



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

February 8, 2013

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

**SUBJECT: KEWAUNEE POWER STATION – NRC INTEGRATED
INSPECTION REPORT 05000305/2012005**

Dear Mr. Heacock:

On December 31, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Kewaunee Power Station. The enclosed inspection report documents the inspection results which were discussed on January 3, 2012, with Mr. R. Simmons, the site Plant Manager, 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.

Four NRC identified findings of very low safety significance (Green) were identified during this inspection. These findings were determined to involve violations of NRC requirements, including one traditional enforcement Severity Level IV violation. The NRC is treating these violations as non-cited violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. Additionally, two licensee-identified violations are listed in Section 4OA7 of this report.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Kewaunee Power Station.

If you disagree with a cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III; and the NRC Resident Inspector at the Kewaunee Power Station.

D. Heacock

-2-

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

Sincerely,

/RA by Nirodh Shah for/

Kenneth Riemer, Branch Chief
Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000305/2012005;
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ™

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000305/2012005

Licensee: Dominion Energy Kewaunee, Inc,

Facility: Kewaunee Power Station

Location: Kewaunee, WI

Dates: October 1, 2012, through December 31, 2012

Inspectors: R. Krsek, Senior Resident Inspector
K. Barclay, Resident Inspector
J. Beavers, Emergency Preparedness Inspector
V. Myers, Health Physicist
J. Laughlin, Emergency Preparedness Inspector
R. Winter, Reactor Engineer
K. Carrington, Reactor Engineer
D. McNeil, Senior Operations Engineer
C. Moore, Operations Engineer
J. Jandovitz, Project Engineer

Approved by: Kenneth Riemer, Branch Chief
Branch 2
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS	1
REPORT DETAILS	5
Summary of Plant Status.....	5
1. REACTOR SAFETY.....	5
1R01 Adverse Weather Protection (71111.01).....	5
1R04 Equipment Alignment (71111.04).....	8
1R05 Fire Protection (71111.05)	14
1R06 Flooding (71111.06).....	16
1R07 Annual Heat Sink Performance (71111.07)	16
1R11 Licensed Operator Requalification Program (71111.11).....	17
1R12 Maintenance Effectiveness (71111.12).....	20
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13) ..	21
1R15 Operability Determinations and Functional Assessments (71111.15)	22
1R18 Plant Modifications (71111.18).....	23
1R19 Post-Maintenance Testing (71111.19).....	24
1R22 Surveillance Testing (71111.22)	24
1EP2 Alert and Notification System Evaluation (71114.02).....	26
1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03).....	26
1EP4 Emergency Action Level and Emergency Plan Changes (IP 71114.04).....	27
1EP5 Maintenance of Emergency Preparedness (71114.05).....	27
1EP6 Drill Evaluation (71114.06).....	29
2. REACTOR SAFETY.....	29
2RS2 Occupational As-Low-As-Is-Reasonably-Achievable Planning and Controls (71124.02).....	29
2RS4 Occupational Dose Assessment (71124.04).....	31
2RS5 Radiation Monitoring Instrumentation (71124.05).....	32
4. OTHER ACTIVITIES	36
4OA1 Performance Indicator Verification (71151).....	36
4OA2 Identification and Resolution of Problems (71152)	38
4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)	43
4OA5 Other Activities	46
4OA6 Management Meetings.....	50
4OA7 Licensee-Identified Violations	50
SUPPLEMENTAL INFORMATION	1
KEY POINTS OF CONTACT.....	1
LIST OF ITEMS OPENED, CLOSED AND DISCUSSED	2
LIST OF DOCUMENTS REVIEWED.....	4
LIST OF ACRONYMS USED	21

SUMMARY OF FINDINGS

Inspection Report (IR) 05000305/2012005, 10/01/2012 – 12/31/2012, Kewaunee Power Station (KPS); Adverse Weather Protection, Equipment Alignment, and Maintenance of Emergency Preparedness.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Four Green findings were identified by the inspectors. The findings were considered non-cited violations (NCVs) of NRC regulations, including one SL IV violation. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using IMC 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated June 7, 2012. 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: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to assure that appropriate quality standards were specified and included in design documents, and that deviations from such standards were controlled. Specifically, during plant design change (DC) 10-011011, "EDG Ventilation Air Supply Modification (Capital)," the licensee failed to assign appropriate quality classifications to components that were relied upon to maintain a safety-related (SR) pressure boundary. As a short term corrective action, the licensee closed an upstream SR valve to restore the SR pressure boundary. The licensee entered the issue into their corrective action program (CAP) and assigned an apparent cause evaluation (ACE) to identify and assess the cause of the incorrect quality classification.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of Design Control, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to assign the appropriate SR quality classification to components that were relied upon to maintain a SR pressure boundary. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions", dated June 19, 2012. The licensee confirmed that the emergency diesel generator (EDG) starting air system remained operable but non-conforming; therefore, the inspectors answered "Yes" to Mitigating Systems Screening question number 1, and screened the finding as having very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, work control, because the licensee did not maintain interfaces with offsite organizations, and communicate, coordinate, and cooperate with each other during

activities in which interdepartmental coordination is necessary to assure plant and human performance. Specifically, during the licensee's acceptance review of the offsite vendor's work, the licensee questioned the new component qualifications; however, follow-up coordination and communications between the offsite vendor preparer and the licensee reviewer were not adequate to resolve the incorrect component classification (H.3(b)). (Section 1R04.1)

Cornerstone: Barrier Integrity

- Green SLIV. The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and associated finding of very low safety significance for the failure to document an evaluation that provided a basis for the determination that the changes implemented in Procedure RF-01.00, "KNPP [Kewaunee Nuclear Power Plant] Refueling Procedure," Revision I, did not require a license amendment in 2001. Specifically, the licensee failed to include, in the written evaluation, a basis as to why the change did not create a possibility for a malfunction of an structure, system or component (SSC) important to safety with a different result than any previously evaluated in the Updated Safety Analysis Report (USAR) and did not result in a departure from a method of evaluation described in the USAR used in establishing the design bases. The changes to procedure RF-01.00 removed a requirement to place the residual heat removal (RHR) A heat exchanger in parallel with the spent fuel pool (SFP) heat exchanger, when a full core offload took place with service water temperatures greater than or equal to 60 degrees Fahrenheit (°F). The licensee initiated condition report (CR) 493206, and at the end of the inspection period, was conducting a causal evaluation and developing corrective actions to restore the required actions to the refueling procedure.

The violation was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because the performance deficiency adversely affected the Barrier Integrity Cornerstone objective to maintain functionality of the SFP cooling system. Specifically, the configuration control and design control attributes, related to the design margins for the SFP, increase in allowable fuel assemblies as documented in License Amendment No. 150. Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the SDP because they are considered to be violations that potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012 and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, "Barrier Integrity Screening Questions," dated June 19, 2012. The inspectors answered "No" to questions 1 through 4 in Section D, "Spent Fuel Pool," and screened the finding as having very low safety significance (Green). In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation is categorized as SL IV because the resulting changes were evaluated by the SDP as having very low safety significance. The inspectors determined that this finding did not reflect present performance since the error was introduced in a design change that was greater than three years old; therefore, there was no cross-cutting aspect associated with this finding. (Section 1R04.2)

Cornerstone: Emergency Preparedness

- Green. The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q), "Emergency Plans," for failing to follow and maintain the effectiveness of an emergency plan that met the requirements of emergency planning standard 10 CFR 50.47(b)(4). Specifically, the licensee failed to maintain emergency action levels (EALs), EAL bases, and abnormal operating procedures (AOPs) that ensured a declaration was made when Lake Michigan Levels reached low levels. Plant elevations for the Kewaunee Power Station (KPS) were based on Lake Michigan Levels in reference to the 1955 International Great Lakes Datum (IGLD). While the EALs, EAL bases, and AOPs listed the correct lake elevation in reference to the 1955 IGLD, all current alternate source information utilized by the KPS staff to declare an EAL was based on the 1985 IGLD Lake Michigan Level, a difference of 0.7 feet higher than the 1955 IGLD. Neither the EAL, EAL bases, nor AOP directed KPS staff to subtract 0.7 feet from the alternate source information used to declare an EAL; therefore, KPS staff would not have classified an emergency condition. The licensee entered this performance deficiency into their CAP as CR500145, and put in place interim corrective actions to ensure the correct value was obtained.

The inspectors determined that from August 2001, to December 14, 2012, the licensee's failure to ensure that EALs HU1 and HA1 were properly declared during an actual event was a performance deficiency. This finding was determined to be more than minor because it was associated with the emergency response organization (ERO) performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," using Figure 5.4-1, "Significance Determination for Ineffective EALs and Overclassification," dated February 24, 2012, and resulted in a Green finding as an Unusual Event and Alert event would not have been declared. The inspectors concluded there was no cross-cutting aspect with this finding because the failure occurred in 2001, and was not representative of current performance. (Section 1R01.1)

- Green: The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q) "Emergency Plans," for failing to follow and maintain an emergency plan that met the requirements of emergency planning standard 10 CFR 50.47(b)(4). Specifically, the licensee failed to maintain onsite atmospheric monitoring equipment capable of measuring carbon dioxide concentrations Immediately Dangerous to Life and Health (IDLH). The IDLH concentrations within specified plant areas are utilized to classify emergency conditions per the KPS Emergency Plan. The licensee entered this performance deficiency into their CAP as CR481430.

The inspectors determined that the issue was a performance deficiency as it was within the licensee's ability to foresee and correct. This finding was determined to be more than minor because it was associated with the ERO performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," using Figure 5.4-1, "Significance

Determination for Ineffective EALs and Overclassification”, and resulted in a Green finding as an Alert event would not have been declared. A cross-cutting aspect was identified in the area of human performance, decision-making. The licensee’s risk-significant decision concerning this EAL-related equipment change did not use a systematic process to ensure that safety was maintained. A lack of formally defined authority and roles for decisions and communications precluded the appropriate interdisciplinary input and review of this equipment change (H.1(a)). (Section 1EP5.1)

B. Licensee-Identified Violations

Two violations of very low safety significance identified by the licensee have been reviewed by inspectors. Corrective actions planned or taken by the licensee have been entered into the licensee’s CAP. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Kewaunee Power Station (KPS) operated at full power for the entire inspection period with one exception. On October 2, 2012, KPS reduced power to 57 percent to facilitate replacement of the condensate pump B motor after a service water leak developed in the oil cooler for the upper motor bearing. KPS replaced the condensate pump motor and returned to full power on October 5, 2012.

On October 22, 2012, Dominion publicly announced that it planned to close and decommission KPS. Dominion sent a letter to the NRC dated, November 2, 2012, stating that it expected to cease power production at KPS in the second quarter of 2013 and move to safe shutdown. Dominion stated they will notify the NRC with an exact shutdown date after a required grid reliability review by the Midwest Independent Transmission System Operator.

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 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. In addition, due to the Army Corps of Engineers prediction of historic Lake Michigan low water levels for the Great Lakes during the winter months of 2013, the inspectors reviewed the licensee's AOPs and EALs for the ultimate heat sink. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Documents reviewed 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:

- circulating water system;
- fire protection (FP) system; and,
- turbine building and greenhouse ventilation system.

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

b. Findings

EAL Table Utilizes 1955 IGLD for Emergency Event Classification

Introduction: The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q), "Emergency Plans," for the failure to follow and maintain the effectiveness of an emergency plan that met the requirements of emergency planning standard 10 CFR 50.47(b)(4). Specifically, the licensee failed to maintain EALs, EAL bases, and AOPs that would ensure a declaration was made when Lake Michigan Levels reached low levels. Plant elevations for KPS were based on Lake Michigan levels in reference to the 1955 IGLD. While the EALs, EAL bases, and AOPs listed the correct lake elevation in reference to the 1955 IGLD, all current alternate source information utilized by the KPS staff to declare an EAL was based on the 1985 IGLD Lake Michigan Level, a difference of 0.7 feet higher than the 1955 IGLD. Neither the EAL, EAL bases, nor AOPs directed KPS staff to subtract 0.7 feet from the alternate source information used to declare an EAL; therefore, KPS staff may not have classified an emergency condition when the low lake level criteria were met.

Description: On December 14, 2012, the inspectors reviewed documentation associated with the KPS EALs, EAL bases, and AOP OP-KW-AOP-CW-001, "Abnormal Circulating Water System Operation," Revision 8, due to the predicted historic low Lake Michigan levels predicted for the winter 2013 by the U.S. Army Corps of Engineers (USACE) and the National Oceanic and Atmospheric Administration (NOAA). The KPS EALs and associated bases for HU1, "Initiating Condition – Unusual Event, Natural and Destructive Phenomena Affecting the Protected Area," and HA1, "Initiating Condition – Alert, Natural and Destructive Phenomena Affecting the Protected Area," utilize Table H-2, "Lake-Forebay Level Thresholds (Greater than 15 minutes). Table H-2 lists both high and low Lake Michigan levels that required the declaration of either an unusual event or alert. The EAL bases clearly stated that the Lake Michigan levels specified were based on the 1955 IGLD and that under certain plant conditions, only an alternate source of information can be used to determine lake level. The alternate source of data was obtained from either the USACE or NOAA.

A review of AOP OP-KW-AOP-CW-001, which would be invoked during conditions of low forebay levels, revealed that Step 18 of the procedure directed KPS operators to utilize the NOAA website (<http://www.co-ops.nos.noaa.gov> Great Lakes Water Level, Active stations, Kewaunee) to obtain the actual lake level and to continually monitor lake level. The inspectors noted that the Lake Michigan level data reported both on the procedurally directed NOAA website and the USACE website was listed as 1985 IGLD. A review of the, "Establishment of International Great Lakes Datum (1985)," Section 45, revealed that the differences between 1985 IGLD and 1955 IGLD for the active Kewaunee station, required the subtraction of approximately 0.7 feet from the 1985 IGLD levels. Therefore, in order to correctly declare the KPS EALs utilizing the procedurally prescribed alternate source, 0.7 feet was required to be subtracted because currently all Lake Michigan level data is reported in 1985 IGLD. Neither the inspectors nor the licensee identified any procedural guidance or direction in the EAL bases that required KPS employees to subtract 0.7 feet from the alternate source data, as required to meet the current KPS EALs. The licensee validated the inspectors' concerns and

initiated CR500145, and put in place interim corrective actions to ensure that the correct value was obtained.

The inspectors determined that the EAL levels were correct for the 1955 IGLD. These particular EALs were last revised, with NRC approval, in August 2001.

Analysis: The inspectors determined that from August 2001 to December 14, 2012, the licensee's failure to ensure that EALs HU1 and HA1 were properly declared during an actual event was a performance deficiency. This finding was determined to be more than minor because it was associated with the ERO performance attribute of the Emergency Preparedness Cornerstone, and adversely affected the cornerstone objective of ensuring that the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," using Figure 5.4-1, "Significance Determination for Ineffective EALs and Overclassification," dated February 24, 2012, and resulted in a Green finding as an Unusual Event and Alert event would not have been declared. The licensee's risk-significant decision concerning this EAL-related equipment change did not use a systematic process to ensure that safety was maintained.

The inspectors concluded that there was no cross-cutting aspect with this finding because the failure occurred in 2001, and was not representative of current performance.

Enforcement: Title 10 CFR 50.47(b)(4), states, "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures." Contrary to the above, from August 2001 through December 14, 2012, the licensee failed to maintain a standard scheme of emergency classification and actions levels in use. Specifically, the EALs, bases, and implementing procedures did not ensure the EAL HU1 and HA1 would be declared when an alternate source was utilized to obtain lake level data, since the alternate source data currently available was based on a different IGLD reference than what was specified in KPS EAL Table H-2, and no guidance was prescribed to ensure appropriate data was obtained. Because this violation was of very low safety significance and was entered into the licensee's CAP as CR500145, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 5000305/2012005-01; EAL Table Utilizes 1955 IGLD for Emergency Event Classification).

The licensee initiated CR500145, implemented immediate interim compensatory measures to ensure the appropriate data was obtained, and began a causal evaluation to determine long-term corrective actions.

.2 Readiness for Impending Adverse Weather Condition – High Wind Conditions

a. Inspection Scope

Since high winds were forecast in the vicinity of the facility on October 30, 2012, the inspectors reviewed the licensee's overall preparations/protection for the expected weather conditions. On October 30, 2012, the inspectors evaluated the licensee's preparations against the site's procedures and determined that the staff's actions were adequate. During the inspection, the inspectors focused on plant-specific design features and the licensee's procedures used to respond to specified adverse weather conditions. The inspectors also toured the plant grounds, which included the electrical switchyard, the main transformers, and areas adjacent to the underground fuel oil storage tank vent lines and the emergency diesel fuel oil day tank vent lines, to look for any loose debris that could become missiles during a tornado. The inspectors also reviewed a sample of CAP items to verify that the licensee identified adverse weather issues at an appropriate threshold, and dispositioned them through the CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one readiness for impending adverse weather condition sample as defined in IP 71111.01-05.

b. Findings

No findings 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:

- service water (SW) train B; and,
- EDG B while EDG A was out-of-service (OOS).

