test of Reheater and Interceptor Valves," as a selected issue follow-up. The inspectors noted, as described in the condition report, that during the performance of SP-54-086, "Turbine Stop and Governor Valve Operability Test" a blown fuse caused the licensee to stop and omit the testing of the reheater and interceptor valves. In the CR, the licensee claimed that a previous test would satisfy the Turbine Stop and Governor Valve Operability Test requirement for this cycle. The inspectors questioned the licensee as to the periodicity of the valve testing and which surveillance met the USAR requirements for periodic testing that verified freedom of movement.

The licensee responded to the inspectors that License Amendment 84 allowed the licensee to follow Westinghouse recommendations with regards to periodicity and License Amendment 121 allowed the licensee to transfer the requirements from the TSs to the USAR. However, in the safety evaluation for amendment 84, the inspectors found that the periodicity of turbine valve testing was allowed to follow the recommendations of Westinghouse but the testing periodicity was never to exceed one year. This one-year requirement was never transferred to the USAR from the TSs when the licensee moved the requirements with License Amendment 121. Additionally, the licensee never evaluated the removal of the one year requirement. The licensee specifically stated in the License Amendment request for Amendment 121 that the amendment would simply relocate the existing turbine valve testing requirements from the TSs to the USAR and would not result in a change to the requirements.

Analysis: The inspectors determined that the failure to update the USAR to include the one year turbine valve testing requirement was a performance deficiency. The inspectors also determined that the finding was more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," dated December 4, 2008, because it had a material impact on licensed activities in that the incorrect USAR allowed the licensee to change the procedure and schedule the periodic testing of the reheat and interceptor valves at an interval beyond one year. As described in Supplement I of the Enforcement Policy, to determine the severity of a 50.71(e) violation, the underlying technical issue was evaluated under the SDP. In this case, the underlying technical issue affected the Initiating Events Cornerstone. The inspectors evaluated the finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 3b for the Initiating Events Cornerstone, dated January 10, 2008. Using information provided by the licensee, the inspectors answered "no" to the transient initiator contributor questions in this cornerstone column; therefore, the finding was determined to be of very low safety significance (Green).

The finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to accurately identify the issue when conducting corrective actions for CR040457, "Discrepancy in Turbine Valve Testing Requirements and Acceptance Criteria." Specifically, the USAR indicated that the periodic test for the main steam turbine stop valves also verified movement of the reheater stop and interceptor valves. In 2007 and 2008, while completing the corrective actions for CR040457, the licensee failed to accurately access the basis for the periodic test of the intercept valves being linked to the periodicity of the stop and control valves. The licensee's incomplete evaluation of the basis for the test frequency resulted in the associated procedure change without the test frequency being understood. Had the screening been rigorous, the licensee would have prior identified that the one year requirement was not carried over as stated in the license amendment request. (P.1(a)).

Enforcement: Because violations of 10 CFR 50.71(e) are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process. Title 10 CFR 50.71(e) requires, in part, that licensees periodically update the USAR originally submitted as part of the application for the operating license to assure that the information included in the USAR contains the latest material developed.

Contrary to the above, on November 1, 1995, the licensee failed to adequately update the USAR after they transferred the turbine valve testing requirements from the TSs to the USAR in License Amendment 121. Specifically, the licensee failed to transfer the turbine valve testing interval requirement to never exceed one year. Because this was a Severity Level IV violation that was not willful and it was entered into the licensee's corrective action program as CR319464 this violation was treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000305/2008005-03). The licensee proposed corrective actions included performing an apparent cause evaluation and USAR changes as appropriate.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) LER 05000305/2007-006-00: Reactor Coolant System Pressure-Temperature Limits Momentarily Exceeded During Solid Plant Operations

On April 5, 2007, during review of past computer data, licensee engineering personnel identified that a pressure transient had occurred which exceeded TS pressure limits. Specifically, on November 24, 2004, RCS pressure exceeded the pressure-temperature limits of TS Figure 3.1-2, "Kewaunee Unit No. 1 Cooldown Limitation Curve," referenced in TS 3.1.b. During performance of procedure N-RC-36D, "Filling and Venting the Reactor Coolant System," a reactor coolant pump was started and reactor coolant pressure suddenly increased from 371.9 pounds per square inch gauge (psig) to 509.8 psig and exceeded the heat up and cooldown curve pressure limit of 493 psig for twelve seconds. The licensee determined the cause to be procedure deficiencies. Corrective actions included revising procedures N-RC-36A and N-RC-36D. This finding is more than minor because without prompt operator actions maximum reactor vessel pressure would have exceeded its design pressure and RCS boundary integrity would not have been ensured. The finding affected the Barrier Integrity Cornerstone and was considered to have very low safety significance (Green) because the maximum pressure reached was below the maximum allowed design pressure; therefore, the reactor pressure vessel integrity was not challenged. The licensee-identified finding involved a violation of TS 3.1.b and TS Figure 3.1-2. The enforcement aspects of the violation are discussed in Section 4OA7 of this report. Documents reviewed are listed in the Attachment to this report.

.2 (Closed) LER 05000305/2007009-00: Both Trains of Shield Building Ventilation (SBV) Inoperable Due to Damper Controller Failure on One Train While Second Train Inoperable for Routine Maintenance

On September 18, 2007, a failure was identified on the SBV train "A" damper controller that rendered the train inoperable. Train "B" SBV was inoperable for routine maintenance. Both trains being inoperable required a reactor shutdown within 12-hours. Shield building ventilation train "B" was restored to operable status and the 12-hour shutdown condition was then exited. The failed controller on SBV train "A" was then repaired and the SBV system fully restored to operable status. Additionally, subsequent circuit level analysis of the train "A" controller determined that the condition used to conclude the controller had failed was not indicative of a controller failure and the initial operability determination was conservative. The LER was reviewed by the inspectors and no findings of significance were identified and no violation of NRC requirements occurred. The licensee documented the failed equipment in CR269440. Documents reviewed are listed in the Attachment to this report.

.3 (Closed) LER 05000305/2007001-00: Reactor Trip During Turbine Trip Mechanism Testing

On January 12, 2007, the turbine and reactor tripped while plant personnel were performing a turbine mechanical trip test. Additional RCS cool down occurred during the transient when valve MS-201B1, reheat steam to moisture separator reheater failed to close. Closure of LER 05000305/2007001-01 in the Kewaunee inspection report 05000305/2008007 discussed this same event. Documents reviewed are listed in the Attachment to this report.