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 and system diagrams to determine the appropriate system lineup. 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 two partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

Emergency Diesel Generator Starting Air System Quality Classification Error

Introduction: The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to assure that appropriate quality standards were specified and included in design documents, and that deviations from such standards were controlled. Specifically, during plant DC 10-011011, "EDG Ventilation Air Supply Modification (Capital)," the licensee relocated an air sampling connection for each train of the SR EDG starting air system. The licensee accomplished this by adding the necessary components, which included regulators, isolation valves, and piping, downstream of the existing SR vent valves SA-2030A (and B). The modification changed the normal position of SA-2030A (and B) from closed to open, but did not assign the appropriate SR quality classification to the new downstream components that were relied upon to maintain the extended SR pressure boundary.

Description: On December 26, 2012, the inspectors performed a partial system walkdown on the EDG B when EDG A was inoperable for planned testing. In addition to walking down critical portions of the EDG, the inspectors reviewed recent CRs that were flagged as relating to configuration control. The CR494039, written on October 31, 2012, discussed finding two EDG starting air valves in positions different than expected for the chemistry air sampling procedure that was being used. The licensee concluded that the valves were left in their positions during DC 10-01101 that was turned over to operations in December of 2011. The licensee referenced the drawing for the system, OPERM-213-9, Revision J, "Flow Diagram Diesel Generator Startup Air Compressor A & B and Fish Screen Air," and found that the drawing directed that valves SA-2030A-2 (and B-2) be in the closed position and the two upstream valves for each train, SA-2030A (and B), and SA-2030A-1 (and B-1), be in the open position. The licensee repositioned the valves to match the drawing and completed a corrective action to update the EDG starting air checklists with the new valve positions. The inspectors reviewed the classification of the valves that were relied upon to maintain the SR pressure boundary and found that the licensee had classified valves SA-2030A-2 (and B-2) as nonsafety-related (NSR). The inspectors informed the licensee that they had improperly moved an SR boundary to include NSR components; the licensee immediately closed SA-2030A (and B) to restore the SR boundary for both trains of EDG starting air.

During the licensee's investigation of the issue, they discovered that DC 10-01101 had not assigned the appropriate quality classification to the components installed downstream of SA-2030A (and B). The licensee also discovered that many of the NSR components that were installed for the air sample connection were procured and installed at a higher safety classification than prescribed in the modification. The only components that were not procured SR were the regulators, which were confirmed to be NSR and included in the SR boundaries, when SA-2030A-2 (and B-2) were being used as boundary valves. The licensee entered this issue into the CAP and assigned an ACE to determine the cause of the incorrect quality classification. As part of the immediate corrective actions, the licensee conducted a human performance review board, which

concluded that while the licensee initially questioned the new component qualifications, follow-up coordination and communications between the offsite vendor preparer and licensee reviewer were not adequate to resolve the incorrect component classifications.

Analysis: The inspectors determined the failure to assure that appropriate quality standards were specified and included in design documents and that deviations from such standards were controlled was contrary to 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and was a performance deficiency.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of Design Control, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not assign the appropriate SR quality classification to components that were relied upon to maintain an SR pressure boundary. The classification error existed on both trains of EDG starting air; and a failure of the NSR components could have affected both of the DGs' ability to start and perform their safety function.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, Mitigating Systems Screening Questions, dated June 19, 2012. The licensee evaluated the NSR regulator as it related to functioning as a pressure boundary and concluded that the regulators pressure rating was twice that of the EDG starting air system. The licensee also concluded that the EDG starting air system remained operable but non-conforming; therefore, the inspectors answered "Yes" to Mitigating Systems Screening question number 1, and screened the finding as having very low safety significance (Green).

This finding has a cross-cutting aspect in the area of human performance, work control, because the licensee did not maintain interfaces with offsite organizations, and communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance. Specifically, during the licensee's acceptance review of the offsite vendor's work, the licensee initially questioned the new component qualifications; however, follow-up coordination and communications between the offsite vendor preparer and the licensee reviewer were not adequate to resolve the incorrect component classification (H.3(b)).

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards were specified and included in design documents and that deviations from such standards were controlled.

Contrary to the above, from June 29, 2011 through December 9, 2011, the licensee failed to assure that appropriate quality standards were specified and included in design documents. Specifically, in DC 10-01101, the licensee failed to assure that appropriate quality standards were specified for valves SA-2030A-1 (and B-1), SA-2030A-2 (and B-2), regulators 36206 and 36207, and their associated piping. Because this violation was of very low safety significance, and it was entered into the licensee's CAP

as CR500931, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000305/2012005-02, Emergency Diesel Generator Starting Air System Quality Classification Error).

The licensee isolated the NSR components of concern in the EDG starting air system with a SR valve and assigned an ACE to determine the cause of the incorrect quality classification.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

Starting on October 22, 2012, the inspectors performed a complete system alignment inspection of the SFP cooling system to verify the functional capability of the system. The inspectors walked down the system to review mechanical and electrical equipment lineups, electrical power availability, system pressure and temperature indications, as appropriate, component labeling, component lubrication, component and equipment cooling, hangers and supports, operability of support systems, and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding work orders (WOs) was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04-05.

b. Findings

Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval

Introduction: The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," and associated finding of very low safety significance for the failure to document an evaluation that provided a basis for the determination that the changes implemented in Procedure RF-01.00, "KNPP [Kewaunee Nuclear Power Plant] Refueling Procedure," Revision I, did not require a license amendment in 2001. Specifically, the licensee failed to include, in the written evaluation, a basis as to why the change did not create a possibility for a malfunction of a structure, system or component (SSC) important to safety with a different result than any previously evaluated in the Updated Safety Analysis Report (USAR) and did not result in a departure from a method of evaluation described in the USAR used in establishing the design bases. The changes to procedure RF-01.00 removed a requirement to place the residual heat removal (RHR) A heat exchanger in parallel with the spent fuel pool (SFP) heat exchanger, when a full core offload took place with service water temperatures greater than or equal to 60 degrees Fahrenheit (°F).

Description: As part of the semiannual equipment alignment of the SFP, the inspectors researched and reviewed the design basis of the SFP as described in the USAR and design basis, including NRC-approved licensing actions for increasing the capacity of the SFP. The SFP and associated cooling system was originally designed for 168 spent

fuel assemblies (SFAs). In 1987, the capacity of the SFP was increased to 990 SFAs, although the cooling system remained the same. On January 23, 2001, the NRC issued License Amendment No. 150 increasing the total capacity of storage locations in the SFP to 1205 SFAs. The inspectors reviewed the license amendment submittals specifically to understand the licensing and design basis of the SFP cooling system and associated thermal hydraulics. The inspectors noted that in the NRC's Safety Evaluation Report for Amendment No. 150, the thermal hydraulics consideration Section 2.2.B, "Spent Fuel Pool Cooling System Evaluation," stated the following:

"During partial-core discharge, a single SFP cooling system pump and the SFP heat exchanger provide cooling for the SFP. During full-core discharge, both SFP cooling system pumps and the SFP heat exchanger will provide the cooling for the SFP until the completion of fuel transfer. After fuel transfer is completed, and if the SW temperature exceeds 60°F, one RHR system heat exchanger will be aligned in parallel with the SFP heat exchanger to cool the SFP. The licensee stated in the submittal that the reactor engineering procedure that controls fuel movement during refueling outage would be revised to ensure the RHR alignment."

Further review by the inspectors determined that the licensee's thermal hydraulic calculations submitted for the different system configurations relied on RHR heat exchanger A placed in-service at SW temperatures greater than 60°F in order to maintain the bulk SFP temperature below 150°F. A review of the requests for additional information revealed that on August 7, 2000, the licensee answered NRC question 13 by stating, in part, that the requirement to place the RHR heat exchanger in-service will be required by administrative procedures for fuel handling. The licensee also stated in a note, the following:

"Prior to an actual full core off-load, the conditions specific to the outage may be reviewed to evaluate increasing this action limit [60°F] if justified. Conditions that differ from the bounding conditions used in the analyses, such as the number of plugged tubes in the SFP heat exchanger, increasing the in-core hold time, etc. may be considered. Any change to the SW action limit and RHR heat exchanger alignment timing would be evaluated in accordance with 10 CFR 50.59..."

Based on a review of current KPS-approved procedures, the inspectors concluded that the requirement to place the RHR heat exchanger in-service for SW temperatures above an action limit did not exist.

Through a review of procedure changes, the inspectors determined that on May 25, 2001, approximately four months after the receipt of License Amendment No. 150, the licensee approved Revision I to Procedure RF-01.00, "KNPP [Kewaunee Nuclear Power Plant] Refueling Procedure," which removed any SW action limit and any requirement to place an RHR heat exchanger in alignment for a full core offload. The inspectors' review of the licensee's evaluation determined that the licensee did not adequately justify that prior NRC approval was needed because the evaluation did not ensure the bulk SFP temperature remained below 150°F for all license basis conditions, the evaluation removed conservatism present for defense in depth in the licensee submittal to ensure the SFP remained below 150°F, both of which could introduce malfunctions of an SSC to safety. In addition, the inspectors concluded the change and evaluation failed to recognize that strictly increasing the incore hold time represented a departure from a method that was approved by the NRC only four months prior.

The inspectors concluded that this refueling procedure error also affected NRC License Amendment No. 172, dated February 27, 2004, which increased the licensed reactor core power level. Specifically, the licensee's submittal and responses to requests for additional information for the increased heat load in the SFP. These licensee documents referred to the procedure changes the licensee incorrectly made on May 25, 2001, and the thermal hydraulic calculations submitted by the licensee, which required a SW action limit and the establishment of an RHR heat exchanger in service with the SFP heat exchanger in response to NRC requests for additional information.

The inspectors concluded that because of the refueling procedure changes made approximately four months after the receipt of NRC License Amendment No. 150 to increase the capacity of the SFP, this issue was not representative of current performance. The inspectors debriefed the licensee on the errors and concerns. The licensee staff corroborated the inspectors' concerns and initiated CR493206 to restore an SW limit and the establishment of an RHR heat exchanger in-service with the SFP heat exchanger.

The inspectors conducted a review of SW temperatures for the past three years during periods of time when all SFAs were loaded into the SFP, and concluded that the SW temperature was never greater than or equal to 60°F. In addition, the inspectors validated that the bulk SFP temperature had remained below 150°F.

Analysis: The inspectors determined that the failure to perform an adequate evaluation for the removal of procedure actions required under License Amendment No. 150 to increase the allowable number of SFAs stored in the SFPs was contrary to 10 CFR 50.59(d)(1), and was a performance deficiency warranting a significance evaluation. The violation was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because the performance deficiency adversely affected the Barrier Integrity Cornerstone objective to maintain functionality of the SFP cooling system. Specifically, the configuration control and design control attributes related to the design margins for the SFP increase in allowable SFAs as documented in License Amendment No. 150.

Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the SDP because they are considered to be violations that potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012 and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, "Barrier Integrity Screening Questions," dated June 19, 2012. The inspectors answered "No" to questions 1 through 4 in Section D, "Spent Fuel Pool," and screened the finding as having very low safety significance (Green).

This violation is associated with a finding that has been evaluated by the SDP and communicated with an SDP color reflective of the safety impact of the deficient licensee performance. The SDP, however, does not specifically consider the regulatory process impact. Thus, although related to a common regulatory concern, it is necessary to address the violation and finding using different processes to correctly reflect both the

regulatory importance of the violation and the safety significance of the associated finding.

In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation is categorized as SL IV because the resulting changes were evaluated by the SDP as having very low safety significance (Green).

The inspectors determined that this finding did not reflect present performance since the error was introduced in a change that was greater than three years old; therefore, there was no cross-cutting aspect associated with this finding.

Enforcement: Title 10 CFR Part 50.59, "Changes, Tests, and Experiments," Section (d)(1) states, in part, that the licensee shall maintain records of changes in the facility or procedures, and that the records must include a written evaluation that provides the bases for the determination that the change does not require a license amendment pursuant to Paragraph (c)(2).

Contrary to this, on May 25, 2001, the licensee approved an evaluation for a modification to Procedure RF-01.00, "KNPP [Kewaunee Nuclear Power Plant] Refueling Procedure," Revision I, that removed a requirement to place the RHR A heat exchanger in parallel with the SFP heat exchanger, when a full core offload took place with SW temperature greater than or equal to 60°F. In this change, the licensee failed to include in the written evaluation a basis as to why the change did not create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the USAR, and did not result in a departure from a method of evaluation described in the USAR used in establishing the design bases. In accordance with the Enforcement Policy, the violation was classified as an SL IV violation because the underlying technical issue was of very low risk significance. Because this violation was of a very low safety-significance (Green), was not repetitive or willful, and was entered into the licensee's CAP as CR493206, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 05000305/2012005-03; Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval)

The finding is evaluated separately from the traditional enforcement violation and, therefore, the finding is being assigned a separate tracking number. (FIN 05000305/2012005-04; Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval)

The licensee initiated CR493206, and at the end of this inspection period, was conducting a causal evaluation and developing corrective actions to restore the required actions to the refueling procedure.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- TU-95C, auxiliary feedwater pump (AFW) 1A room;
- TU-97, battery room 1-A;
- TC-102, technical support center (TSC) non-safeguards battery and electric equipment room; and,
- AX-23A, refueling water storage tank (RWST) and containment spray pump (CSP) area.

The inspectors reviewed areas to assess if the licensee had implemented an FP program that adequately controlled combustibles within the plant, effectively maintained fire detection and suppression capability, maintained passive FP features in good material condition, and implemented adequate compensatory measures for OOS, degraded or inoperable FP 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. Using the documents listed in the Attachment to this report, 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 were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On December 12, 2012, the inspectors observed an unannounced fire brigade drill for a simulated fire in the turbine hydrogen seal oil unit in the turbine building. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that 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:

- proper wearing of turnout gear and self-contained breathing apparatus;
- proper use and layout of fire hoses;
- employment of appropriate fire fighting techniques;
- sufficient firefighting equipment brought to the scene;
- effectiveness of fire brigade leader communications, command, and control;
- search for victims and propagation of the fire into other plant areas;
- smoke removal operations;
- utilization of pre-planned strategies;

- adherence to the pre-planned drill scenario; and,
- 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 were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its SR equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the USAR and AOPs. Documents reviewed are listed in the Attachment to this report. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the CAP to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant area to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable:

- all auxiliary feedwater pump rooms;
- both 480-volt safeguards bus rooms;
- both EDG rooms; and
- the carbon dioxide storage tank room.

This inspection constituted one internal flooding sample as defined in IP 71111.06-05.

b. Findings

No findings were identified.

1R07 Annual Heat Sink Performance (71111.07)

.1 Heat Sink Performance

a. Inspection Scope

The inspectors reviewed the licensee's testing of the SFP heat exchanger to verify that potential deficiencies did not mask the licensee's ability to detect degraded performance, to identify any common cause issues that had the potential to increase risk, and to ensure that the licensee was adequately addressing problems that could result in

initiating events that would cause an increase in risk. The inspectors reviewed the licensee's observations as compared against acceptance criteria, the correlation of scheduled testing and the frequency of testing, and the impact of instrument inaccuracies on test results. Inspectors also verified that test acceptance criteria considered differences between test conditions, design conditions, and testing conditions. Documents reviewed are listed in the Attachment to this document.

This annual heat sink performance inspection constituted one sample as defined in IP 71111.07-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On November 13, 2012, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training to verify that operator performance was adequate; simulator performance was adequate; evaluators were identifying and documenting crew performance problems; and the evaluator's post-scenario critiques were adequate. The crew's performance 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 simulator sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On October 2, 2012, the inspectors observed the control room during an unplanned downpower to 57 percent after the licensee identified an oil cooler leak on a condensate pump motor that required removing the pump from service; and on December 18, 2012, the inspectors observed the control room during surveillance testing. These were activities that required heightened awareness or were related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- correct use and implementation of procedures;
- control board and equipment manipulations; and,
- oversight and direction from supervisors.

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.3 Annual Operating Test Results (71111.11A)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the Annual Operating Test administered by the licensee from October 22 through December 14, 2012, required by 10 CFR 55.59(a). The results were compared to the thresholds established in IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)," to assess the overall adequacy of the licensee's licensed operator requalification training (LORT) program to meet the requirements of 10 CFR 55.59.

This inspection constituted one annual licensed operator requalification inspection sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.4 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were conducted during the weeks of November 19, and November 26, 2012, to assess: 1) the effectiveness and adequacy of the facility licensee's implementation and maintenance of its systems approach to training (SAT) based LORT program, put into effect to satisfy the requirements of 10 CFR 55.59; 2) conformance with the requirements of 10 CFR 55.46 for use of a plant referenced simulator to conduct operator licensing examinations and for satisfying experience requirements; and, 3) conformance with the operator license conditions specified in 10 CFR 55.53. Documents reviewed are listed in the Attachment to this report.

- Problem Identification and Resolution and Licensee Training Feedback System (10 CFR 55.59(c); SAT Element 5 as Defined in 10 CFR 55.4): The inspectors evaluated the licensee's ability to assess the effectiveness of its LORT program and their ability to implement appropriate corrective actions to maintain its LORT program up-to-date. The inspectors reviewed documents related to the plant's operating history and associated responses (e.g., plant issue matrix (PIM) and plant performance review (PPR) reports; recent examination and inspection reports (IRs); and licensee event reports (LERs)). The inspectors reviewed the use of feedback from operators, instructors, and supervisors as well as 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.

- Licensee Regualification Examinations (10 CFR 55.59(c); SAT Element 4 as Defined in 10 CFR 55.4): The inspectors reviewed the licensee's program for development and administration of the LORT biennial written examination and annual operating tests to assess the licensee's ability to develop and administer examinations that are acceptable for meeting the requirements of 10 CFR 55.59(a).
 - The inspectors reviewed the methodology used to construct the examination including content, level of difficulty, and general quality of the examination/test materials. The inspectors also assessed the level of examination material duplication from week-to-week for both, the operating tests conducted during the current year, as well as the written examinations administered in calendar year 2011. The inspectors reviewed a sample of the written examinations and associated answer keys to check for consistency and accuracy.
 - The inspectors observed the administration of the annual operating test to assess the licensee's effectiveness in conducting the operating tests, including the conduct of pre-examination briefings, evaluations of individual operator and crew performance, and post-examination analysis. The inspectors evaluated the performance of one 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 job performance measures (JPMs).
 - The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the last requalification examinations and the training planned for 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.
- Conformance with Examination Security Requirements (10 CFR 55.49): The inspectors conducted an assessment of the licensee's processes related to examination physical security and integrity (e.g., predictability and bias) to verify compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." The inspectors reviewed the facility licensee's examination security procedure, and observed the implementation of physical security controls (e.g., access restrictions and simulator I/O controls) and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the inspection period.
- Conformance with Simulator Requirements Specified in 10 CFR 55.46: The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements. The inspectors reviewed a sample of simulator performance test records (e.g., transient tests, malfunction tests, scenario based tests, post-event 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 corrective action process to ensure that simulator fidelity was being 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.

- Conformance with Operator License Conditions (10 CFR 55.53): 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. Additionally, medical records for 12 licensed operators were reviewed for compliance with 10 CFR 55.53(l).

This inspection constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11-05.

b. Findings

No findings 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:

- carbon dioxide fire suppression system actuation failure in the relay room;
- system 54 engineered safety feature actuation system;
- system 05A, feedwater (FW) system; and,
- system 23, internal containment spray.

The inspectors verified the licensee's actions to address system performance or condition problems in terms of the following areas, as necessary:

- 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 SSCs/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 four quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

Relay Room Carbon Dioxide Fire Suppression System and Control Room Envelope Potentially Affected by HELB (high-energy line break)

Introduction: The inspectors identified an unresolved item (URI) concerning the qualification of control cabinets that are mounted on the outside of the SR east wall of the relay room and exposed to the turbine building.

Description: During the inspectors' review of the relay room carbon dioxide (CO₂) fire suppression system actuation failure, the inspectors identified that control cabinets for both the CO₂ fire suppression actuation system and the relay room ventilation damper ACC-22, are mounted on the outside of the SR east wall of the relay room and exposed to the turbine building. The control cabinets could be exposed to steam from a nearby 30-inch steam header if a crack were to develop. The inspectors were concerned that the potential existed to actuate the relay room CO₂ fire suppression system and/or cause one of the relay room ventilation dampers to open, complicating the control room response to the small steam break.

At the conclusion of this inspection period, the licensee was evaluating the issue; the inspectors needed additional information to determine if a performance deficiency existed. As a result, this item was considered unresolved (URI 05000305/2012005-05, Relay Room Carbon Dioxide Fire Suppression System and Control Room Envelope Potentially Affected by HELB).

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 SR equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- risk assessment on November 20 while work was performed on the nuclear instrumentation and containment spray train B;

- risk assessment on November 28 while work was performed on the travelling water screen A2, steam generator (SG) B pressure transmitter PT-478 and SG B pressure transmitter PT-479;
- risk assessment on December 3 while work was performed on EDG B, SW pump B, and component cooling pump B; and,
- risk assessment on December 13 while work was performed on the RHR A train, tertiary auxiliary transformer cable pull pit, and boric acid transfer pump A.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstone. 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 that 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 four samples as defined in IP 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- CR466942, Door 117 Door Handle is Broken;
- CR500079, Calculation C11719, Revision 1, Safety Class Motors May Spuriously Trip While Running and CR500083, Control Room Post Accident Recirculation Fan B fails C11719, Revision 1; and,
- OD 512, EDG 1B Start Up Air System Operation Following Turbine Building HELB.

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 TSs 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 reviewed a sampling of corrective action documents to verify that the licensee had identified and corrected 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 were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modifications:

- change to Technical Requirements Manual (TRM) 8.9.3 (permanent); and,
- evacuation time estimate/procedure change on RHR interlock (permanent).

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the USAR, and the TSs, as applicable, to verify that the modification did not affect the operability or availability of the affected systems. The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. For commercial grade dedications, the inspectors also reviewed the appropriateness of the critical characteristics selected for the dedication process and verified that the licensee's testing or acceptance method for the critical characteristics was appropriate. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two permanent modification samples as defined in IP 71111.18-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- WO KW100912753, SW pump 1B2 maintenance with repack of pump on November 7;
- WO KW100556633, local starter maintenance on turbine-driven auxiliary feedwater (TDAFW) pump on November 29; and,
- OSP-CCI-001, Personnel and Emergency Airlock Leak Rate Test after Containment Entry, on November 14.

These activities were selected based upon the SSCs' 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 documents such as TSs, 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 PMTs to determine whether the licensee had identified problems and entered them in the CAP, and that the problems were 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 were identified.

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 that testing was conducted in accordance with applicable procedural and TS requirements:

- ISP-SI-040, RWST level calibration (routine) on December 10;
- ISP-ESP-155A, engineered safety feature (ESF) train A logic test (routine) on October 16;
- SP-02-138A, SW pumps and valve test (inservice testing (IST)) on October 17;
- SP-06-031 A-6, SG steam pressure (routine) on November 27; and,
- OP-KW-OSP-MI-001, shift instrument channel checks (routine) on December 10.

The inspectors considered the following test attributes, if applicable, while they observed in-plant activities and reviewed procedures and associated records:

- did preconditioning occur;
- were the effects of the testing adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- were acceptance criteria 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 was in accordance with TSs, the USAR, procedures, and applicable 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 IST, testing was performed in accordance with the applicable version of American Society of Mechanical Engineers (ASME) code, Section XI, 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 SR 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 four routine surveillance testing samples and one inservice testing sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

1EP2 Alert and Notification System Evaluation (71114.02)

.1 Alert and Notification System Evaluation

a. Inspection Scope

The inspectors held discussions with Emergency Preparedness (EP) staff regarding the operation, maintenance, and periodic testing of the primary and backup Alert and Notification System (ANS) in the plume pathway Emergency Planning Zone. The inspectors reviewed monthly trend reports and siren test failure records from May 2010 through September 2012. Information gathered during document reviews and interviews was used to determine whether the ANS equipment was maintained and tested in accordance with Emergency Plan commitments and procedures. Documents reviewed are listed in the Attachment to this report.

This ANS evaluation inspection constituted one sample as defined in IP 71114.02-05.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

.1 Emergency Response Organization Staffing and Augmentation System

a. Inspection Scope

The inspectors reviewed and discussed with plant EP staff the emergency plan commitments and procedures for Emergency Response Organization (ERO) on-shift and augmentation staffing levels. A sample of the EP training records, approximately 15 ERO personnel assigned to key and support positions, were reviewed to determine the status of their training as it related to their assigned ERO positions. The inspectors reviewed the ERO augmentation system and activation process, the primary and alternate methods of initiating ERO activation, unannounced off-hour augmentation tests from May 2010 through September 2012, and the provisions for maintaining the plant's ERO roster.

The inspectors reviewed a sample of corrective actions related to the facility's ERO staffing and augmentation system program and activities from May 2010 through September 2012 to determine whether corrective actions were completed in accordance with the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

This ERO staffing and augmentation system inspection constituted one sample as defined in IP 71114.03-05.

b. Findings

No findings were identified.

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

.1 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The NSIR headquarters staff performed an in-office review of the latest revisions of the Emergency Plan and various Emergency Plan Implementing Procedures (EPIPs) located under ADAMS accession number ML123190450 as listed in the Attachment.

The licensee transmitted the EPIP revisions to the NRC pursuant to the requirements of 10 CFR Part 50, Appendix E, Section V, "Implementing Procedures." The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. Documents reviewed are listed in the Attachment.

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

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

.1 Maintenance of Emergency Preparedness

a. Inspection Scope

The inspectors reviewed a sample of nuclear oversight staff's audits of the EP program to determine that these independent assessments met the requirements of 10 CFR 50.54(t). The inspectors also reviewed critique reports and samples of CAP records associated with the 2011 biennial exercise, as well as various EP drills conducted, in order to determine that the licensee fulfilled its drill commitments and to evaluate the licensee's efforts to identify, track, and resolve concerns identified during these activities.

The inspectors reviewed a sample of EP items and corrective actions related to the facility's EP program and activities between May 2010 and September 2012 to determine whether corrective actions were completed in accordance with the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

This correction of EP weaknesses and deficiencies inspection constituted one sample as defined in IP 71114.05-05.

b. Findings

Detection Instrumentation Unavailable for Emergency Event Classification

Introduction: The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.54(q), "Emergency Plans," for failing to follow and maintain the effectiveness of an EP that met the requirements of emergency planning standard 10 CFR 50.47(b)(4). Specifically, the licensee failed to maintain onsite

atmospheric monitoring equipment capable of measuring CO₂ concentrations Immediately Dangerous to Life and Health (IDLH). The IDLH concentrations within specified plant areas are utilized to classify emergency conditions per the KPS EP.

Description: On April 4, 2012, the KPS portable CO₂ meters capable of reading IDLH concentrations were due for calibration. It was determined that the original portable meters would need to be replaced, and on April 23, 2012, a rented meter capable of reading IDLH concentration was purchased. The new replacement meters were purchased on May 7, 2012, but the maximum range of the new instruments was a factor of eight below the IDLH concentration threshold. No adequacy evaluation of the new instrumentation was performed with respect to compliance with the KPS EP. Four days later, the rental meter was returned, and the capability for determining onsite IDLH concentrations of CO₂ was lost. More than 60 days later, on July 11, 2012, inspectors raised the question regarding the station's ability to measure IDLH atmospheres for CO₂ and ultimately evaluate EAL HA3.1, which addressed toxic levels of CO₂ near vital plant equipment. The licensee generated CR481430, "Station Cannot Measure CO₂ at Levels Necessary to Evaluate EAL HA3.1." On July 12, 2012, replacement meters were purchased capable of reading IDLH concentrations onsite, and compliance regarding EAL HA3.1 was restored. Additional corrective actions addressing the roles and responsibilities for hazardous spills and control of related equipment are in process. Additionally, the inclusion of these EAL-related devices are scheduled for inclusion into the KPS procedure for equipment important to EP.

Analysis: From May 7 to July 12, 2012, the licensee failed to maintain onsite CO₂ detection instrumentation capable of measuring CO₂ concentrations IDLH, which was necessary for the declaration of emergency events. The inspectors determined that the issue was a performance deficiency, because it was within the licensee's ability to foresee and correct. This finding was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone, and impacted the ERO performance attribute of the cornerstone. This finding adversely affected the cornerstone objective of ensuring that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was evaluated in accordance with IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," using Figure 5.4-1, "Significance Determination for Ineffective EALs and Overclassification," dated February 24, 2012, and resulted in a Green finding as an Alert event would not have been declared. A cross-cutting aspect was identified in the area of human performance, decision-making. The licensee's risk-significant decision concerning this EAL related equipment change did not use a systematic process to ensure safety was maintained. A lack of formally defined authority and roles for decisions and communications precluded the appropriate interdisciplinary input and reviews of this equipment change (H.1(a)).

Enforcement: Title 10 CFR 50.47(b)(4), states, "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures." Contrary to the above, from May 11 to July 12, 2012, the licensee failed to maintain a standard scheme of emergency classification and actions levels in use. Specifically, onsite atmospheric monitoring equipment capable of measuring CO₂ IDLH concentrations necessary for the declaration

of an Alert emergency event using EAL HA3.1 was not available. Because this violation was of very low safety significance and was entered into the licensee's CAP as CR481430, it is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 5000305/2012005-06; CO₂ Detection Instrumentation Unavailable for Emergency Event Classification).

1EP6 Drill Evaluation (71114.06)

.1 Training Observation

a. Inspection Scope

The inspector observed a simulator training evolution for licensed operators on December 19, 2012, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that the licensee evaluators noted the same issues and entered them into the corrective action program. As part of the inspection, the inspectors reviewed the scenario package and other documents listed in the Attachment to this report.

This inspection of the licensee's training evolution with emergency preparedness drill aspects constituted one sample as defined in IP 71114.06-06.

b. Findings

No findings were identified.

REACTOR SAFETY

2RS2 Occupational As-Low-As-Is-Reasonably-Achievable Planning and Controls (71124.02)

The inspection activities supplement those documented in integrated NRC Inspection Report 05000305/2012003 and constituted a partial sample as defined in IP 71124.02-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed pertinent information regarding plant collective exposure history, current exposure trends, and ongoing or planned activities in order to assess current performance and exposure challenges. The inspectors reviewed the plant's 3-year rolling average collective exposure.

The inspectors reviewed the site-specific trends in collective exposures and source term measurements.

The inspectors reviewed site-specific procedures associated with maintaining occupational exposures occupational as-low-as-is-reasonably-achievable (ALARA), which included a review of processes used to estimate and track exposures from specific work activities.

b. Findings

No findings were identified.

.2 Radiological Work Planning (02.02)

a. Inspection Scope

The inspectors selected the following work activities of the highest exposure significance:

- RWP 12-306, SFP Diving Activities;
- RWP 12-0207, Cleanup, Decon, and Laundry Evolutions; and
- RWP 12-0255, Core Offload/Reload and Associated Work.

The inspectors compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in the licensee's ALARA planning for these work activities. The inspectors compared the person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements, and evaluated the accuracy of these time estimates. The inspectors assessed the reasons (e.g., failure to adequately plan the activity, failure to provide sufficient work controls) for any inconsistencies between intended and actual work activity doses.

The inspectors determined whether post-job reviews were conducted and if identified problems were entered into the licensee's CAP.

b. Findings

No findings were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems (02.03)

a. Inspection Scope

The inspectors reviewed the assumptions and basis (including dose rate and man-hour estimates) for the current annual collective exposure estimate for reasonable accuracy for select ALARA work packages. The inspectors reviewed applicable procedures to determine the methodology for estimating exposures from specific work activities and the intended dose outcome.

The inspectors evaluated whether the licensee had established measures to track, trend, and if necessary, to reduce occupational doses for ongoing work activities. The inspectors assessed whether trigger points or criteria were established to prompt additional reviews and/or additional ALARA planning and controls.

The inspectors evaluated the licensee's method of adjusting exposure estimates, or re-planning work, when unexpected changes in scope or emergent work were encountered. The inspectors assessed whether adjustments to exposure estimates (intended dose) were based on sound radiation protection and ALARA principles or if they were just adjusted to account for failures to control the work. The inspectors evaluated whether the frequency of these adjustments called into question the adequacy of the original ALARA planning process.

b. Findings

No findings were identified.

.4 Source Term Reduction and Control (02.04)

a. Inspection Scope

The inspectors used licensee records to determine the historical trends and current status of significant tracked plant source terms known to contribute to elevated facility aggregate exposure. The inspectors assessed whether the licensee had made allowances or developed contingency plans for expected changes in the source term as the result of changes in plant fuel performance issues or changes in plant primary chemistry.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.06)

a. Inspection Scope

The inspectors evaluated whether problems associated with ALARA planning and controls are being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

The inspection activities supplement those documented in NRC Inspection Report 05000305/2012004 and constitute a partial sample as defined in IP 71124.04-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program (NVLAP) accreditation report on the vendor's most recent results to determine the status of the contractor's accreditation.

b. Findings

No findings were identified.

.2 External Dosimetry (02.02)

a. Inspection Scope

The inspectors evaluated whether the licensee's dosimetry vendor is NVLAP accredited and if the approved irradiation test categories for each type of personnel dosimeter used are consistent with the types and energies of the radiation present and the way the dosimeter is being used (e.g., to measure deep dose equivalent, shallow dose equivalent, or lens dose equivalent).