.4 (Closed) LER 05000305/2007002-00: Issue with AMAG/Westinghouse Calculations for Full Power Result in Reduced Power Operations

On January 3, 2007, it was identified that a recalibration of the flow section was required before updating the calculation for feedwater flow measurement and uncertainty, or performing the CROSSFLOW feedwater flow calibration required to allow 100 percent power operation. On August 25, 2006, it was determined that that calibration of the CROSSFLOW calibration may have been invalidated due to previous disassembly of the ASME flow section. On October 23, 2006, the licensee was informed by Westinghouse there may be a larger system uncertainty due to flow noise. If a larger than analyzed system measurement uncertainty existed, the TS rated thermal power could be exceeded. Therefore, plant power was limited to less than 100 percent subsequent to the end of the refueling outage on October 26, 2006. Short-term corrective action was to conservatively maintain the steady state reactor power to no more than 99.69 percent (1766.5 MegaWatt-thermal) until a full system calibration could be performed during the next refueling outage. Actual plant measure data for feedwater flow was taken after the refueling outage in May 2008. The feedwater flow calculation was updated and concluded that CROSSFLOW performed within its rated uncertainty, or accuracy. No evidence was found to indicate that the plant had previously exceeded licensed power. Based on this data, the plant returned to 100 percent power operation. Documents reviewed are listed in the Attachment to this report.

.5 (Closed) URI 05000305/2007003-02: Inadequate Equipment and References for Response to an Earthquake

This issue identified issues with the possible lack of USAR information related to the seismic response of the control room air conditioning system, the adequacy and qualification of compensatory equipment for a seismic event, and the supporting documentation for the licensee's response to Generic Letter 87-02, "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors (USI A-46)." The issue is partly addressed by NCV 05000305/2007003-01. In addition, the licensee determined that the summary report that addresses USI-A-46 program implementation, no credit was taken for compensatory equipment, rather credit is taken for operator reset of the control room air conditioning. The NRC safety evaluation in 1998 accepted these conditions therefore the compensatory measures discussed are not considered modifications. Documents reviewed are listed in the Attachment.

.6 (Closed) URI 05000305/2007003-03: Potentially Inappropriate Safety/Nonsafety-Related Interface for Condensate Storage Tank System and Safety-Related Auxiliary Feedwater Pumps

While performing the follow-up inspection activities associated with URI 05000305/2006003-03, "Potentially Inappropriate Safety/Nonsafety-Related Interface for Bearing Cooling and Flushing Water to the Safety-Related Services Water Pumps," the inspectors noted that interfaces between other nonsafety-related and safety-related systems and were potentially inappropriate. Specifically, the inspectors noted that the condensate storage tank was a nonsafety-related system which interfaced directly with the safety-related auxiliary feedwater system and questioned various design aspects related to the interface. The licensee provided the inspectors with historical and current design information, licensing amendments, licensing basis information, past inspection results and future inspection plans which supported its position that the

current design interface between the condensate storage tank and the auxiliary feedwater system was acceptable and in compliance with current plant licensing basis requirements. Documents reviewed are listed in the Attachment to this report.

4OA5 Other Activities

.1 Implementation of Temporary Instruction (TI) 2515/176, "Emergency Diesel Generator TS Surveillance Requirements Regarding Endurance and Margin Testing"

a. The objective of TI 2515/176 was to gather information to assess the adequacy of nuclear power plant EDG endurance and margin testing as prescribed in plant-specific TSs. The inspectors reviewed the licensee's TS, procedures, and calculations and interviewed licensee personnel to complete the TI. The information gathered for this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation on December 17, 2008. This TI is complete at Kewaunee Power Station; however, this TI 2515/176 will not expire until August 31, 2009. Additional information may be required after review by the Office of Nuclear Reactor Regulation.

b. Findings

No findings of significance were identified.

.2 (Closed) URI 5000305/2007006–14, "Emergency Diesel Generator Room Cooling Fan Testing Deficiencies"

This item is discussed in Section 1R21 of this report. The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

.3 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On January 7, 2009, the inspectors presented the inspection results to Mr. S. Scace, and other members of the licensee staff. The licensee acknowledged the issues

presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Interim exit meetings were conducted for Radiation Monitoring Instrumentation, Respiratory Protection Equipment, and Unrestricted Release of Material from the Radiologically Controlled Area with the Site Vice-President, Mr. S. Scace on November 7, 2008;
- A telephone exit for TI 2515/176 was conducted with Lori Armstrong, Engineering Director, and other licensee staff on December 3, 2008;
- The licensed operator requalification training program biennial inspection with the Site Vice-President, Mr. S. Scace, on December 5, 2008;
- The licensed operator requalification training program written examination and operating test results with Mr. D. Allen, Supervisor, Nuclear Training - Operations, by telephone on December 22, 2008;
- The annual review of emergency action level and emergency plan changes with the licensee's Licensing Engineer, Mr. R. Repshas, via telephone on December 30, 2008;
- The closure of Component Design Basis Safety Inspection URI 05000305/2007006-14 as an NCV was discussed with Licensing Engineer, Mr. J. Gadzala via telephone on January 13, 2009.

The inspectors confirmed that none of the potential report input discussed was considered proprietary.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements, which met the criteria of Section VI of the NRC Enforcement Policy, NUREG - 1600, for being dispositioned as an NCV.