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation (71124.05)

This inspection constituted a partial sample as defined in IP 71124.05-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the plant USAR to identify radiation instruments associated with monitoring area radiological conditions including airborne radioactivity, process streams, effluents, materials/articles, and workers. Additionally, the inspectors reviewed the instrumentation and the associated TS requirements for post-accident monitoring instrumentation including instruments used for remote emergency assessment.

The inspectors reviewed a listing of in-service survey instrumentation including air samplers and small article monitors, along with instruments used to detect and analyze workers' external contamination. Additionally, the inspectors reviewed personnel contamination monitors and portal monitors, including whole-body counters, to detect workers' internal contamination. The inspectors reviewed this list to assess whether an adequate number and type of instruments were available to support operations.

The inspectors reviewed licensee and third-party evaluation reports of the radiation monitoring program since the last inspection. These reports were reviewed for insights into the licensee's program and to aid in selecting areas for review ("smart sampling").

The inspectors reviewed procedures that govern instrument source checks and calibrations, focusing on instruments used for monitoring transient high radiological conditions, including instruments used for underwater surveys. The inspectors reviewed the calibration and source check procedures for adequacy and as an aid to smart sampling.

The inspectors reviewed the area radiation monitor alarm setpoint values and setpoint bases as provided in the Technical Specifications and the Final Safety Analysis Report.

The inspectors reviewed effluent monitor alarm setpoint bases and the calculational methods provided in the offsite dose calculation manual.

b. Findings

No findings were identified.

.2 Walkdowns and Observations (02.02)

a. Inspection Scope

The inspectors walked down effluent radiation monitoring systems, including at least one liquid and one airborne system. Focus was placed on flow measurement devices and all accessible point-of-discharge liquid and gaseous effluent monitors of the selected systems. The inspectors assessed whether the effluent/process monitor configurations aligned with Offsite Dose Calculation Manual descriptions and observed monitors for degradation and out-of-service tags.

The inspectors selected portable survey instruments that were in use or available for issuance and assessed calibration and source check stickers for currency as well as instrument material condition and operability.

The inspectors observed licensee staff performance as the staff demonstrated source checks for various types of portable survey instruments. The inspectors assessed whether high-range instruments were source checked on all appropriate scales.

The inspectors walked down area radiation monitors and continuous air monitors to determine whether they were appropriately positioned relative to the radiation sources or areas they were intended to monitor. Selectively, the inspectors compared monitor response (via local or remote control room indications) with actual area conditions for consistency.

The inspectors selected personnel contamination monitors, portal monitors, and small article monitors and evaluated whether the periodic source checks were performed in accordance with the manufacturer's recommendations and licensee procedures.

b. Findings

No findings were identified.

.3 Calibration and Testing Program (02.03)

Process and Effluent Monitors

a. Inspection Scope

The inspectors selected effluent monitor instruments (such as gaseous and liquid) and evaluated whether channel calibration and functional tests were performed consistent with radiological effluent Technical Specifications/Offsite Dose Calculation Manual. The inspectors assessed whether; (a) the licensee calibrated its monitors with National Institute of Standards and Technology traceable sources; (b) the primary calibrations adequately represented the plant nuclide mix; (c) when secondary calibration sources

were used, the sources were verified by the primary calibration; and (d) the licensee's channel calibrations encompassed the instrument's alarm set-points.

The inspectors assessed whether the effluent monitor alarm setpoints were established as provided in the Offsite Dose Calculation Manual and station procedures.

For changes to effluent monitor setpoints, the inspectors evaluated the basis for changes to ensure that an adequate justification existed.

b. Findings

No findings were identified.

Laboratory Instrumentation

a. Inspection Scope

The inspectors assessed laboratory analytical instruments used for radiological analyses to determine whether daily performance checks and calibration data indicated that the frequency of the calibrations was adequate and there were no indications of degraded instrument performance.

The inspectors assessed whether appropriate corrective actions were implemented in response to indications of degraded instrument performance.

b. Findings

No findings were identified.

Post-Accident Monitoring Instrumentation

a. Inspection Scope

Inspectors selected containment high-range monitors and reviewed the calibration documentation since the last inspection.

The inspectors assessed whether an electronic calibration was completed for all ranges decades above 10 rem/hour and whether at least one decade at or below 10 rem/hour was calibrated using an appropriate radiation source.

The inspectors assessed whether calibration acceptance criteria were reasonable, accounted for the large measuring range and the intended purpose of the instruments.

The inspectors selected effluent/process monitors that were relied on by the licensee in its emergency operating procedures as a basis for triggering emergency action levels and subsequent emergency classifications, or to make protective action recommendations during an accident. The inspectors evaluated the calibration and availability of these instruments.

The inspectors reviewed the licensee's capability to collect high-range, post accident iodine effluent samples.

The inspectors discussed electronic and radiation calibration of these instruments with the licensee to assess conformity with the licensee's calibration and test protocols.

b. Findings

No findings were identified.

Portal Monitors, Personnel Contamination Monitors, and Small Article Monitors

a. Inspection Scope

For each type of these instruments used on site, the inspectors assessed whether the alarm setpoint values were reasonable under the circumstances to ensure that licensed material is not released from the site.

The inspectors reviewed the calibration documentation for each instrument selected and discussed the calibration methods with the licensee to determine consistency with the manufacturer's recommendations.

b. Findings

No findings were identified.

Portable Survey Instruments, Area Radiation Monitors, Electronic Dosimetry, and Air Samplers/Continuous Air Monitors

a. Inspection Scope

The inspectors reviewed calibration documentation for at least one of each type of instrument. For portable survey instruments and area radiation monitors, the inspectors reviewed detector measurement geometry and calibration.

As available, the inspectors selected portable survey instruments that did not meet acceptance criteria during calibration or source checks to assess whether the licensee had taken appropriate corrective action for instruments found significantly out of calibration (greater than 50 percent). The inspectors evaluated whether the licensee had evaluated the possible consequences of instrument use since the last successful calibration or source check.

b. Findings

No findings were identified.

Calibration and Check Sources

a. Inspection Scope

The inspectors reviewed the licensee's 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," source term to assess whether calibration sources used were representative of the types and energies of radiation encountered in the plant.

b. Findings

No findings were identified.

.4 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring instrumentation were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee corrective action program. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring instrumentation.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures performance indicator (PI) for the period from the fourth quarter 2011 through the third quarter 2012. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73" definitions and guidance, were used. The inspectors selected from the following sources of information to validate the accuracy of the submittals: operator narrative logs, operability assessments, maintenance rule records, maintenance WOs, CRs, event reports and NRC integrated IRs. The inspectors also reviewed the licensee's CAP 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 safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Reactor Coolant System Leakage

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Leakage PI for the period from the fourth quarter 2011 through the third quarter 2012. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors selected from the following sources of information to validate the accuracy of the submittals: licensee's operator logs, RCS leakage tracking data, CRs, event reports and NRC integrated IRs. The inspectors also reviewed the licensee's CAP 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 reactor coolant system leakage sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise PI for the period from the third quarter 2011 through second quarter 2012. The inspectors used PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions, performance during the 2011 biennial exercise, and performance during other drills associated with the PI to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 drill/exercise performance sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.4 Emergency Response Organization (ERO) Readiness

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO PI for the period from the third quarter 2011 through second quarter 2012. The inspectors used PI definitions and

guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2011 biennial exercise and other drills; and revisions of the roster of personnel assigned to key ERO positions to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 ERO readiness sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.5 Alert and Notification System (ANS) Reliability

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise PI for the period from the third quarter 2011 through second quarter 2012. The inspectors used PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's records and processes including procedural guidance on assessing opportunities for the PI and results of periodic ANS operability tests to validate the accuracy of the submittals. The inspectors also reviewed the licensee's CAP 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 ANS reliability sample as defined in IP 71151-05.

b. Findings

No findings were identified.

40A2 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 Corrective Action Program

a. Inspection 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: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and 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 included 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 were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a 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 were identified.

.3 Semi-Annual Trend Review

a. Inspection 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, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of June 2012 through November 2012, 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 were identified.

.4 Selected Issue Follow-up Inspection: Operator Workarounds

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of the operator workarounds (OWAs) on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents.

The inspectors performed a review of the cumulative effects of OWAs. The documents listed in the Attachment to this report were reviewed to accomplish the objectives of the IP. The inspectors reviewed both current and historical operational challenge records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP and proposed or implemented appropriate and timely corrective actions which addressed each issue. Records such as the daily plant and equipment status logs, degraded instrument logs, and operator aids or tools being used to compensate for material deficiencies were selected from to identify any potential sources of unidentified operator workarounds.

This review constituted one operator workaround annual inspection sample as defined in IP 71152-05.

b. Findings

No findings were identified.

.5 Selected Issue Follow-up Inspection: Corrective Actions to Address Multiple Spurious Operation Due to Fire-induced Circuit Failures

a. Inspection Scope

By letter dated September 21, 2011, Dominion Energy Kewaunee, Inc. applied for a license amendment for the KPS. The proposed amendment would adopt National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light water Reactor Electrical Generating Plants," 2001 Edition. Subsequently, by letter dated January 13, 2012, Kewaunee withdrew the amendment request and discontinued transition to NFPA 805.

Because of the KPS withdrawal from NFPA 805, enforcement discretion, as described in Section 9.1 of the NRC Enforcement, no longer applied to KPS. However, certain non-compliances continued to receive enforcement discretion, as described in the Enforcement Guidance Memorandum 09-002 "Enforcement Discretion for Fire Induced Circuit Fault," as outlined in an NRC letter to Mr. D. Heacock, dated February 14, 2012.

As a routine inspection, inspectors reviewed corrective actions, licensing basis documents, plant drawings (including schematics wiring, piping, and instrument) and circuit analysis to verify the adequacy of the licensee's corrective actions and compensatory measures related to multiple spurious operations (MSOs) due to fire-induced circuit failures.

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

b. Findings and Observations

During the KPS NFPA 805 transition project, the licensee evaluated the effects of MSOs of equipment due to a fire-induced circuit failure on the ability to satisfy the nuclear safety performance criteria. An Expert Panel (consisting of individuals with expertise in safe shutdown analysis, plant operations, PRAs, FP engineering, and plant systems) reviewed and evaluated all potential MSO equipment scenarios identified by the Pressurized Water Reactor Owner's Group. The expert panel's approach for screening MSOs used insights from a Fire PRA. The MSOs that were determined to be applicable to KPS by the expert panel were documented in Attachment A to KPS NFPA 805 Transition Project FA.2. Subsequently, the licensee performed a detailed review for each MSO scenario that was not screened out by the expert panel. Based on the detailed review, the licensee either was able to show that the risk contribution from the scenario was acceptable or proposed a modification to eliminate the concern. The licensee indicated that the summary of the MSO review, evaluation, and proposed resolution, including the risk contribution, was completed and submitted to the NRC as part of the September 21, 2011 license amendment application which was subsequently withdrawn by letter dated January 13, 2012.

As a result of the KPS withdrawal from NFPA 805, the licensee initiated CR463976 and CA228092, to evaluate and review the extent of condition of outstanding issues related to 10 CFR Part 50, Appendix R. The licensee preliminarily concluded that there was no concern associated with any applicable MSO scenario with respect to their current licensing basis, Appendix R; therefore, no additional compensatory measures were required. This conclusion was based on an initial review which was completed concurrently with the NFPA 805 expert panel review for any Appendix R concern related to the applicable MSO scenarios. The CR also identified that the two NCVs identified during the 2008 NRC FP Inspection were no longer treated under the interim enforcement discretion.

For one MSO scenario, the licensee completed a modification related to pressurizer power-operated relief valves (PORVS) PR-2A and PR-2B. The licensee installed cables associated with the PORVs entirely within dedicated conduits in the relay room and control room per DC, KW-12-01049 to prevent external hot shorts and spurious opening the valves during an Appendix R fire event.

In addition, the licensee initiated a project plan to review and evaluate the KPS Appendix R licensing basis. Subtask 2.2 of the licensee plan was to complete an MSO detailed evaluation using the NFPA 805 MSO analysis as a starting point; but to review and resolve issues in the context of Appendix R rather than the context of NFPA 805. The subtask was necessary to document and substantiate the licensee's preliminary conclusion and was scheduled to be completed by February 15, 2013.

The inspectors reviewed the expert panel evaluation which was prepared for NFPA 805, drawings (including schematics, wiring and flow diagrams) and circuit analysis for samples of safe shutdown components to ensure no MSOs affect safe shutdown. The inspectors reviewed the following MSO scenarios:

- Spurious opening (or failure to close) of multiple series Volume Control Tank (VCT) outlet valves. The inspectors reviewed circuit analysis related to CVC-1, "CVC VCT Outlet Isolation Valve." The inspectors did not identify any concern associated with this MSO scenario;
- Combination of spurious valve operations in the AFW pump discharge flowpaths to the SGs scenario; and spurious full opening of multiple AFW flow control and/or isolation valves. The inspectors reviewed circuit analysis associated with AFW-10A, "AFW Pump Discharge Crossover Valve," and AFW-2A, "AFW Pump A Flow Control Valve." The inspectors did not identify any concern associated with these MSO scenarios; and,
- Spurious opening of valves between the condensate storage tank 9 and condenser hotwell. The inspectors reviewed flow diagrams associated with this scenario. The inspectors did not identify any concern associated with this MSO scenario.

In conclusion, the inspectors did not identify any MSO concerns associated with these samples and verified that the licensee preliminary conclusion was reasonable.

No findings were identified.

6. Selected Issue Follow-up Inspection: Maintenance Practices for Greasing Safety-Related Bearings

a. Inspection Scope

The inspectors while performing routine review of licensee CRs, observed that the licensee was experiencing motor failures that could have resulted from the greasing sealed bearings, or the over-greasing of shielded or open bearings. The inspectors reviewed the corrective actions from past motor failures related to the over greasing of bearings and also assessed the current licensee procedures and maintenance practices for the routine greasing of bearings.

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

b. Findings

No findings were identified.

.7 Selected Issue Follow-Up Inspection: Follow-Up of the Failure of the Special Particulate Iodine Nobel Gas (SPING) Monitor Indication in the Control Room

a. Inspection Scope

During a review of historical plant data for the plant radiation monitors, the inspectors found a gap in the data for both the auxiliary building and reactor building SPING monitors from February 28 through March 30, 2011. Since both SPING monitors were needed for EAL classification, the inspectors selected their failure and the associated licensee corrective actions for follow-up. The inspectors reviewed the licensee's CAP during that timeframe and found that CR419976, "Both SPINGs and DAMs 2,5, & 6 reading Bad on PPCS [Plant Process Computer System] and failed on RadServ," dated March 30, 2011, that documented the failed monitors. The CR stated that failure was due to a power loss that occurred during the outage and closed the CR to WO KW100783592 to reboot the computers and restore the indication. The inspectors reviewed the condition report, corrective actions, and work order associated with the SPING failures. This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

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

b. Findings

The inspectors found that the data gap preceded the power failure during the outage, which occurred on March 10, 2011, and that the failure actually started on February 28, 2011. The inspectors identified that the licensee was unaware that both SPING monitor readouts, which were used for EAL classification, were unavailable in the RP office, control room, and TSC from February 28, through March 30, 2011. The inspectors determined that additional inspection by regional Emergency Preparedness inspectors was necessary. The follow-up inspection by EP inspectors was documented in NRC Inspection Report 05000305/2012503.

40A3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) LER 05000305/2011-005-01: Shield Building Ventilation Train Inoperable For Longer Period Than Allowed By Technical Specifications

On January 26, 2011, the licensee found a control card, for train A of the SBV system, hanging down partially by its control cables. The licensee determined the cause to be insufficient quality and design of the standoff material resulting in improper adhesion between the metal stud and the neoprene. The standoffs were used to support the control cards at four points and were needed to maintain the seismic qualification of the card. The licensee's initial assessment of this event failed to recognize the past operability implications, as well as, how the unqualified standoffs were installed in the system to begin with. The inspectors documented two violations related to this event in NRC IR 05000305/2011003. One additional violation of 10 CFR 50.73 was identified during the review of LER 05000305/2011-005-00 and documented in NRC IR 05000305/2012002, for the failure to report any event where a single cause or condition caused two independent trains to become inoperable in a single system designed to control the release of radioactive material. Specifically, the licensee failed to report or update their previous LER after the vendor communicated that the standoffs

were the wrong design if they needed to support the control cards during a seismic event.

The LER 05000305/2011-005-01 amended the original LER to report the common cause failure that was identified by the inspectors. No additional violations were identified. Documents reviewed are listed in the Attachment to this report. Therefore, this LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.2 (Closed) LER 05000305/2012-006-00: Train A Special Ventilation Inoperable for Longer Period Than Allowed Due to Charcoal Filter Efficiency

On July 18, 2012, with the plant in Mode 1, charcoal laboratory radioiodine test results were found to be at 97.13 percent for the auxiliary building special ventilation (ABSV) train A charcoal adsorber efficiency. The acceptance criteria specified in TS 5.5.9, "Ventilation Filter Testing Program," is less than 2.5 percent penetration or an efficiency of 97.5 percent. The licensee determined that TS Surveillance Requirement (SR) 3.7.12.2, which directs that ABSV filter testing be performed, was not met. TS SR 3.0.1 states, in part, that the failure to meet an SR shall be the failure to meet the limiting condition for operation (LCO). The failure to meet SR 3.7.12.2 from July 11 through July 21, 2012, resulted in not meeting LCO 3.7.12, which exceeded the 7-day time period allowed by TSs. The event was reported in accordance with 10 CFR 50.73(a)(2)(i)(B) for any operation or condition which was prohibited by TSs. The KPS accident analysis assumed a charcoal adsorber efficiency of 95 percent; however, the acceptance criteria of 97.5 percent was used to ensure that a safety factor of two was utilized; therefore, train A still maintained its safety function, since the measured value for efficiency was greater than the accident analysis assumption of 95 percent efficiency. The inspectors reviewed the licensee's evaluation of the TS violation and subsequent actions taken. The inspectors concluded that the licensee's resolution of this issue was adequate. Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.3 (Closed) LER 05000305/2012-008-00: Residual Heat Removal System Interlock Surveillance Not Met Due to Improper Setpoint

The inspectors reviewed the plant's response to the discovery on September 13, 2012, while in Mode 1, that the RHR interlock surveillance was not met due to an improper setpoint. The SR 3.4.14.2 required verification that the RHR system interlock prevented the valves from being opened with a simulated or actual pressure signal > 450 psig [pounds per square inch gauge] as implemented in the conversion to Improved Standard Technical Specifications (ITS) by License Amendment 207. The ITS conversion added the 450 psig value to the SR for the first time. The plant used the existing RHR interlock setpoint of 450 +/- 15 psig (0.5 percent) without realizing the calibration tolerance would allow opening the valves at a pressure greater than 450 psig. Additionally, TS LCO 3.4.14.C, RHR system interlock function inoperable, should have been entered during startup from the refueling outage in May 2012, after the 18-month SR 3.4.14.2 was performed.

The inspectors determined that a licensee-identified violation occurred; this performance deficiency is documented in Section 4OA7.3 of this report. Documents reviewed are listed in the Attachment to this report.

This event follow-up review constituted one sample as defined in IP 71153 05.

.4 (Closed) LER 05000305/2012-002-00: Safety Injection Inoperable for Longer Period Than Allowed by Technical Specifications

The inspectors reviewed the plant's response to the discovery on February 29, 2012, during the start of safety injection (SI) pump B for surveillance testing. The 4160-Volt breaker functioned correctly to start the pump, but the breaker charging spring motor did not stop after charging the breaker springs. This condition potentially impacted SI pump operability, in that, if the SI pump were stopped with the breaker charging motor continuing to run and the breaker was subsequently called upon to close, it potentially would not cycle due to the breaker's closing circuit design. The SI pump breaker was previously cycled successfully on December 7, 2011, when the breaker was installed as a refurbished breaker. In a causal evaluation, the licensee determined the refurbished breaker had a bent main charging shaft, which caused the charging motor anomalies. Troubleshooting confirmed the motor failing to stop did not occur every time and was an intermittent condition. The licensee's evaluation identified the bent main charging shaft as the only significant anomaly associated with the refurbished breaker.

Upon discovery of the condition during the normally scheduled quarterly Technical Specification Surveillance (SR) test, the SI pump B was returned to an operable status with replacement of the breaker that malfunctioned.

The inspectors determined that a licensee identified violation occurred and this performance deficiency is documented in Section 4OA7.3 of this report. Documents reviewed are listed in the Attachment to this report.

This event follow-up review constituted one sample as defined in IP 71153-05.

.5 (Closed) LER 05000305/2012-007-00: Minor Thru-Wall Leak at Weld in Safety Injection Suction Piping

The inspectors reviewed the plant's response to the discovery on August 20, 2012, with the reactor operating at full power, of a through wall leak on the common suction line for the safety injection (SI) pumps from the boric acid storage tank. The through wall leak was located at the weld between the valve SI-3 body and the piping upstream of valve SI-3. Both trains of SI were declared inoperable until valve SI-3 was closed, and the trains were returned to an operable status within 10 minutes of the discovery of the condition.

The flow path for SI pump operability has not credited the boric acid storage tank since License Amendment No. 116, dated March 28, 1995. Therefore upon closure of valve SI-3 the through wall leak was isolated from the SI pumps and the refueling water storage tank, and SI system operability was not longer affected. Additionally, the licensee performed a required Code evaluation and concluded the most likely cause was due to stress corrosion cracking at a stagnant borated line constructed of austenitic stainless steel.

The inspectors determined that the licensee's corrective actions were appropriate and in accordance with the Code, and that the licensee's actions did not adversely affect operation of the plant or Technical Specifications. The inspectors concluded that no licensee performance deficiency occurred. Documents reviewed are listed in the Attachment to this report.

This event follow-up review constituted one sample as defined in IP 71153-05.

4OA5 Other Activities

.1 (Closed) Temporary Instruction (TI) 2515/185, Revision 1, Follow-Up On the Industry's Groundwater Protection Initiative

a. Inspection Scope

An NRC assessment was performed on the KPS Groundwater Protection Program during the period from October 15 through October 19, 2012, to determine whether the licensee fully implemented the voluntary industry groundwater protection initiative, NEI 07-07, "Industry Groundwater Protection Initiative – Final Guidance," dated August 2007, ADAMS Accession Numbers ML072610036 and ML072600292. The inspectors interviewed personnel, reviewed applicable documents, and performed walkdowns of selected areas. In addition, the inspectors followed up on the status of implementation for the five deviations to the acceptance criteria in NEI 07-07 that were reported in NRC IR 05000305/2009003:

- 1.2.f: establish long-term programs to perform preventative maintenance or surveillance activities to minimize the potential for inadvertent releases of licensed materials due to equipment failure;
- 1.4.b: evaluate the potential for detectable levels of licensed material resulting from planned releases of liquids and/or airborne materials;
- 1.5.a: establish a recordkeeping program to meet the requirements of 10 CFR 50.75(g). Note that these records are used to determine an area's classification for purposes of performing surveys (see NRC Regulatory Issue Summary 2002-02, Lessons Learned Related to Recently Submitted Decommissioning Plans and License Termination Plans);
- 2.1.b: licensees should consider including additional information or updates on groundwater protection in periodic discussions with state/local officials; and,
- 2.1.c: for licensees that are in states where multiple nuclear power plants are located and multiple owner companies, it is highly recommended that the licensees coordinate their efforts and communicate with each other. The initial briefing for the state/local officials and the contents of the voluntary communication should be consistent.

b. Findings

No findings were identified.

The inspectors determined that all the acceptance criteria reviewed was implemented. The licensee has fully implemented the Industry Groundwater Protection Initiative in accordance with NEI 07-07.

.2 (Closed) Temporary Instruction 2515/187 – Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns

a. Inspection Scope

Inspectors verified that licensee's walkdown packages KW-F-2012-002, KW-F-2012-021B, and KW-F-2012-022B, contained the elements as specified in NEI 12-07, "Walkdown Guidance."

The inspectors accompanied the licensee on their walkdown of the screenhouse door 165, screenhouse train B floor covers and floor vent pipe; and verified that the licensee confirmed the following flood protection features:

- visual inspection of the flood protection feature was performed if the flood protection feature was relevant. External visual inspection for indications of degradation that would prevent its credited function from being performed was performed;
- critical SSC dimensions were measured;
- available physical margin, where applicable, was determined; and,
- flood protection feature functionality was determined using either visual observation or by review of other documents.

The inspectors independently performed their walkdown and verified that the following flood protection features were in place:

- screenhouse door 164.

The inspectors also independently reviewed the licensee's procedure for construction of temporary flood barriers, SA-KW-EVL-GEN-001, "Planned Barrier Impairment Control," to assess the available physical margin when permanent barriers were removed and temporary barriers installed.

The inspectors verified that noncompliances with current licensing requirements, and issues identified in accordance with the 10 CFR 50.54(f) letter, Item 2.g of Enclosure 4, were entered into the licensee's CAP. In addition, issues identified in response to Item 2.g that could challenge risk significant equipment and the licensee's ability to mitigate the consequences will be subject to additional NRC evaluation.

b. Findings

No findings were identified.

.3 (Closed) TI 2515/188 – Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns

The inspectors accompanied the licensee on their seismic walkdowns of the following areas:

- Walk-By Area 3, EDG room 1A on July 9, 2012; seismic walkdown equipment list (SWEL) item 38, oil cooler water outlet valve; SWEL item 61, EDG 1A; SWEL
- item 67, damper control temperature switch;

- Walk-By Area 5, SW screenhouse on July 11, 2012; SWEL item 39 screenhouse exhaust fan 1A discharge damper solenoid valve; SWEL item 66 screenhouse 1A area temperature switch; SWEL item 13 SW pump 1A;
- Walk-By Area 19, relay room on July 10, 2012; SWEL item 89, RR104, safety injection (SI)/aux coolant panel 1C1; SWEL item 91, RR128, train A engineered safeguard panel; and,
- Walk-By Area 23, control rod drive room on July 10, 2012; SWEL item 6, RD106, reactor trip breakers panel.

The inspectors verified that the licensee confirmed that the following seismic features associated with the SWEL items noted above were free of potential adverse seismic conditions:

- anchorage was free of bent, broken, missing or loose hardware;
- anchorage was free of corrosion that is more than mild surface oxidation;
- anchorage was free of visible cracks in the concrete near the anchors;
- anchorage configuration was consistent with plant documentation;
- SSCs will not be damaged from impact by nearby equipment or structures;
- overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls are secure and not likely to collapse onto the equipment;
- attached lines have adequate flexibility to avoid damage;
- the area appears to be free of potentially adverse seismic interactions that could cause flooding or spray in the area;
- the area appears to be free of potentially adverse seismic interactions that could cause a fire in the area; and,
- the area appears to be free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and, temporary installations (e.g., scaffolding, lead shielding).

The inspectors independently performed their walkdown and verified that the above seismic features as applicable, associated with the following SWEL items were free of potential adverse seismic conditions:

- Walk-By Area 3, EDG room A on July 11, 2012; SWEL item 83, DR101, EDG control cabinet; SWEL item 50, outside air inlet damper to EDG room 1A;
- Walk-By Area 16, component cooling water (CCW) heat exchanger area on July 11, 2012; SWEL item 99, component cooling heat exchanger 1A;
- Walk-By Area 15, station battery A room on July 12, 2012; SWEL item 57, station battery A; and,
- Walk-By Area 7, inside RWST shield structure; SWEL item 100, RWST.

Observations made during the walkdown that could not be determined to be acceptable were entered into the licensee's CAP for evaluation.

Additionally, inspectors verified that items that could allow the SFP to drain down rapidly were added to the SWEL; these items were walked down by the licensee.

b. Findings

No findings were identified.

.4 (Closed) Unresolved Item 05000302/2011005-07: Use of TLDs May Not Be Consistent With the Methods Used By the NVLAP Accreditation Process

In the fourth quarter of 2011 the inspectors identified that the licensee's use of thermoluminescent dosimeters (TLDs) may not be consistent with the methods used by the NVLAP accreditation process. Specifically, the licensee used a vendor to supply and process dosimeters that measure radiation exposure for the monitored workers. This vendor is NVLAP-accredited for beta, gamma, neutron, mixture of beta/gamma, and mixture of neutron/gamma radiations. However, the licensee used the TLDs when workers may be exposed to beta, gamma, and neutron radiations within the same monitoring period. The inspectors determined that this mixture of three radiation types may not be aligned with the accreditation process and opened unresolved item (URI) 05000305/2011005-07 to evaluate the issue. The inspectors requested technical assistance from the Office of Nuclear Reactor Regulation (NRR) through Task Interface Agreement (TIA) 2012-05 (ML 12268A330), the results of which, are discussed below.

Title 10 CFR 20.1501(c)(2) requires that the dosimeter processor be approved for the type of radiation or radiations included in the National Voluntary Laboratory Accreditation Program (NVLAP) program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored. As there is no NVLAP test category for dosimeters exposed to a mixture of beta, gamma, and neutron radiations, the NRC has determined that licensees, which monitor for beta, gamma, and neutron exposure with a single dosimeter need to use a processor that is NVLAP accredited in categories for beta-photon mixtures and neutron-photon mixtures. The licensee's dosimetry processor was NVLAP accredited for both beta-photon and neutron-photon mixtures and therefore was in compliance with 10 CFR 20.1501(c)(2).

Notwithstanding the paragraph above, licensees are required to provide adequate monitoring in accordance with 10 CFR 20.1502(a). For any type of in-field use practice that can introduce error in the monitoring results (dependent upon type of dosimeter and processing method), it becomes a question of compliance with the monitoring requirements of 10 CFR 20.1502(a) and not of NVLAP accreditation requirements of 10 CFR 20.1501(c)(2). As described in TIA 2012-05, another licensee had performed a study with the same dosimeters used by Kewaunee (Harshaw 760). This study showed that exposing a single Harshaw 760 dosimeter to a mixture of beta, gamma, and neutron radiation met industry standard for accuracy and precision. Therefore, the licensee provided adequate monitoring and was in compliance with 10 CFR 20.1502(a).

The inspectors determined that no performance deficiency existed; therefore this URI is closed.

a. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On January 3, 2012, the inspectors presented the inspection results to R. Simmons, 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:

- the inspection results for the areas of Occupational ALARA Planning and Controls and the Groundwater Protection Initiative with Mr. R. Simmons, Plant Manager, on October 19, 2012;
- the inspection results of the EP program were discussed with Mr. R. Simmons, Plant Manager, on October 19, 2012;
- the inspection results for the area of radiation monitoring instrumentation with Mr. R. Simmons, Plant Manager, on November 30, 2012;
- the inspection results for the area of occupational dose assessment were discussed with Mr. R. Simmons, Plant Manager, on November 30, 2012;
- the results of the licensed operator requalification training program inspection with Mr. R. Simmons, Plant Manager, on November 30, 2012; and
- the overall pass/fail results of the annual operating test administered during calendar year 2012 with Mr. S. Johnson, Operations Instructor on December 17, 2012.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

4OA7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

.1 Residual Heat Removal System Interlock Surveillance Not Met Due to Improper Setpoint

Technical Specification SR 3.4.14.2 requires verification that the RHR system interlock prevents the valves from being opened with a simulated or actual pressure signal \geq 450 psig as implemented in the conversion to ITSs by License Amendment No. 207.

Contrary to the above, from February 2011 until September 13, 2012, the licensee failed to recognize that the procedures that calibrated and tested the RHR system interlock would not assure that SR 3.4.14.2 was met. Specifically, during startup from the refueling outage in May 2012, after the 18-month SR was performed, the SR was not identified as not being met, and the required TS 3.4.14.C LCO entry was not made. The ITS conversion process failed to identify the +/- 15 psig (0.5 percent) setpoint tolerance

for the 450 psig setpoint would allow opening the valve at a pressure greater than 450 psig; therefore, a change to the setpoint was needed to fulfill the SR requirement.

The inspectors determined that the violation could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power" Exhibit 1, Initiating Events Screening Questions, dated June 19, 2012. The inspectors answered "No" to all the screening questions and determined the finding screened as having very low significance (Green).

The licensee documented this violation in CR488003 and conducted an apparent cause determination. The licensee took corrective actions to fulfill the TS LCO (closing valves with supply breakers off). Additionally, engineering was determining a lower setpoint and calibration tolerances that would fulfill surveillance requirements.

.2 Safety Injection Pump B Technical Specification Violation

Technical Specification 3.5.2, Emergency Core Cooling System (ECCS), Action, Limiting Condition for Operation, requires, in part, that two ECCS trains shall be Operable while in Mode 1.

Contrary to the above, from December 7, 2011, through February 29, 2012, the B SI pump was not operable, because the associated SI pump breaker 1-606 installed on December 7, 2011, did not function properly due to a bent main charging shaft, while the reactor was in Mode 1. Upon discovery of the condition during the scheduled Technical Specification SR test, the licensee restored the system to an operable status through replacement of the SI pump B breaker. The inspectors determined the violation could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power" Exhibit 2, Mitigating Systems Screening Questions, effective July 1, 2012. The inspectors answered "Yes" to the screening question 3 that stated the finding represented an actual loss of function of at least a single train for greater than its allowed Technical Specification allowed outage time, in this case 72 hours. Therefore, the finding required a detailed risk evaluation by the Region III Senior Reactor Analyst (SRA).