- Technical Specification 3.1.b required that the reactor coolant temperature and pressure and system heatup and cooldown rates be limited in accordance with Figure TS 3.1-2. On April 5, 2007, the licensee determined that the requirements of TS Figure 3.1.b had not been met in November 2004, when reactor vessel pressure exceeded the heatup and cooldown curve in Figure 3.1-2. During performance of procedure N-RC-36D, “Filling and Venting the Reactor Coolant System,” a reactor coolant pump was started and reactor coolant pressure suddenly increased from 371.9 psig to 509.8 psig and exceeded the heat up and cooldown curve pressure limit of 493 psig for twelve seconds. The licensee documented this problem in CAP038394. This finding is of very low safety significance because the maximum reactor vessel pressure reached in the event was below the design pressure. (Section 4OA3.1)

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Scace, Site Vice-President
M. Crist, Plant Manager
D. Allen, Supervisor, Nuclear Training - Operations
J. Dillich, Site Engineering Director
R. Brock, Supervisor, Operations Support
D. Emery, Supervisor, Nuclear Training
T. Evans, Manager – Training
A. Fahrenkrug, Operations Training
J. Gadzala, Licensing Engineer
M. Hovis, Radiation Protection Supervisor
S. Johnson, Operations Training
C. Olson, Radiation Protection General Supervisor
R. Repshas, Licensing Engineer
D. Scherwiski, Operator Training
C. Gum, Manager Protective Service
M. Wilson, Director of Safety and Licensing
K. Zastrow, Supervisor of Corrective Actions
W. Henry, Maintenance Manager
J. Rutter, Operations Manager
T. Breene, Manager of Licensing

Nuclear Regulatory Commission

M. Kunowski, Chief, Division of Reactor Projects, Branch 5
A. M. Stone, Chief, Division of Reactor Safety, Engineering Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000305/2008005-01	URI	Licensee Response to Operator's Violation of NRC Requirements (Section 1R11.8)
05000305/2008005-02	NCV	Emergency Diesel Generator Room Cooling Fan Testing Deficiencies (1R21)
05000305/2008005-03	NCV	Failure to Transfer Turbine Valve Testing Requirements into the USAR (Section 4OA2.5)

Closed

05000305/2007001-00	LER	Reactor Trip During Turbine Trip Mechanism Testing (Section 4OA3.3)
05000305/2007002-00	LER	Issue with AMAG/Westinghouse Calculations for Full Power Result in Reduced Power Operations (Section 4OA3.4)

05000305/2007006-00	LER	Reactor Coolant System Pressure-Temperature Limits Momentarily Exceeded During Solid Plant Operations (Section 4OA3.1)
05000305/2007009-00	LER	Both Trains of Shield Building Ventilation Inoperable Due to Damper Controller Failure on One Train While Second Train Inoperable for Routine Maintenance (Section 4OA3.2)
05000305/2008005-02	NCV	Emergency Diesel Generator Rooms Cooling Fans Testing Deficiencies (1R21)
05000305/2008005-03	NCV	Failure to Transfer Turbine Valve Testing Requirements into the USAR (Section 4OA2.5)
05000305/2007003-02	URI	Inadequate Equipment and References for Response to an Earthquake (Section 4OA3.5)
05000305/2007006-14	URI	Emergency Diesel Generator Room Cooling Fan Testing Deficiencies (1R21)
05000305/2007003-03	URI	Potentially Inappropriate Safety/Nonsafety-Related Interface for Condensate Storage Tank System and Safety-Related Auxiliary Feedwater Pumps (Section 4OA3.6)

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R01 Adverse Weather Protection

-CR014293; Repair or Replace Hose House 2. The Structure Was Hit by a Semi Trailer
-CR014310; Fed Ex Truck Damaged Fire Hose House When Turning to Leave Shipping Area
-CR116111; The TSC Diesel Coolant Is in Component Cooling Water Action Level 1 for Freeze Point
-CR118644; Degraded Gland Studs on Packing for B2 Service Water Pump
-CA088078; Review and Update Procedure MA-KW-MPM-DGM-007
-CA088269; Revise MA-KW-MPM-DGM-007 Per the Marked Up Procedure
-CY-KW-045-004; Technical Support Center Diesel Generator Cooling Water Chemistry Specifications and Sampling; Revision 0
-ICP-88B-07; MAE – Test Pressure Gauges Calibration; Revision K
-MA-KW-MPM-DGM-007; Preventive Maintenance of TSC Diesel Generator Cooling System; Revision 0
-MA-KW-MPM-FP-005; Mechanical Preventive Maintenance; Revision 2
-OP-KW-ORT-MISC-005; Cold Weather Operations; Revision 0
-KW07-007523; PM-784: Inspect/Lube
-KW100308187; PM08-005: Inspection/Flush Hydrants
-KW100441147; TSC D/G-Add Antifreeze to Bring Proper Level
-SP-55-167-4B; Post LOCA Valves Timing Test (IST) from Local Panel – Train B
-Fire House Inspection Data Sheet; August 22 – 26, 2006
-Drawing M-229; Yard Piping; Revision AV
-Drawing OPERM-208-1; Flow Diagram Fire Protection System; Revision A
-Drawing OPERM-208-2; Flow Diagram Fire Protection System; Revision A
-Drawing OPERM-208-3; Deluge and Sprinkler Valves Fire Protection System; Revision B
-Drawing XK-54167-2; Trailer Site Plan Site Details; Revision H

1R04 Equipment Alignment

-N-ICS-23-CL; Containment Spray System Prestartup Checklist; Revision 30
-OPERM-217; Flow Diagram Internal Containment Spray System; Revision AP
-Internal Containment Spray System Health Report; 3rd Quarter 2008
-N-SI-33-CL; Safety Injection System Prestartup Checklist; Revision AK
-APXK-100-28; Analytical Part Flow Safety Injection System; Revision M
-ISIXK-100-29; ISI Flow Diagram Safety Injection System; Revision U

1R05 Fire Protection

-CAP001847; Fire Protection Cardox Unit Compressor Tripped
-CAP003401; Cardox Compressor Not Controlling Cardox Pressure Within the Normal Range
-CAP007555; CO2 Storage Tank Compressor Is Affected by Changes in Room Temperature
-CAP017704; Cardox System Pressure High
-CE001427; Annunciator 47051-L "Fire Detection System Activated" for SER 60 "CO2 Pressure High/Low"; July 24, 2001
-CE002648; NAO Found Cardox Compressor Not Controlling Cardox Pressure Within the Normal Range
-CE006634; The CO2 Storage Tank Compressor Is Affected by Changes in Room Temperature
-DCR001191; Perform a Plant Physical Change to Install Additional Ventilation Opening Area in the Cardox Tank Metal Housing
-KW01-013571; Cardox Unit Local Alarm Bell Did Not Actuate When the Cardox Unit Pressure Was Above the Setpoint of 325 psig
-KW01-005334; During Performance of PMP-08-05, the Discharge Control Valve, CV31368,Timing Varied from Procedure
-KW02-006187; PS-16129 is Supposed to Control Cardox Tank Pressure Between 295 psig and 305 psig,
-KW05-014392; Cardox Unit Is Cycling From 310 psig to 315 psig, Using the Local Gauge
-KW05-014394; Cardox CO2 Refrigerant Compressor Tries to Start Every 30 Seconds
-WO001192; Check for Air in Refrigerant Per PMP-08-02 - Step 4.3.4
-Cardox CO2 Level/Pressure Chart Data; August, 2008 through December, 2008
-Fire Zone TU-97 and TU-98; Battery Rooms 1A and 1B Area Drawing; Revision D
-Fire Zone TU-95B and TU-95C; 480V Switchgear Bus 1-61 and 1-62 Room and Auxiliary Feedwater Pump Area Drawing; Revision D
-E-2441; Fire Detection System Turbine and Administration Building Basement Floor; Revision T
-Drawing E-2441; Fire Detection System; Turbine and Administration Building Basement Floor; Revision T
-Drawing PFP-9 A-540; 480V Switchgear Bus and 1-62 Room and Auxiliary Feedwater Pump Area; Revision D
-Fire Protection Engineering Evaluation (FPEE) No. 046; Revision 0
-Fire Protection Program Plan; Table 12-1; Fire Detector Functionality Requirements; Revision 8
-Kewaunee Power Station Work Order Overview Report Data; CO2 Work Since November 1, 2007

1R11 Licensed Operator Requalification Program

-ACE 014004; RO License Not Reactivated IAW 10 CFR 55.53; dated October 7, 2008
-AFI No. 06-021-K; Nuclear Oversight – Area for Improvement; November 20, 2006
-CA77779; Nuclear Oversight Assessment No. 06-61-K; dated November 30, 2006
-CA081726; Evaluate for Documented Tour IAW Reactivation Form; August 22, 2008
-CA085455; Increase Population of Parties to Cover All Reactivations Occurring in Last 2 Years; dated October 2, 2008

-CA088785; Revise LOR-TP Form G2; dated November 4, 2008
-CA088790; Review Past 2 Reactivations for STAs for Performance of Complete Plant Tour; dated November 4, 2008
-CA088792; Evaluate the Requirement That an STA Perform a Complete Plant Tour; dated November 4, 2008
-CR112049; RO License Not Reactivated IAW 10 CFR 55.53
-E-0, Reactor Trip or Safety Injection; Revision 38
-E-2, Faulted Steam Generator Isolation; Revision 21
-E-3, Steam Generator Tube Rupture; Revision 32
-GNP-05.16.06; Validation of Time Dependant Operator Actions; Revision 7
-KPS-SA-07-30/SAR000299; 71111.11 Inspection Self-Assessment; dated September 28, 2007
-KPS USAR Section 14.2.4, Steam Generator Tube Rupture; Revision 21; dated November 7, 2008
-LRC-07-SEE04; Simulator Exercise Guide 2007 Annual Operating Exam; dated October 26, 2007
-LRC-08-SEE05; Simulator Exercise Guide 2008 Annual Operating Exam; dated October 3, 2008
-LRC-08-SEE06; Simulator Exercise Guide 2008 Annual Operating Exam; dated October 3, 2008
-LRC-HI-LP-A08 Accident Analysis Lesson Plan; Revision C
-LRC-HI-LP-A08 HOI Accident Analysis Student Handout
-LRC-HI-SEG01 Simulator Exercise Guide; Revision D; dated May 17, 2007
-LRC-HI-SEE04 Simulator Exercise Guide; Revision A; dated October 26, 2007
-LRC-HI-SEG07 Simulator Exercise Guide; Revision C; dated May 2, 2007
-NTP-6430; Remediation Form (Remediation Packages for 10 Operators); Revision 0; dated from July 13, 2006 through October 7, 2008
-NTP-6525; Training Program Effectiveness Report; dated January 24, 2008
-NTP-6526; Training Program Effectiveness Report; dated July 5, 2007
-NTP-6526; Training Program Effectiveness Report; dated September 10, 2008
-NTP-6526; Training Program Effectiveness Report; dated October 10, 2007
-NTP-6526; Training Program Effectiveness Report; dated October 29, 2008
- RFT026585; Update Training Materials with Information from CE 18304 Regarding Assumed Operator Response Times to a SGTR; no date
-SAR 000438; 71111.11 (License Operator Requalification) Readiness; dated June 24, 2008
-Accident Analysis Training Document
-Crew A-F Operator Action Response Times to All Time Critical Operator Actions
-Drawing 6520 D13 Pressurizer Drawing; Revision 6c
-Drawing M-874-1 Spray Line Isometric Drawing; Revision E
-Drawing M-1200 Pressurizer Drawing; Revision F
-Drawing TR-KW-TPG-0500; Requalification; November 14, 2008
-Hot EAL Chart EAL Technical Bases Document; Revision 4; dated May 29, 2008
-Observation Log Report (10 Selected); dated August 2, 2006 through November 31, 2008
-Simulator Test ST-123; Steady State Operation – Mid-Power; Revision C; dated February 14 2007
-Technical Specification 3.4.b; Auxiliary Feedwater System
-Training Program Description LOR-TP; Revision L; dated March 31, 2008
-Training Program Guide; TR-AA-210; Attachment 3; License Operator Requalification
-Simulator Scenario LRC-08-SEE10; Revision A

1R12 Maintenance Effectiveness

-CA077865; Add a Note or Step to PMP-16-02
-CA077866; Analyze Other Fan Coil Units
-CA077883; Add a Note or Step to PMP-17-03
-CA077886; Upgrade PMP-16-02 and 17-02
-CR014155; Turbine Building Fan Coil Unit 1A Failed to Start
-CR026687; Turbine Building Fan Coil Unit "A" Did Not Start
-MRE001069; Turbine Building Fan Coil Unit "A" Did Not Start
-MRE001082; Evaluate Battery Room Fan Coil Unit 1A
-MRE006814; Evaluate TS-16394 Found Out of Specification
-Maintenance Rule System Basis; Turbine Building and Screenhouse Ventilation; Revision 7
-Condition Report Action Screening Reports for Turbine Building Fan Coil Units
-Engineering Logs: August, September, October, December 2006; January, March, April, May, September, November, December, 2007; January – May, 2008
-Work Order Overview Report; Kewaunee Power Station; August 11, 2008