The SRA determined that the failure would result in failure of the high pressure recirculation mode for SI pump B. The SRA performed the detailed risk evaluation using the Kewaunee SPAR Model Version 8.20, SAPHIRE Version 8.0.8.0. The exposure time was 84 days. The model was run by setting the basic event representing failure of motor-operated valve RHR-299B to "True." Setting failure of this valve to "True" represents failure of the flowpath from the discharge of residual heat removal (RHR) pump B to the suction of SI pump B, thus failing the B train of the high pressure recirculation mode of SI with common cause potential for the A train as well. The resultant delta CDF was $4.13E-7/\text{yr}$. This represents internal events risk with the dominant sequence involving a loss of offsite power initiating event, failure of secondary cooling, and failure of high pressure recirculation.

Regarding external events risk, the SRA used the external event features of the Kewaunee SPAR model to determine the additional risk for the finding due to initiating

events such as fires, floods, and seismic events. The SRA performed a similar analysis as that above for external events only. The resultant delta CDF was $1.4E-7$ predominantly due to fire.

The total delta CDF was the sum of the internal and external event risk, or $5.6E-7$.

Regarding the potential risk contribution due to Large Early Release Frequency (LERF), The SRA used IMC 0609 Appendix H, "Containment Integrity Significance Determination Process." Kewaunee Station is a 2-loop Westinghouse PWR with a large dry containment. Sequences important to LERF include steam generator tube rupture events and inter-system LOCA events. These were not the dominant core damage sequences for this finding.

The SRA determined that the risk due to internal and external events, and LERF to be of very low safety significance (GREEN).

The licensee documented this violation in CR 0190063 and conducted an apparent cause determination. The licensee took immediate corrective actions upon discovery to restore the B SI train. At the end of the inspection period, the licensee continued to implement long term corrective actions from the causal evaluation.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

A. Jordan, Site Vice President
R. Simmons, Plant Manager
S. Yuen, Decommissioning Director
J. Stafford, Safety and Licensing Director
T. Olson, Engineering Director (Acting)
A. Christensen, EP
B. Koehler, Engineering Supervisor
C. Edwards, Supervisor Nuclear Maintenance Support
C. Olson, Health Physics Supervisor
C. Walsh, Senior Operations Instructor
D. Asbel, Manager, Outage and Planning Manager
D. Lawrence, Operations Manager
D. Shannon, Health Physics Operations Supervisor
D. Vorpahl, Engineering
G. Riste, Licensing
H. Siercks, LOR Program Lead
J. Collins, Manager Corporate EP
J. Egdorf, EP Supervisor
J. Gadzala, Licensing
J. Helbing, Operations MA
J. Hinze, Supervisor Operation Training
J. Jannsen, Engineering
J. Palmer, Training Manager
J. Riste, Licensing
K. Morris, Security Manager
K. Phillips, Outage and Planning
K. Zastrow, Organizational Effectiveness Manager
M. Aulik, Design Engineering Manager
M. Haese, Licensing
M. Hale, Radiation Protection/Chemistry Manager
M. Rosseau, Engineering Supervisor
P. Bukes, ISI Program Engineer
R. Repshas, Licensing Manager
S. Cieslewicz, STA/Unit Supervisor
S. Johnson, Operations Instructor
T. Olsowy, Corrective Action
T. Wiltman, EP

Nuclear Regulatory Commission

K. Riemer, Branch Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000305/2012005-01	NCV	EAL Table Utilizes 1955 IGLD for Emergency Event Classification (Section 1R01.1)
05000305/2012005-02	NCV	Emergency Diesel Generator Starting Air System Quality Classification Error (Section 1R04.1)
05000305/2012005-03	SLIV	Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval (Section 1R04.2)
05000305/2012005-04	FIN	Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval (Section 1R04.2)
05000305/2012005-05	URI	Relay Room Carbon Dioxide Fire Suppression System and Control Room Envelope Potentially Affected by HELB (Section 1R12.1)
05000305/2012005-06	NCV	CO ₂ Detection Instrumentation Unavailable For Emergency Event Classification (Section 1EP5.1)

Closed

05000305/2012005-01	NCV	EAL Table Utilizes 1955 IGLD for Emergency Event Classification (Section 1R01.1)
05000305/2012005-02	NCV	Emergency Diesel Generator Starting Air System Classification Error (Section 1R04.1)
05000305/2012005-03	SLIV	Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval (Section 1R04.2)
05000305/2012005-04	FIN	Removal of Refueling Procedure Requirement For Spent Fuel Pool Cooling Without Prior NRC Approval (Section 1R04.2)
05000305/2012005-06	NCV	CO ₂ Detection Instrumentation Unavailable For Emergency Event Classification (Section 1EP5.1)
05000305/2012005-07	URI	Use of TLDs May Not Be Consistent With the Methods Used By the NVLAP Accreditation Process (2RS4.2)
05000305/2011-005-01	LER	Shield Building Ventilation Train Inoperable For Longer Period Than Allowed By Technical Specifications (Section 4OA3.1)
05000305/2012-006-00	LER	Train A Special Ventilation Inoperable for Longer Period Than Allowed Due to Charcoal Filter Efficiency (Section 4OA3.2)
05000305/2012-008-00	LER	Residual Heat Removal System Interlock Surveillance Not Met Due to Improper Setpoint (Section 4OA3.3)
05000305/2012-002-00	LER	Safety Injection Inoperable for Longer Period Than Allowed by Technical Specifications (Section 4OA3.4)
05000305/2012-007-00	LER	Minor Thru-Wall Leak at Weld in Safety Injection Suction Piping (Section 4OA3.5)
2515/185, Revision 1	TI	Follow-up On the Industry's Groundwater Protection Initiative (Section 4OA5.1)

2515/187	TI	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns (Section 4OA5.2)
2515/188	TI	Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns (Section 4OA5.3)

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or 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

- CA240258; Det. Doc And Initiate Actions As Approp For Enhancements Identified For GMP-172
- Calculation No. C11220; Determination Of Forebay Low-Low Level Trip Instrument Accuracy; January 18, 2001
- Calculation No. C11882; Capability Of The Kewaunee Circulating Water Intake Structure's Auxiliary Intakes To Provide Required Flow To The Service Water Pumps (1A1, 1A2, 1B1, 1B2); September 2, 2009
- CE000003; NRC Resident Inspector Requested We Re-Review The Adequacy Of The Trip Of Circulating Water Pumps On Lo Forebay Level
- CR475771; Primary Met Tower 10M Wind Direction And Speed Indication Bad
- CR482022; 2012 MCR: Two Enhancements To GMP-172 Were Identified
- CR492956; Primary Tower 60 Meter Wind Speed Indicates BAD
- CR497915; Entry Into AOP-GEN-004 Due To High Winds
- CR500145; EAL Chart Table H-2 Uses 1955 IGLD For Lake Level
- CR500352; NRC Question On UHS LCO
- CR501307; 4Q12 Inspection-Proposed NRC NCV: EP, Potential For Late Declaration
- Establishment Of International Great Lakes Datum (1985), By The Coordinating Committee On Great Lakes Basic Hydraulic And Hydrologic Data; December 1995
- GMP-172; Tornado Missile Hazard Inspection; Revisions 10 And 11
- Great Lakes Water Level Data; 9087068, Kewaunee, WI; December 1 To December 14, 2012
- HU1; Hazards And Other Conditions Affecting Plant Safety; Revision 9
- KPS USAR 2.6; Hydrology; Revision 24, November 13, 2012
- Lake Michigan Lake Level 1996 – 2012; Corps Of Engineers Monthly Lake Level Bulletin Values; November 1995 To November 2012
- NRC-01-055; Correspondence From M. Reddemann, NMC, LLC, To NRC; Subject: Lake Michigan Low Level Emergency Action Level Modification; May 2, 2001
- NRC-01-081; Correspondence From M. Reddemann, NMC, LLC, To NRC; Subject: Lake Michigan Low Level Emergency Action Level Modification; July 18, 2001
- OP-KW-AOP-CW-001; Abnormal Circulating Water System Operation, System No. 04; Revision 8
- OP-KW-AOP-GEN-004; Response To Natural Events; Revision 11
- OP-KW-ARP-47052-M; Forebay Level Low, System No. CW-04; Revision 3
- OP-KW-ORT-MISC-005; Cold Weather Operations; Completed December 4, 2012
- Report No. 288; Hydraulic-Model Study Of Water Intake, Kewaunee Nuclear Power Plant, Wisconsin; Submitted By Iowa Institute Of Hydraulic Research; December 2000
- Single Point Trend; CW Intake Forebay Level; Various Dates From December 15, 2011 To December 17, 2012
- Site Monthly Missile Hazard Inspection Results; October 30, 2012

1R04 Equipment Alignment

- CA248260; Submit A Procedure Change To Update The EDG Startup Air Checklist
- Condition Reports List With Configuration Control Hot Buttons; From January 1 To December 26, 2012
- CR465339; Discrepancy In Heat Transfer Rate Of SFP Hx
- CR465480; SFP HX Performance Monitoring Test Did Not Meet Acceptance Criteria
- CR466559; Service Water Higher Than Normal Temperature Concerns During KR32
- CR470682; Evaluate Change To SFP Heatup Curves During Offloaded Conditions
- CR485168; Licensing Basis For SFP Cooling May Not Be Appropriately Incorporated Into USAR
- CR493206; SFP Cooling USAR Section May Not Fully Reflect Amendments 150 & 172
- CR494039; Question On Valve Position On EDG A S/U Air System
- CR499433; Licensing Basis For Spent Fuel Pool Cooling
- DC No. KW-10-01101-010; Provide EDG Room Ventilation Damper Actuators
- Drawing OPERM-213-13; Station And Instrument Air System Diesel Generator A And B Ventilation Damper; Revision B
- Drawing OPERM-213-9; Diesel Generator Startup Air Compressor A & B And Fish Screen Air; Revisions G, H, And J
- Drawing OPERM-220; Fuel Oil Systems; Revision BA
- GMP-163; Spent Fuel Pool Heat Exchanger Outlet To Spectacle Flange; Revision 2
- GNP 4.3.1; Safety Evaluation Report; May 25, 2001
- Holtec Report HI-992208; Project 80924; Section 5.0, Thermal-Hydraulic Considerations
- Kewaunee Nuclear Power Plant; Plant Operations Review Committee; Meeting No. 81-78; August 31, 1981
- Kewaunee Spent Fuel Pool Storage History
- KPS Asset Report For SA-2030B And SA-2030B-2; December 26, 2012
- KPS USAR 9.3.1.3; Spent fuel Pool Cooling System; Revision 24; November 13, 2012
- KPS USAR 9.3.2.3; Spent Fuel Pool Cooling System; Revision 23.01; December 30, 2011
- LC000748; Change TRM 8.9.3 Decay Heat From 148 Hours To 100 Hours
- NRC-00-059; Correspondence From M. Marchi, Wisconsin Public Service Corporation, To NRC; Subject: Proposed Technical Specification Amendment Request PA #167 Spent Fuel Storage – Response To Additional Information; August 7, 2000
- NRC-03-108; Attachment 1; November 5, 2003
- NRC-99-081; Correspondence From M. Marchi, WPS, To NRC; Subject: Proposed Amendment 167 To The Kewaunee Nuclear Power Plant Technical Specifications – Spent Fuel Storage; November 18, 1999
- OP-KW-AOP-DGM-001; Diesel Generator Emergency Fuel Oil Transfer; Revision 7
- OP-KW-NCL-DGM-001B; Diesel Generator B Prestartup Checklist; Revision 10
- OP-KW-OSP-ESF-001; ESF Valve Alignment Verification; December 14, 2012
- RAS000200; SFP HX Performance Monitoring Method
- RF-01-00; KNPP Refueling Procedure; Revision 1
- Single Point Trend; T2513A – CDSR 1A Circ Wtr Inlet T; April 19 To April 29, 2012
- Tracking And Processing Record For OP-KW-NCL-DGM-001B, Revision 9; Diesel Generator B Prestartup Checklist; November 26, 2012
- WCAP-16040-P; Correspondence From T. Coutu, NMC, To NRC; Subject: Power Uprate Project, Kewaunee Nuclear Power Plant, NSSS And BOP Licensing Report; February 2003
- White Paper: Managing Decay Heat During The KR32 Core Offload Window
- WO KW100283104; PM10-025: Replace Regulator
- DCU KW-01-01101, EDG Ventilation Air Supply Modification (Capital), dated July, 1, 2011

1R05 Fire Protection

- Drawing PFP-13; Battery Rooms 1A And 1B; Revision D
- Drawing PFP-38; Technical Support Center; Revision F
- Drawing PFP-9; 480V Switchgear Bus 1-61 And 1-62 Room And AFW Pump Area; Revision D
- Fire Protection Program Analysis; Fire Zone Summary TC-102 TSC Non-Safeguards Battery And Electric Equipment Room; Revision 10
- Fire Protection Program Analysis; Fire Zone Summary TU-95C AFW Pump 1A Room; Revision 10
- Fire Protection Program Analysis; Fire Zone Summary TU-97 AFW Pump 1A Room; Revision 10
- FPP-08-07; Control Of Ignition Sources; Revision 12
- FPP-08-08; FP – Control Of Transient Combustible Materials; Revision 11
- KPS Fire Protection Program Analysis; Revision 10; August 2012
- PFP-16; RWST And Containment Spray Pump Area
- SA-KW-FPP-010, Attachment A; Fire Drill Evaluation/Critique 2012-23; December 12, 2012
- WO KW100733916; Fire Dmpr Ins (A Train)

1R06 Flooding

- CR336221; Rain Water Leaking Into Battery Room B
- CR477418; Debris In/Around Cardox Room Floor Drain
- CR485146; Battery Dead On Flood Dewatering Pump
- Drawing S-500; Turbine Building Plant-Base Slab Floor Drains; Revision J
- Drawing S-508; Administration Building Foundation Plan & Floor Drains; Revision S
- FP-E-MOD-10; DCR 3570, "Install Check Valves In Floor Drains From Cardox Room, Safeguards Alley, Bus 1 And 2 Rooms & Sump Pump In Safeguards Alley," Completed February 9, 2006
- KPS USAR; B.11, Internal Flooding; Revision 23.04
- MA-KW-MPM-MDS-001; Inspection Of Flood Protection Floor Drain Check Valves, System 30; Revision 4
- OP-KW-AOP-MDS-001; Abnormal Operation Of Miscellaneous Drains And Sumps, System MDS-30; Revision 6
- PCR021392; Drain Piping Impact On Flooding Scenarios
- PCR021394; Drain Piping Impact On Flooding Scenarios
- TRM 8.7.7; Plant Systems; Revision 0
- WO KW100276096; PM30-547: Inspect Valve Internals
- WO KW100684024; PM30-554: B Train 18 Mo Funct Test
- WO KW100686333; PM30-541: A Train 18 Mo Funct Test
- WO KW100695859; Seal Expansion Joint On Turbine Floor
- WO KW100768119; PM30-553: Inspect Valve Internals-MD-600B (D/G Room 1B)
- WO KW100771642; PM30-552: Inspect Valve Internals-MD-600A (D/G Room 1A)
- WO KW100772171; PM30-543: Inspect Valve Internals-MD-300-2 (Safeguards Alley)
- WO KW100772204; PM30-542: Inspect Valve Internals-MD-300-1-(Cardox Room)
- WO KW100772294; PM30-544: Inspect Valve Internals-MD-300-3 (Bus 1 & 2 Room)
- WO KW100773624; PM04-582: Turbine Bldg CW Pump Functional Test

1R07 Annual Heat Sink Performance

- WO KW07-010763; PM21-527: Performance Monitoring
- WO KW100330144; PM21-527: Performance Monitoring

- WO KW100642749; PM21-527: Performance Monitoring-Spent Fuel Pool Heat Exchanger