1R13 Maintenance Work Assessments and Emergent Work Control

-CA078350; ATC Identifies Potential Problems with Bank 10 Transformer Bushings
-CA084755; Electrical Engineering Design to Perform ETAP Runs of Electrical Load Flow
-CA084756; Create MOP to Support the Bank 10 Out-of-Service
-CA084758; PRA to Complete Safety Monitor Model Changes to Enable Risk Profile
-CA084759; Operations Training to Establish Simulator Scenarios and JIT Package for Bank 10
-CR102908; ATC Identifies Potential Problems with Bank 10 Transformer Bushings
-CR117315; Error in 50.59 Screening for OP-KW-MOP-SUB-001
-CR119353; Breaker 14604 Reclosed Automatically When Opened
-MA-KW-MPM-SI-013B; Mechanical Preventive Maintenance; Revision 2
-N-EHV-39; 4160V AC Supply and Distribution System Operation; Revision 26
-OEE000229; SEN 267: High-Voltage Bushing Failure Results in Main Transformer Fault and Unplanned Outage
-OP-KW-MOP-SUB-001; Removal and Restoration of Transformer Bank T-10; Revision 0
-50.59 Applicability Review of OP-KW-MOP-SUB-001; Removal and Restoration of Transformer Bank T-10; Revision 0
-OP-KW-ORT-DGM-002; TSC Diesel Generator Monthly Availability Test; Revision 1
-Drawing E-234; Station Synchronizing Diagram; Revision C
-Drawing E-1064; Schematic Diagram; Synchronizing – Check; Revision B
-Drawing E-1097; Control Switch Development; Revision L
-Drawing E-1102; Control Switch Development; Revision N
-Drawing E-2893; Control Schematic, 480V Breaker No. 14601; Revision E
-Drawing E-2894; Control Schematic, 480V Breaker No. 14604; Revision E
-Drawing E-2897; Schematic Diagram, Load Shedding Volt Restoring; Bus 1-46;

Revision C
-Drawing E-3002; TSC Diesel Generator Control Schematic Diagram;
Revision G
-Drawing E-3007; AC S/D-480V SWGR Bus 1-46 and TSC Diesel Generator;
Revision J

1R15 Operability Evaluations

-CR013788; NRC Resident Concern on Non-Safety to Safety Interface
Condensate to Auxiliary Feed System
-CR117874; Replacement Part not a Like for Like Replacement
-CR118514; Crack in Grouted Joint in Masonry Block Wall North of
Stairwell E
-CR118544; Diesel Generator Air Box Drain Filter Assemblies Replaced Without
a PTE
-DCR-917; Remove Strainers from Auxiliary Feedwater Pumps Suction Line
-DCR-3260; Design Description and Safety Evaluation
-LER 2000-014-01; All Three Auxiliary Feedwater Pumps Declared Inoperable
Due to the Potential to Plug Their Suction Strainers; dated August 21, 2000
-NEP-08.04; Maintenance rule Inspection Guideline for Buildings and
Structures; Revision 3
-PM27A017; Replace Floating Roof Seal; Boiler Room South East Tank
-PM27A060; Replace Floating Roof Seal; Boiler Room South West Tank
-TCR00-19; Remove Auxiliary Feedwater Pump Suction Strainers
-Engineering Log; NEP-08.04/CA085075 Update: Maintenance rule Inspection
for Building and Structures; November 7, 2008
-Letter to Wisconsin Public Service Corporation From Mr. Olshan, Project
Manager Division of Operating Reactors Nuclear Regulatory Commission;
Summary of Meeting on May 9, 1979 to Discuss the Auxiliary Feedwater System
and Related Areas; dated May 14, 1979
-Letter To Mr. Mathews, Vice-President of Wisconsin Public Service From Mr.
Eisenhut, Director of Division of Operating Reactors Nuclear Regulatory
Commission; NRC Requirements for Auxiliary Feedwater Systems at Kewaunee
Plant; dated September 21, 1979
-Letter to Mr. Eisenhut, Director of Division of Operating Reactors Nuclear
Regulatory Commission From Mr. Mathews, Vice-President of Wisconsin Public
Service; NRC Requirements for Auxiliary Feedwater System at Kewaunee Plant;
dated October 30, 1979
-Letter to Mr. Mathews, Vice-President of Wisconsin Public Service From
Mr. Varga, Chief of Operating Reactors Nuclear Regulatory Commission;
Kewaunee Nuclear Power Plant Additional Information Requirements for
Auxiliary Feedwater Systems; dated August 18, 1980
-Letter to Mr. Varga, Chief of Operating Reactors Nuclear Regulatory
Commission From Mr. Mathews, Vice-President of Wisconsin Public Service;
Additional Information for Auxiliary Feedwater System; dated October 17, 1980
-Letter to All Operating Pressurized Water Reactor Licensees From
Mr. Eisenhut, Director of Division of Licensing Nuclear Regulatory Commission;
SEISMIC Qualification of Auxiliary Feedwater Systems; dated February 10, 1981
-Letter to Mr. Mathews, Vice-President of Wisconsin Public Service From
Mr. Varga, Chief of Operating Reactors Nuclear Regulatory Commission;
NUREG-0737, Clarification of TMI Action Plan Requirements, Clarification Item

No. 11.E.1.2 Auxiliary Feedwater System Automatic Initiation and Flow Indication; dated December 24, 1981
-Letter to Mr. Giesler, Vice-President of Wisconsin Public Service From Mr. Varga Division of Licensing Nuclear Regulatory Commission; Completed Review and Concluded that the Auxiliary Feedwater System has Sufficient SEISMIC Capability to Withstand a Safe Shutdown Earthquake and Accomplish Its Safety Function; dated August 30, 1982
-Letter To Mr. Varga, Division of Licensing Nuclear Regulatory Commission From Mr. Giesler, Vice-President of Wisconsin Public Service, Auxiliary Feedwater System Operability; dated May 6, 1983
-Letter to Mr. Giesler, Vice-President of Wisconsin Public Service From Mr. Varga Division of Licensing Nuclear Regulatory Commission, Kewaunee Nuclear Power Plant – Safety Evaluation Input on the Implementation of Recommendations for the Auxiliary Feedwater Systems; dated December 16, 1982
-Letter to Mr. Giesler, Vice-President of Wisconsin Public Service From Mr. Varga, Division of Licensing Nuclear Regulatory Commission; Review of Auxiliary Feedwater system is Complete and Acceptable; dated August 10, 1983

1R19 Post-Maintenance Testing

-CMP-25-07; ACC – Control Room Air Conditioning System Chiller Pump Overhaul; Revision E
-50.59 Applicability Review of -CMP-25-07; ACC – Control Room Air Conditioning System Chiller Pump Overhaul; Revision E
-CR107137; Fuel Oil Leakrate has Increased on Technical Support Center Diesel
-CR113378; Pin Hole Leak in Weld
-CR115772; Fuel Oil Weepage
-CR116111; Technical Support Center Diesel Coolant Is in Component Cooling Water Action Level 1 for Freeze Point
-CY-KW-045-004; Technical Support Center Diesel Generator Cooling Water Chemistry Specifications and Sampling; Revision 0
-GMP-137; Brush/Tube Scrubber Cleaning Heat Exchanger Tubes and Inspection
-ICP-10-15; DGM – Technical Support Diesel Generator Instrumentation Calibration; Revision P
-KW07-000353; CAP 40859 – The Northwest Access Door Seal Is degraded; Repair/Replace
-KW07-005268; While Operating SA-100B for a Tagout the Valve Was Noted to Be Very Difficult to Operate and There Seemed To Be Binding Inside
-KW07-010004; Repair Oil Leaks at the Selector Valve for the Oil Filters on The Technical Support Center Diesel Generator
-KW100270181; PM10-605, 36-Month Calibration Check
-KW100273010; PM40-737, Perform Circuit Breaker Maintenance
-KW100273866; PM40-738, Perform Circuit Breaker Maintenance
-KW100274240; PM67-065, Lube Motor
-KW100275196; PM10-673, 18-Month Inspection
-KW100275492; PM10-676, 36-Month Inspection
-KW100278204; PM25-021, Inspect/Clean Fan
-KW100279900; PM67-507, Inspect Technical Support Center Diesel Radiator

Cooling Fan Blades
-KW100279962; PM10-007, Change Engine Lube Oil
-KW100281020; PM10-677, 72-Month Inspection
-KW100282084; PM10-678, Clean and Inspect Battery Charger
-KW100282510; PM10-684, 144-Month Inspection
-KW100318059; Leaking Bushing Upstream of LO-11886
-KW100318290; CRAC Chilled Water Pump "B" Has Minor Seal Leak
-KW100323748; PM25-012, Inspect Chiller
-KW100318290; CRAC Chilled Water Pump "B" Has Minor Seal Leak
-KW100375790; PM25-037, Inspect/Clean Condenser Tubes
-KW100377466; Technical Support Center Fuel Oil Sample
-KW100278286; PM10-058, Change Oil Filter
-KW100378331; PM10-644, Inspect Day Tank Fuel Oil
-KW100378362; PM10-019, Sample Oil
-KW100394519; Technical Support Center Diesel Fuel Oil Leak on Fitting
-KW100398878; Replace the Fuel Injectors and Jumper Lines on the Technical Support Center Diesel Generator
-MA-KW-MPM-DGM-004; Changing Oil and Filters on Technical Support Center Diesel Generator; Revision 2
-50.59 Applicability Review of MA-KW-MPM-DGM-004; Changing Oil and Filters on Technical Support Center Diesel Generator; Revision 2
-MA-KW-MPM-DGM-007; Preventive Maintenance of Technical Support Center Diesel Generator Cooling System; Revision 0
-MRE006967; Leaking Swagelok Union on Technical Support Center Diesel Generator
-OP-KW-ORT-DGM-002; Technical Support Center Diesel Generator Monthly Availability Test; Revision 1
-PMP-10-14; DGM – Inspection of Technical Support Center Diesel Generator (Mechanical); Revision B
-PMP-25-09; ACC – Control Room Air Conditioning Mechanical Inspection and Maintenance; Revision 5
-SP-10-225; Diesel Fuel Oil Sampling; Revision 24

1R21 Component Design Bases Inspection Closure of URI 05000305/2007006-14

- CAP044276; DG A Ventilation Measured Flow Readings Lower Than Assumed in Calc C10044; Revision 1; Diesel Generator Room Temperatures; dated April 26, 2007
- CAP044276; DG A Ventilation Measured Flow Readings Lower Than Assumed in Calc C10044; Revision 1; Diesel Generator Room Temperatures; dated April 26, 2007
- KPS-04055MG; Kewaunee Diesel Generator Cubicle GOTHIC Model in Support of Ventilation Steady State Design and Transient Operation, Revision 0
- SP-42-312B; Diesel Generator B Availability Test; Revision AB

1R22 Surveillance Testing

-CR114700; Local Flow Indicator FI-18201 Is Not Working
-MA-KW-ESP-EHV-002B; Bus 1-6 Loss of Voltage Relay Test; Revision 3
-MA-KW-EPM-EHV-016; Bus 1-6 Loss of Voltage Relay Calibration; Revision 1
-SP-05B-283A; Motor Driven AFW Pump "A" Full Flow Test – IST; Revision 22

1EP4 Emergency Action Level and Emergency Plan Changes

-EP-AA-101, 10 CFR 50.54 (q) Change Evaluation; Revision 1
-10 CFR 50.54 (q) Review Packet, Kewaunee Power Station Emergency Plan; Revision 32
-10 CFR 50.54 (q) Review Packet, Kewaunee Power Station Emergency Action Level Matrixes and Technical Bases; Revision 2
-10 CFR 50.54 (q) Review Packet, Kewaunee Power Station Emergency Action Level Matrixes and Technical Bases; Revision 3
-10 CFR 50.54 (q) Review Packet, Kewaunee Power Station Emergency Action Level Matrixes and Technical Bases; Revision 4
-10 CFR 50.54(q) Review Packet, 2008-013, Alert Gaseous Release – Emergency Action Level Technical Bases and Matrix Revision; Revision 4
-10 CFR50.54 (q) Review Packet, 2008-014, Alert Liquid Release - Emergency Action Level Technical Bases and Matrix Revision; Revision 4
-10 CFR 50.54(q) Review Packet, 2008-015, Unusual Event Liquid Release – Emergency Action Level Technical Bases and Matrix Revision; Revision 4