1R11 Licensed Operator Regualification Program

- 2011 Simulator Fidelity Tests; Multiple Titles; Various Dates
- 2011 Transient Trends; Multiple Titles; Various Dates
- 2012 Operations Training LOR Schedule; Revision 0
- 2012 Simulator Fidelity Tests; Multiple Titles; Various Dates
- 2012 Transient Trends; Multiple Titles; Various Dates
- 2013 Operations Training LOR Schedule; Revision 0
- AD-AA-102; Procedure Use And Adherence; Revision 6
- AD-AA-102; Procedure Use And Adherence; Revision 6
- Annual JPM Exam - 2011 - LRC-11-05-Annual JPM Exam Kewaunee
- Annual Simulator Exam - 2011 - LRC-11-05-Annual Sim Exam Kewaunee
- Biennial Training Plan (2010 through 2011); Revision B
- Biennial Training Plan (2012 through 2013); Revision A
- CR410180, PA/PII On NARS Form Accuracy And Timeliness Did Not Achieve Desired Improvement; January 6, 2011
- CR410388; Ops LOR TRB Work Items - Conditions Not Adverse To Quality
- CR411385; ILT, LOR, NAO Training Programs Are Yellow In 4th Quarter 2010
- CR411397; LOR And NAO-C Training Schedule Emergent Change
- CR411457; EP Lower Tier PI- DEP/Classifications
- CR411830; Unplanned Changes To LOR And AOC Training Schedules
- CR412248; Recommendation Based On Operations Classroom Training On Motor Operated Valves
- CR412523; Ops LOR TRB Work Items - Conditions Not Adverse To Quality
- CR413557; SAR1341 Recommendation To Clarify Focus Brief Expectation
- CR414713; Critical Observation Performed On Shutdown JITT
- CR417578; EP Missed Milestone Checklist Due Date For May Drill
- CR417790; AOP-RM-001 Evaluate Change Word Check To Ensure
- CR419235; SI-11A Breaker Found On With Plant In Mode 3
- CR423075; SOER 10-02 Recommendations From Operations Fundamentals Committee
- CR425797; 2011 WANO- Simulator Meter ID'd Out Of Tolerance During Crew Evaluation/CPO
- CR426645; The Simulator's Motor Driven Switch , 52Z-301 On The Electrical Panel Failed
- CR426657; Evaluate EPIPF-AD-07-01 Box 6 For Correctness And Consistency With ITS
- CR427377; Simulator Evaluation Guide (SEG) Left Unattended During LORT Dynamic
- CR428619; RST Tap Changer Reported To Move More Than One Step Per Manual Operation
- CR428753; Ops LOR TRB Work Items - Conditions Not Adverse To Quality
- CR428867; 1Q11 SPAM - Additional Actions Required In Pre-Job Briefs
- CR429526; Incorrect Box Was Selected On The NARS Form During LOR Dynamic Examination
- CR432130; Weakness In Operability Assessment
- CR469619; Both SI Pumps Discharge Valves Were Open When LTOP Was Required
- CR473763; Implementation Of ITS LCO 3.0.4.A Not Being Logged
- CR490018; Administrative Work Hour Limits
- Curriculum Completion Status (Cycle 1-May 2011)
- Curriculum Completion Status (Cycle Cycle 1-April 2012)
- Kewaunee Attendance Report 2011
- Kewaunee Attendance Report 2012
- Kewaunee Course Attendance Report – Biennial Written Examination 2011
- Kewaunee Lesson Plans, Operating Experience, LERs, and Plant Events (2011)

- Kewaunee Lesson Plans, Operating Experience, LERs, and Plant Events (2012)
- Kewaunee Power Station 2011 Operating Tests; Multiple; Various Dates
- Kewaunee Power Station 2011 Written Examinations; Multiple; Various Dates
- Kewaunee Power Station 2012 Operating Test Results; December 17, 2012
- Kewaunee Power Station 2012 Operating Tests; Multiple; Various Dates
- LI-AA-700; Fatigue Management And Work Hour Limits For Covered Workers; Revision 7
- LI-AA-7000; Work Hour Limits For Non-Covered Workers; Revision 1
- OP-AA-100; Conduct Of Operations; Revision 21
- OP-AA-100; Conduct Of Operations; Revisions 19 And 21
- OP-AA-103; Operator Qualifications; Revision 3
- OP-AA-1500; Operational Configuration Control; Revision 10
- OP-AA-1500; Operational Configuration Control; Revision 10
- OP-AA-1500; Operational Configuration Control; Revision 8
- OP-AA-1800; Operator Fundamentals; Revision 5
- OP-AA-1800; Operator Fundamentals; Revision 5
- OP-KW-AOP-GEN-002; Rapid Power Reduction; Revision 13
- OP-KW-AOP-GEN-002; Rapid Power Reduction; Revision 13
- PI-AA-500; Verification Practices; Revision 3
- PI-AA-500; Verification Practices; Revision 3
- PI-AA-5000; Human Performance (HU); Revision 7
- PI-AA-5000; Human Performance (HU); Revision 7
- Requalification Program Sample Plan 2008
- Simulator Differences; Multiple Documents; Various Dates
- Simulator Exercise Guide LRC-12-SE403
- Simulator Work Orders; Multiple Documents; Various Dates
- TR-KW-TPG-0300; Licensed Operator Requalification; Revision V
- WM-AA-100; Work Management; Revision 20
- WM-AA-100; Work Management; Revision 20
- WM-KW-100-1001; Work Management Process; Revision 20
- WM-KW-100-1001; Work Management Process; Revision 20

1R12 Maintenance Effectiveness

- CR418475; ICS-3A Did Not Hold Pressure During SP-23-080
- CR470750; S/G B Wide Range Level Transmitter LT-24084 Found Out Of Tolerance
- EPIX001026; Recorder 43014, WR Steam Generator Level, Display Goes Blank
- Maintenance Rule Scoping Questions; 05A Main Feedwater; Attachment A, Revision 1
- Maintenance Rule Scoping Questions; 23 Internal Containment Spray; Attachment A – Revision 2
- Maintenance Rule System Basis; Revision 11
- Maintenance Rule System Basis; Revision 14
- MRE012232; For FI-41341, ICS Pump B Disch Flow, Indicating 400gpm Following Loop Calib.
- MRE013331; OOS Found On LT-24084
- MRE013431; Steam Generator B Level Channel LI-473 Drifting High
- MRE013433; SG B Level Channel Greater Than 9% Difference
- MRE013901; Recorder 43014, WR Steam Generator Level, Display Goes Blank
- MRE015038; S/G B Wide Range Level Transmitter LT-24084 Found Out Of Tolerance
- SSC Performance Criteria Sheet; 05A Main Feedwater; Attachment B, Revision 3
- SSC Performance Criteria Sheet; 23 Internal Containment Spray; Attachment B – Revision 3

1R13 Maintenance Risk Assessments and Emergent Work Control

- 1016744; EPRI Configuration Risk Management Forum – 2008 Research Task; An Approach For Evaluating Heavy Load Lifts And Related Maintenance Tasks In Maintenance Rule (a)(4)
- Dominion Probabilistic Risk Assessment Notebook; Part V, Volume DOM-RA.001; Appropriateness Of PRA Evaluations For Load Lifts In MRule (a)(4); Revision 0
- Dominion Probabilistic Risk Assessment Notebook; Part V, Volume RA.027; Heavy Load Lift Over Screenhouse; Revision 0
- GNP-08.12.02; Controls For Use Of Cranes Within The Protected Area; Revision 27
- ML082460291; NRC RIS 2008-28; Endorsement Of Nuclear Energy Institute Guidance For Reactor Vessel Head Heavy Load Lifts; December 1, 2008
- NF-AA-PRA-101-3081; Probabilistic Risk Assessment Procedures And Methods: Configuration Risk Assessment Of Load Lifts; Revision 1
- Risk Evaluations
- WM-AA-100; Work Management; Revision 17
- WM-AA-20; Risk Assessment Of Maintenance Activities; Revision 1

1R15 Operability Determinations and Functional Assessments

- Calculation No. 0064-0031-PCC-01; High Head Safety Injection Pump Design Basis Operating Time; Revision 1; January 17, 2007
- CR320055; Gas Void Found Near SI-4A And SI-4B
- CR475077; INNS – Nuclear Anal And Fuel
- CR479580; INNS – Nuclear Anal And Fuel
- CR484439; INNS – Nuclear Anal And Fuel
- CR484536; INNS – Nuclear Anal And Fuel
- CR488084; Documents Require Updating Due To Revision 4 Of Calculation 51-9020502
- CR490860; NRC Inspector Questions Procedure Clarity
- CR491077; Ops Procedure Does Not Match OD239 For Compensatory Actions
- CR492363; NRC Questions N/A Vs. Operable But Non-Conforming In CR475077
- CR499682; Train B EDG Start Up Air System Components Not Qualified For Harsh Environment
- CR500079; Calculation C11719 Rev 1 Safety Class Motors May Spuriously Trip While Running
- CR500083; Control Room Post Accident Recirculation Fan B Fails C11719 Rev 1 4.2.2 Problem Statement
- CY-KW-CSP-RC-001; Reactor Coolant chemistry Surveillance, System No. 36; Revision 0
- ER-KW-NSP-SI-003; Operability Assessment Of Gas Accumulation In SI Piping; System No. 33; Revision 2
- ES-0.2; Natural Circulation Cooldown; Revision 26
- KPS – Adequacy Of Valve SI-3 Support; October 10, 2012
- KPS USAR; Revision 24; November 13, 2012
- OD 239 Rev 3 Supplement: Evaluation Of Existing RAA Revealed Adequate Bases Cannot Be Found; August 13, 2012
- OP-AA-102; Operability Determination; Revision 8
- OP-AA-102-1001; Development Of Technical Basis To Support Operability Determinations; Revision 6
- OP-KW-AOP-SI-001; Voids In SI Piping, System No. SI-33; Revision 2
- OP-KW-NOP-GE-001; Operation Of The Generator Hydrogen, Seal Oil, And Exciter Cooling System; April 6, 2012
- POD 499682; 1B EDG Start Up Air System Operation Following turbine Building HELB; December 12, 2012

- SP-29-069; Liquid Continuous Radioactive Releases – Steam Generators, Turbine Building Sump; Revision 35

1R18 Plant Modifications

- CR465339; Discrepancy In Heat Transfer Rate Of SFP Hx
- CR465480; SFP HX Performance Monitoring Test Did Not Meet Acceptance Criteria
- CR466559; Service Water Higher Than Normal Temperature Concerns During KR32
- CR470682; Evaluate Change To SFP Heatup Curves During Offloaded Conditions
- CR485168; Licensing Basis For SFP Cooling May Not Be Appropriately Incorporated Into USAR
- CR493206; SFP Cooling USAR Section May Not Fully Reflect Amendments 150 & 172
- CR494039; Question On Valve Position On EDG A S/U Air System
- CR499433; Licensing Basis For Spent Fuel Pool Cooling
- DC No. KW-10-01101-010; Provide EDG Room Ventilation Damper Actuators
- Drawing OPERM-213-13; Station And Instrument Air System Diesel Generator A And B Ventilation Damper; Revision B
- Drawing OPERM-213-9; Diesel Generator Startup Air Compressor A & B And Fish Screen Air; Revision J
- Drawing OPERM-220; Fuel Oil Systems; Revision BA
- ETE-KW-2012-0044; RHR Pressure Interlock Setpoint; Revision 0
- GMP-163; Spent Fuel Pool Heat Exchanger Outlet To Spectacle Flange; Revision 2
- GNP 4.3.1; Safety Evaluation Report; May 25, 2001
- Holtec Report HI-992208; Project 80924; Section 5.0, Thermal-Hydraulic Considerations
- Kewaunee Nuclear Power Plant; Plant Operations Review Committee; Meeting No. 81-78; August 31, 1981
- Kewaunee Spent Fuel Pool Storage History
- KPS Asset Report For SA-2030B And SA-2030B-2; December 26, 2012
- KPS USAR 9.3.2.3; Spent Fuel Pool Cooling System; Revision 23.01; December 30, 2011
- LC000748; Change TRM 8.9.3 Decay Heat From 148 Hours To 100 Hours
- NRC-00-059; Correspondence From M. Marchi, Wisconsin Public Service Corporation, To NRC; Subject: Proposed Technical Specification Amendment Request PA #167 Spent Fuel Storage – Response To Additional Information; August 7, 2000
- NRC-03-108; Attachment 1; November 5, 2003
- NRC-99-081; Correspondence From M. Marchi, WPS, To NRC; Subject: Proposed Amendment 167 To The Kewaunee Nuclear Power Plant Technical Specifications – Spent Fuel Storage; November 18, 1999

1R19 Post-Maintenance Testing

- 5.5; Programs And Manuals; Amendment No. 207; February 2, 2011
- Bases 3.6; Containment Systems; Amendment No. 207; February 2, 2011
- CA228541; Review All Safety Related FCU Maintenance Procedures And Develop PMT Requirement
- Containment Leak Rate Testing Program; Revision 9; September 18, 2012
- GMP-251; Common Electrical Preventive Maintenance Tasks; Revision 30
- MA-KW-ICP-ICE-181; Chell LRM Leak Rate Monitor Calibration; Completed September 27, 2012
- OP-KW-ORT-MISC-010; Chell Leak Rate Monitor Operation; Completed November 14, 2012
- PMP-05B-08; AFW – Auxiliary Feedwater Pump Motor Electrical Maintenance, Revision 8; Performed August 23, 2012

- Tracking And Processing Record For OP-KW-OSP-CCI-001; Personnel And Emergency Airlock Leak Rate Test; New Revision No. 5; November 14, 2012
- Tracking And Processing Record For OP-KW-OSP-CCI-001; Personnel And Emergency Airlock Leak Rate Test; New Revision No. 4; July 22, 2012
- WO KW100556633, Perform (Local) Starter Maintenance (AFW)
- WO KW100912753; DC KW-12-01105 Service Water Pump 1B2 Packing Upgrade

1R22 Surveillance Testing

- Calculation No. C10996; NPSH (Available) To The RHR, SI And ICS Pumps When Drawing A Suction From The RWST; October 25, 2006
- Calculation No. C11412-1; Refueling Water Storage Tank (RWST) Level, Control Room indication (Loop 921); Revision 0; August 19, 2010
- Calculation No. CN-LIS-((-**); Kewaunee (WPS) Small Break LOCA Analysis – RSG Program; Revision 0; March 8, 2012
- Drawing E-3023; Wiring Diagram RR162 Foxboro Instrument Rack Channel 1W3 (White); Revision AC
- Drawing E-3749; RG 1.97 Instrumentation Wiring Diagram Refueling Water Storage Tank Level Loop A & B; Revision C
- Drawing XK-100-149, Revision 4K
- ES-1.3; Transfer To Containment Sump Recirculation; Revision 37
- KPS USAR; Revision 24
- MA-KW-ISP-SI-040; Refueling Water Storage Tank Level Instrument Calibration; Completed December 10, 2012
- OP-KW-OSP-MI-001; Shift Instrument Channel Checks – MODE 1 To 4, System No. 87; Revision 0
- RWST 3.5.4; Emergency Core Cooling Systems (ECCS); Amendment No. 207; February 2, 2011
- Section 6.2; KPS USAR; Revision 24
- SP-06-031A-6; Steam Generator Steam Pressure Loop 483 Transmitter Channel 1 (Red) Calibration; Revision 5
- SP-87-151; Weekly Instrument Channel Checks; Completed December 10, 2012

1EP2 Alert and Notification System Testing

- 2010 Emergency Planning Mailer
- 2010 KPS EP Calendar
- 2011 Emergency Planning Mailer
- 2011 KPS EP Calendar
- 2012 KPS EP Calendar
- EP-KW-EMP-009-003; Alert And Notification Siren System Testing And Maintenance; Revision 0
- KPS/PB Siren Problem Tracking Report 2010
- KPS/PB Siren Problem Tracking Report 2011
- KPS/PB Siren Problem Tracking Report 2012
- Siren Testing and Maintenance Data; May 2010 through September 2012

1EP3 Emergency Response Organization Staffing and Augmentation System

- 2010 3rd Quarter Augmentation Capability Assessment
- 2010 4th Quarter Augmentation Capability Assessment
- 2011 1st Quarter Augmentation Capability Assessment

- 2011 2nd Quarter Augmentation Capability Assessment
- 2011 3rd Quarter Augmentation Capability Assessment
- 2011 4th Quarter Augmentation Capability Assessment
- 2012 1st Quarter Augmentation Capability Assessment
- 2012 2nd Quarter Augmentation Capability Assessment
- 2012 3rd Quarter Augmentation Capability Assessment
- TR-KW-TPG-2400; Emergency Preparedness Training Program; Revision 14.1

1EP4 Emergency Action Level and Emergency Plan Changes

- EPIP-ENV-03C; Dose Projection Using RASCAL Software; Revision 29

1EP5 Maintenance of Emergency Preparedness

- CR370958; 6-Year EP Training Objective Matrix Issue
- CR383348; New Seismic Instrumentation Requiring EAL Change
- CR386239; Drill, Core Damage Assessment Issues
- CR405966; SPING Maintenance And Compensatory Actions
- CR419976; SPING Loss Due To Rad Serv Failure
- CR426774; Drill, Notification Discrepancy
- CR434070; New ERO Training Request
- CR434107; Drill, ERO Response Affected By Accountability
- CR434698; Drill, Missed Classification
- CR461325; Drill, Medical Response Bag At TSC Deficient
- CR479412; Drill, Emergency Director Responsibility Confusion
- CR481039; Received Fireworks Alarm For Cardox Room
- CR481430; Station Cannot Measure CO₂ At Levels Necessary To Evaluate EAL HA3.1
- CR490887; Ability to Assess EALs Degraded During SPING Failure In 2011
- Graded Exercise Management Critique; June 29, 2010
- Graded Exercise Management Critique; October 4, 2011
- KPS EAL Technical Bases Document; Revision 9
- KPS Emergency Plan; Revision 36
- Medical Drill Report; February 1, 2012
- Medical Drill Report; May 10, 2011
- Nuclear Oversight EP Audit 11-02
- Nuclear Oversight EP Audit 12-02
- Pre-Exercise Management Critique; July 12, 2011
- Training Drill Management Critique; June 19, 2012