1EP6 Drill Evaluation

-Kewaunee Power Station Off-Year Exercise Data; November 6, 2008

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

-Radiac Calibration Worksheet; AMP-100; S/N 5098-125; dated November 1, 2006
-Radiac Calibration Worksheet; MGP Telepole Dose Rate Meter; S/N 6601-045; dated November 1, 2007
-Radiac Calibration Worksheet; PM-7; S/N 431; dated February 20, 2008
-Radiac Calibration Worksheet; SAM-11; S/N 227; dated February 20, 2008
-Radiac Calibration Worksheet; PCM-1C; S/N 144; dated July 11, 2008
-Radiac Calibration Worksheet; SAC-4; S/N 742; dated November 5, 2008
-HP-07.112; Instrument Calibration Procedure - AMP Series Dose Rate Instrument; Revision C.
-HP-07.109; Instrument Calibration Procedure - MGP TelePole; Revision 4.
-HP-07.009; Instrument Calibration Procedure - PM-7 Portal Monitor; Revision 9.
-HP-07.100; Instrument Calibration Procedure - SAM-11 Small Article Monitor; Revision 10.
-HP-07.072; Instrument Calibration Procedure – PCM-1C Contamination Monitor; Revision 8.
-HP-07.072; Instrument Calibration Procedure – SAC-4; Revision G.
-HP-02.002 Respiratory Protective Equipment; Revision 17
-CAP044749; Verify the Number of SCBA Units as Listed in HP-02.002, Section 6.5.3; dated May 10, 2007
-KPS-SA-07-51; Radiation Monitoring Program; dated June 18, 2007
-KPS-SA-07-60/SAR000304; Respiratory Protection Program; dated December 6, 2007
-Audit 08-06; Radiological Protection/Process Control Program; dated September 5, 2008

-CR101426; RP SCBA Inspections Were Recorded As UNSAT Without CR Initiated
-CR117489; IRD-2000 Electronic Dosimeter Calibration Software Discrepancies
-CR116542; COGNOS Personnel Respirator Qualification Report Misleading
-CR094875; JL Shepherd Model 89 Calibrator Door Interlock Failure

2PS3 Radiological Environmental Monitoring Program and Radioactive Material Control Program

-Audit 07-06: Radiological Protection, Process Control Program, and Chemistry; dated August 24, 2007
-KPS-SA-07-51; Radiation Monitoring Program; dated June 18, 2007
-KPS-SA-07-60 / SAR000304; Respiratory Protection Program; dated December 6, 2007
-CR028178; Sample Delivered to Chemistry ATF Contained Low Levels of Cs-137
-CR017633; Benchmark of Free Release of Aux Building Crane as Part of Upgrade for ISFSI

4OA1 Performance Indicator Verification

-CDE Audit Log; Maximum I-131 Activity (uCi/gm); dated May 2, 2007 through October 2, 2008
-CDE Audit Log; High Radiation Area Occurrences; dated May 1, 2007 through October 3, 2008
-CDE Audit Log; Very High Radiation Area Occurrences; dated May 1, 2007 through October 3, 2008
-CDE Audit Log; Unintended Exposure Occurrences; dated May 1, 2007 through October 3, 2008
-CDE Audit Log; RETS/ODCM Occurrences; dated May 1, 2007 through October 2, 2008
-GNP-03.18.01; NRC Performance Indicators Reporting Instructions; dated September 13, 2007
-LI-AA-500; NRC/INPO/WANO Performance Indicator and MOR Reporting; Revision 0
-Licensee Data Report for Unplanned Scrams Per 7000 Hours; 2007 through 2008
-Licensee Data Report for Unplanned Scrams with Complications; 2007 through 2008
-Licensee Data Report for Unplanned Transients Per 7000 Hours; 2007 through 2008
-Licensee Data Report for Reactor Coolant System Leak Rate; 2007 through 2008

4OA2 Identification and Resolution of Problems

-AD-AA-101-1002; Writers Guide for Procedures and Guidance and Reference Documents; Revision 2
-BKG ECA-1.1; Loss of Emergency Coolant Recirculation; Revision 5
-CR115738; Spec 200 Card for Refueling Water Storage Tank Level Loop 920

Has No Power
-CR116621; Technical Specification Control of Refueling Water Storage Tank Level Instruments
-DNAP-0503; Writers Guide for Dominion Nuclear Common Procedures; Revision 2
-E-1; Loss of Reactor or Secondary Coolant; Revision 23
-ECA-1.3; Containment Sump Blockage; Revision 7
-ES-1.3; Transfer to Cold Leg Recirculation; LP-Revision 2
-ES-1.3; Transfer to Containment Sump Recirculation; Revision 31
-eSOMS Station Narrative Logs; October 25 – October 27, 2008
-GNP-05.16.01; Writer's Guide for Operations Department Procedures; Revision 8
-GNP-05.16.02; IPEOP Background Documentation Writer's Guide; Revision 6
-IR 95-091; Attachment 1, Failure of the "B" Safety Injection Pump on 4/20/95 Due to Inadequate Thrust Bearing Lubrication
-KPS USAR 4.1.3.4; Reactor Coolant Pressure Boundary Rapid Propagation Failure Prevention; Revision 20
-KW100440142; Spec 200 Card for Refueling Water Storage Tank Level Loop 920 Has No Power
-N-SER-52; Control Room Sequential Event Recorder; Revision 11
-NRC Administrative Letter 98-10; Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety
-NUREG-1122; Knowledge and Abilities Catalog for Nuclear Power Plant Operators - Pressurized Water Reactors
-SEG#LRC-08-SE303; LB LOCA, Containment Sump Recirculation; Revision AC
-SEG#LRC-08-SE303; LB LOCA, Containment Sump Recirculation; Revision C
-SP-33-40; Refueling Water Storage Tank Level Instrument Calibration; Revision 22
-TS 3.3; Engineered Safety Features and Auxiliary Systems
-TS 4.1-1 Table; Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels
-UG-0; User's Guide for Emergency and Abnormal Procedures; Revision 14
-KPS Nuclear Oversight Department, Second Quarter Report 2008
-KPS Nuclear Oversight Department, Third Quarter Report 2008
-KPS Dominion Nuclear Trend Report, Second Quarter 2008
-KPS Dominion Nuclear Trend Report, Third Quarter 2008
-KPS Nuclear Oversight Department List of Current Open Issues
-RP/Chemistry Monthly Department Self-Evaluation Meeting Summaries; June, July, August, and October 2008
-EP Monthly Department Self-Evaluation Meeting Summary, Third Quarter 2008
-Maintenance Monthly Department Self-Evaluation Meeting Summary; July, September, and October 2008
-Operations Monthly Department Self-Evaluation Meeting Summary; May, June, August and September 2008
-Engineering Monthly Department Self-Evaluation Meeting Summary August, September and October 2008
-List of past Maintenance Department Rework; February 6, 2008 to December 2, 2008
-CCA000064; Perform a CCA for a Potential Negative Trend in Equipment Rework; September 8, 2008
-Condition Report Search Results for Keyword "trend"; June 2008 to November 2008
-Plant Health Report, Systems Executive Summary; Second Quarter 2008

-Plant Health Report, Systems Executive Summary; Third Quarter 2008
-Plant Health Report, Programs Executive Summary; Third Quarter 2008
-Plant Health Report, Components Executive Summary; Third Quarter 2008
-Plant Health Report, Motor Operated Valves; Third Quarter 2008
-Plant Health Report, Service Water/MIC; Third Quarter 2008
-Plant Health Report, Equipment Qualification; Third Quarter 2008
-Plant Health Report, TSC Diesel Generator; Third Quarter 2008
-Plant Health Report, Emergency Diesel Generator; Third Quarter 2008
-Plant Health Report, 4160V Supply and Distribution; Third Quarter 2008
-Plant Health Report, Safety Injection; Third Quarter 2008
-Plant Health Report, Auxiliary Feedwater; Third Quarter 2008
-Plant Health Report, Turbine Building and Screen House Ventilation; Third Quarter 2008
-Plant Health Report, Service Water; Third Quarter 2008
-CR 114680; SP-54-086, Failure During Test of Reheater Stop and Interceptor Valves
-CAP 040457; Discrepancy in Turbine Valve Testing Requirements and Acceptance Criteria
-CE019616; Perform a Condition Evaluation per CAP 40457
-CA029053; Take Corrective Actions as Required to Resolve Condition Identified in CAP 40457
-CR319464; NRC Inspection Exit Proposes NCV (Green) With Cross-Cutting Aspect in PI&R
-CA126448; Present Preliminary Causal Analysis to the NRC Resident Within 20 days
-PCR 032371; Discrepancy in Turbine Valve Testing Requirements and Acceptance Criteria
-SP-54-086; Turbine Stop and Governor Valve Operability Test; Revision 43
-Proposed Amendment 89 to KPS Technical Specifications, Turbine Valve Test Frequency Reduction; July 14, 1989
-Safety Evaluation by the Office of Nuclear Reactor Regulation Relating to Amendment NO. 84 to Facility Operating License NO. DPR-43; December 22, 1989
-Proposed Amendment 133 to the Kewaunee Nuclear Power Plant Technical Specifications; December 16, 1994
-Amendment NO. 121 to Facility Operating License NO. DPR-43; August 31, 1995
-Safety Evaluation by the Office of Nuclear Reactor Regulation Relating to Amendment NO. 121 to Facility Operating License NO. DPR-43; August 31, 1995
-USAR, Section 10.4; Revisions 11, 13, 14, 15, 20, and 21

4OA3 Event Follow-Up

-ACE003326; RCS Pressure/Temperature Spiked When Starting RXCP A
-ACE13979; Repeat Occurrences of a “Lit” LED on the SBV Train ‘A’ Exhaust Damper Servo-Amplifier Card
-CR015767; Unresolved Issue (URI) Discussed at Quarterly Exit
-CR018463; NRC URI 2007-003-02: Inadequate Equipment References for Response to an Earthquake
-CR106929; SBV Train ‘A’ S/CV 35109 LED Found On, When It Normally Is OFF When Fan in OFF
-CR116623; OD 215; Containment Fan Coil Unit “A” Motor High Vibrations; Revision 1
-LER 2007-002-00; Issue with AMAG/Westinghouse Calculations for Full Power Result in Reduced Power Operations
-LER 2007-006-00; Reactor Coolant System Pressure-Temperature Limits Momentarily Exceeded During Solid Plant Operations
-LER 2007-009-00; Both Trains of Shield Building Ventilation Inoperable Due to Damper Controller Failure on One Train while Second Train Inoperable for Routine Maintenance
-N-RC-36D; Filling and Venting the Reactor Coolant System (deleted on September 7, 2007).

-NID-01.05.01; Predictive Maintenance Vibration Monitoring Program; Revision A
-ODM 73; Containment Fan Coil Unit “A” Increased Vibrations on Motor
-PCR028916, Change N-RC-36D
-PCR028917; Change N-RC-36A
-Calculation TP-KPS-2008-001, Kewaunee Power Station Feedwater Flow Measurement and Uncertainty; Rev 0
-Containment Fan Coil 1A Overall Trend Values Data; July 28, 2002 through December 15, 2008
-Engineering Log; 1A Containment Fan Coil Unit; November 14, 2008
-Westinghouse letter WPS-08-9; Kewaunee EnergiTools Data Qualification Feedwater Flow Estimates; April 29, 2008.

4OA5 Other Activities

-OP-KW-OSP-DGE-004A; Diesel Generator A Elevated Load and Load Rejection Test; Revision 3
-OP-KW-OSP-DGE-004B; Diesel Generator A Elevated Load and Load Rejection Test; Revision 3
-Calculation Number C11450; Auxiliary Power System Modeling and Analysis; Revision 0

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CEDE	Committed Effective Dose Equivalent
CFM	Cubic Feet per Minute
CFR	Code of Federal Regulations
CR	Condition Report
DG	Diesel Generator
ºF	Degrees Fahrenheit
EDG	Emergency Diesel Generator
GOTHIC	Generation of Thermal-Hydraulic Information for Containments
IMC	Inspection Manual Chapter
INPO	Institute of Nuclear Power Operations
IP	Inspection Procedure
IST	Inservice Testing
IR	Inspection Report
JPM	Job Performance Measure
kW	KiloWatt
LER	Licensee Event Report
LORT	Licensed Operator Requalification Training
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PARS	Publicly Available Records System
PI	Performance Indicator
psig	Pounds Per Square Inch Gauge
RCA	Radiologically Controlled Area
RCS	Reactor Coolant System
RETS	Radiological Effluent Technical Specification
RP	Radiation Protection
RWST	Refueling Water Storage Tank
SAT	Systems Approach to Training
SBV	Shield Building Ventilation
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
TI	Temporary Instruction
TS	Technical Specification
USAR	Updated Safety Analysis Report
URI	Unresolved Item