2RS2 Occupational ALARA Planning and Controls

- CR417119; Workers Signing Into The RCA On The Correct RWP But Wrong Task; March 10, 2011
- CR473606; Consider Developing Plan To Manage Source Term From B CVC Mixed Bed Changeout; Dated April 27, 2012
- Dose And Source Term Reduction Strategic Plan; Revision 7
- Radiation Work Permit And Associated ALARA Files; RWP 12-0207; Cleanup, Decon, And Laundry Evolutions; Revision 0
- Radiation Work Permit And Associated ALARA Files; RWP 12-0255; Core Offload/Reload And Associated Work; Revision 1
- Radiation Work Permit And Associated ALARA Files; RWP 12-306; SFP Diving Activities; Revision 0

- RP-AA-103; ALARA Program; Revision 1
- RP-AA-103-1000; Station And Fleet ALARA Committees; Revision 3
- RP-AA-300; ALARA Reviews And Reports; Revision 4
- RP-AA-301; ALARA Goals; Revision 1
- RP-AA-303; ALARA 5-Year Plan; Revision 0
- RP-KW-001-016; Radiation Work Permit – Preparation, Issuance, And Termination; Revision 5
- RP-KW-001-032; RWP Briefing; Revision 4

2RS4 Occupational Dose Assessment

- Final response to Task Interface Agreement 2012-05; ML12268A330; Dated October 16, 2012

2RS5 Radiation Monitoring Instrumentation

- Calculation C10690; ODCM Setpoint Calculation; Revision 2
- CR427759; R-21 Alert And High Alarms Did Not Come In During Testing During SP-45-050.21
- CR433030; R-18 Failure
- CR445305; Out Of Specification Found On R-29
- CR456463; Torque Setting Found Out Of Spec for R11 Paper Take Up Spool
- CR495456; During R-11 Filter Change – Paper Drive Not Taking Up Roll
- HP-06.072; Instrument Operating Procedure - PCM-1C Personnel Contamination Monitor; Revision 7
- HP-06.099; Instrument Operating Procedure – PM-7 Portal Monitor; Revision 4
- HP-06.100; Instrument Operating Procedure – SAM-11 Small Article Monitor; Revision 7
- HP-07.018; Instrument Calibration Procedure – Ion Chambers; Revision 9
- HP-07.040; Instrument Calibration Procedure – JL Shepherd Model 89-400 Calibrator Source Characterization Verification; Revision 5
- HP-07.072; KPS PCM-1C Calibration Record Sheet A; June 7, 2012
- HP-07.096; Instrument Calibration Procedure – RAM GAM-1; Revision 5
- HP-07.109; Instrument Calibration Procedure – MGP TelePole; Revision 6
- HP-07.112; Instrument Calibration Procedure – AMP Series Dose Rate Instrument; Revision 5
- HPF-220; KPS Radiac Calibration Worksheet; Various Dates
- HPF-224; KPS RP Instrument Response Investigation Report; Various Dates
- ICP-45-26; RM-Channel R-5 Spent Fuel Area Radiation Monitor Calibration And Function Test; November 21, 2012
- RP-KW-001-006; Quality Assurance For Radiocounting Equipment; Revision 2
- RP-KW-005-021; Portable Radiation Survey Instruments Checks And Test; Revision 3
- RP-KW-007-099; Calibration Certificate-Eberline PM-7; February 3, 2012
- SP-45-050.18; RMS Channel R-18 Waste Discharge Liquid Radiation Monitor Calibration; June 1, 2012
- SP-45-050.23; RMS Cannel R-23 Control Room Ventilation Radiation Monitor Calibration; September 6, 2012

4OA1 Performance Indicator Verification

- CA235305; Track The MSPI CDE Updates With A Due Date Of 7/30/2012
- CA242110; Track Update To 2nd Quarter Operational Critical Hours Data With 3rd Quarter
- Control Room Log Entries Related To Reactor Coolant System Leak Rate Checks; October 1, 2011 To September 30, 2012
- CR475092; Error Discovered In Submitted RHR Reliability 1st Quarter 2012 MSPI Data
- CR484764; ROP Scram Audit By The NRC For 2011-2012
- DEP Opportunities; Third Quarter 2011 Through Second Quarter 2012

- ERO Personnel Participation; Third Quarter 2011 Through Second Quarter 2012
- List Of TS Related MREs; July 2011 To September 2012
- MRE014358; Loose Connector Found During Testing Of Cable 16P11 For SW Pump 1B1
- MRE014966; MRE For B Phase 1-301 Relay ICS Pick Up Found High
- MRE015042; Identified Leak In N31/N35 Detector Cable (1R1087R)
- MRE015055; Containment Leakage Exceeds TS Limits For Bypass Leakage
- MRE015380; For 1A Zone SV Charcoal Filter Efficiency Test Failure
- NEI 99-02; Revision 6
- OP-KW-OSP-RCS-001; Reactor Coolant System Leak Rate Check, System 36; Completed April 30, 2012
- Siren System Availability Test Records; Third Quarter 2011 Through Second Quarter 2012
- Tech Spect 3.4.13; RCS Operational Leakage; Amendment No. 207

4OA2 Identification and Resolution of Problems

- ACE 000504; Troubleshooting Following 6/29/07 Trip Of Turbine Building FCU A
- ACE 019303; SPING Monitor Indications
- CA019441; CA To Maint (MM(To Determine / Initiate / Implement Correct Actions As Applicable
- CA020745; Brief The Mechanics On The Findings Correction Action 19441
- CA020747; Brief The Electricians On The Findings Of Corrective Action 19441
- CA020747; Revise Lesson Plan LP#: MD-LP 2.1.4, Bearings
- CA020863; Revise Mechanical Maintenance Procedures To Include Bearing Configuration
- CA020865; Revise Electrical Maintenance Procedures To Include Bearing Configuration
- CA020873; Create PMs For Relubrication Of Double-Shielded Bearings
- CA023039; CA To Maintenance To Place Procedure PMP-16-02 On Hold
- CA023040; CA To Procedures To Revise PMP-16-02 Prior To Its Next Use
- CA023041; CA To Maintenance To Review Balance Of Equipment In PMP-16-02 For Over Greasing
- CA024428; CA To Mtn To Ensure Det. Process When Sealed Bearings Are Installed
- CA077593; Revise GMP-251, GMP-251-01, And Associated EM Procedures For Lubricating Bearings
- CA085805; Submit Procedure Enhancements Items For GMP-251 To The Procedures Group
- CA242556; Ops (Schmitt/Gauger) To Track APC For SI-3
- CR020373; Procedure Temporary Change Missing Signature Per GNP-03.01.01
- CR405966; Planned Maintenance On RBV SPING Impacts EP-AA-303
- CR487388; "B" Fuel Oil Tank Indicator Erratic
- Documentation Of Information Sharing; Mechanical Maintenance Group, CA-20745 Bearing Lubrication; January 2, 2008
- Drawing OPERXK-100-38; Chemical & Volume Control System; Revision Z
- E-1; Loss Of Reactor Or Secondary Coolant; Revision 27
- E-3113, Schematic Diagram MCC 1-52B Motor 1-418, Revision J
- E-3904, Schematic Diagram MCC 1-62E Motor 1-1292, Revision A
- E-3906, Schematic Diagram MCC 1-52C Motor 1-1293, Dated 06-03-2011
- ECA-1.3; Containment Sump Blockage; Revision 12
- EP-AA-303; Equipment Important To Emergency Response; Revision 3
- EPIP-RET-03C; Post Accident Operation Of The High Radiation Sample Room; Revision 21
- ER-AA-1021; Component Health Report; Revision 3
- ER-AA-PRS-1001; Plant Health Committee; Revision 3
- ER-AA-SYS-1001; System Health Report; Revision 6
- GMP-251; Common Electrical Preventive Maintenance Tasks; Revision 30

- GMP-251-01; Electrical Component Lubrication Information; Revision 24
- KPS EAL Effectiveness Review; PPCS Loss Of SPING Indication; November9, 2012
- KPS IST Basis Valve Data Sheet; Primary Sample System, ID No. 37-PS; Revision 10
- KPS Operation Aggregate Index; September 13, 2012
- LP# MD-LP 2.1.4; Multiple Discipline; Completed May 14, 2008
- LP# MD-LP 2.1.6; Multiple Discipline; Completed February 28, 2012
- ML 8804060370; NRC Information Notice 88-12: Overgreasing Of Electric Motor Bearings; April 12, 1988
- ML 9407080037; NRC Information Notice 94-51: Inappropriate Greasing Of Double Shielded Motor Bearings; July 15, 1994
- OP-AA-1500, Attachment 1; Alternate Plant Configuration Sheet; August 20, 2012
- OP-AA-1500, Operational Configuration Control; Revision 10
- OP-AA-1700; Operations Aggregate Impact; Revision 5
- OPERM-204-1, Flow Diagram – Condensate and Gland Seal Systems, Revision A
- OPERM-205, Flow Diagram – Feedwater System, Revision BM
- OPERXK-100-36, Flow Diagram – Chemical and Volume Control System, Revision BH
- PMP-16-02; TAV – Turbine Building Ventilation QA-1 Motor Maintenance; Revision 12
- POD CR447013, Revision 1; ACC-15 And ACC-16 QA Classification; Completed December 2, 2011;
- POD For CR351236 And CR484536, Revision 3; Completed August 13, 2012
- R*Time Alarm Logger; Page 423; March 3, 2011
- R*Time Alarm Logger; Page 45; March 11, 2011
- RP-KW-005-004; Effluent Monitoring And Sampling Requirements; Revision 13
- System Health Report; 02-SW; Q4-2012
- System Health Report; 05B-AFW; Q4-2012
- System Health Report; 10-EDG; Q4-2012
- Tracking And Processing Record For E-0-06; Fire In Alternate Fire Zone; December 10, 2007
- WM-AA-100; Work Management; Revision 18

4OA3 Follow-Up of Events and Notices of Enforcement Discretion

- ACE 019063; Charging Motor For Breaker Installed At Location 1-606BKR (Safety Injection Pump 1B) Failed To Stop; Event Date February 29, 2012
- ACE 019152; 13242BKR Failed To Close And Charging Motor Would Not Stop; Event Date April 28, 2012
- ACE 019269; Concern If Surveillance Requirement 3.4.14.2 Is Met
- ACE 19211; 1A Zone SV Charcoal Filter Efficiency Test Failure
- CA242535; Ensure That The Flaw Is Characterized By Successive Metal Removal And PT Inspect
- Calculation No. CEM-0111; Structural Integrity Evaluation Of Through-Wall Flaw In SI Piping At Weld; August 28, 2012
- CR468965; Failure Analysis Report For SBV System Standoffs From Lord Corp.
- CR484084; KPS Chemistry Technician Compliance With 10CFRPart26, Subpart I – Managing Fatigue
- CR485375; SI-3 Has A Small White Boric Acid Deposit At The Upstream Weld
- CR488003; Evaluate If Surveillance Requirement 3.4.14.2 (RHR Interlock @ 450 PSI) Is Met
- Drawing ISIXK-100-29; Safety Injection System; Revision AC
- EN 48209; Minor Thru-Wall Leak At Weld In Safety Injection Suction Piping; Event Date August 20, 2012
- LER 05000305/2012-008-00; Residual Heat Removal System Interlock Surveillance Not Met Due To Improper Setpoint

- LER 2012-002-00; Safety Injection Inoperable For Longer Period Than Allowed By Technical Specifications; April 29, 2012
- LER 2012-003-00; Nuclear Instruments Inoperable For Longer Period Than Allowed By Technical Specifications; June 13, 2012
- LER 50-305/2011-005-01; Shield Building Ventilation Train Inoperable For Longer Period Than Allowed By Technical Specifications; May 24, 2012
- LER 50-305/2012-006-00; Train A Special Ventilation Inoperable For Longer Peior Than Allowed Due To Charcoal Filter Efficiency; September 14, 2012
- LTR000639; LTR To Evaluate For Reportability For 34-RHR-Resdual Heat Removal
- MRE015560; Evaluation Of Residual Heat Removal (RHR) System Interlock Function

40A5 Other Activities

- 9.6-7 And 2.6-1; KPS USAR; Revision 23.01
- AWC No. KW-WB-003; Diesel Generator 1A; Completed August 7, 2012
- AWC No. KW-WB-005; "A" SW Pump Area East Of "A" CW Pit; Completed July 12, 2012
- AWC No. KW-WB-007; Inside RWST Shield Structure; Completed July 12, 2012
- AWC No. KW-WB-019; Relay Room; Completed August 7, 2012
- AWC No. KW-WB-023; Control Rod Drive Room; Completed August 7, 2012
- CA198621; Det, Doc And Resolve NRC Questions On RAS000105 Assumptions Following Walkdown (Inactive)
- CR332686; Evaluation If 50.75(g)(2) Applies To The Sea Lands And KPS; Dated April 28, 2009
- CR348087; Possible Inadequate Door Seal On Seiche Door 165
- CR384397; Apparent Degradation Of Floor Plate Between Traveling Water Screens B1 And B2
- CR438386; Pipe Not Shown On Drawing
- CR453617; Review 2011 Groundwater Results For Any Trends And Generate Actions If Required; Dated November 21, 2011
- CR472733; NRC Resident Comment On Pre Job Briefs
- CR481430; Can Not Measure CO2 At levels Necessary To Evaluate EAL HA3.1
- CR481431; Pinhole Boric Acid Leak Identified On Base Weld Of RWST
- CR481556; Inadequate Compensatory Measure
- CR481947; Revision Needed To OD 492
- CR482181; BDB 2.3 Seismic – Light Fixture Attached To Hanger AC-H68 W68 With Temporary Wire
- CR482597; Flooding BDB Walkdown – Door 87
- CR482631; Door 166 Is Missing The Drip Shield That Is Required By Design
- CR482656; Pen 815 Has Signs Of Moisture Weepage
- CR482665; 1A1 Traveling Water Screen Issues
- CR482703; NRC Questions Concerning OD 492 Revision 1
- CR482724; Screenhouse Roof Inspection Issues (BDB 2.3 Flooding)
- CR482733; BDB 2.3 Flooding Walkdowns – NRC Resident Comment
- CR482779; BDB 2.3 Flooding: Plug Near High Rad Sample Room Condensing Unit Is Degraded
- CR482782; BDB 2.3 Auxiliary Building North Missing Or Degraded Plugs
- CR482785; Storm Drain Covers
- CR482799; Staining On Wall Below Cable Penetration
- CR482810; BDB 2.3 Flooding: Staining Noted On Wall/Ceiling Above Door 83
- CR482813; BDB 2.3 Flooding: Pen In Aux Bldg 585' Rad Waste Area Shows Previous Leakage

- CR482814; BDB 2.3 Staining On Walls In Potatoe Bins (PB-4, PB-5, PB-7) And At Hatch #996
- CR482863; Flooding Credited Cable Seals Were Inspected
- CR482914; A Diesel Transfer Pump Discharge Line Seal
- CR482921; BDB 2.3 Flooding: Door 449 (TSC Back Strwl) Material Condition Not IAW Drawings
- CR482959; BDB 2.3 Flooding: Door 437 Is Not Consistent With The Drawings
- CR482999; BDB 2.3 Flooding: Additional Evaluation required Of Potential Ponding Near Door
- CR483043; BDB 2.3 Flooding ISFSI Walkdown
- CR483091; BDB 2.3 Flooding – Configuration Enhancements Storm Drain Walkdown
- CR483100; BDB 2.3 Flooding: Drawings Don't Represent Actual Configuration And Weatherstrip
- CR483104; BDB 2.3 Flooding Walkdowns – Configuration Control
- CR483108; BDB 2.3 Flooding Walkdowns – Preventive Maintenance
- CR483111; BDB 2.3 Flooding: Degradation Of Rubber Barrier On Outside Of The Turbine Building
- CR483117; BDB 2.3 Flooding: Design Drawing Discrepancy For Door 64
- CR483128; Minor corrosion And Weather Stripping Damage On Door 61 Frame
- CR483330; 1B1 Traveling Water Screen Door Seal Dislodged (BDB 2.3 Flooding)
- CR483337; 1B2 Traveling Water Screen Minor Issues (BDB 2.3 Flooding)
- CR483394; BDB Flooding Walkdown – Door 182
- CR483417; Area Drain Slow To Drain
- CR483452; B Screenhouse Wall Walkdown Results
- CR483459; BDB 2.3 Flooding NRC Comment On Temporary Flood Barrier
- CR483460; B Diesel Transfer Pump Pit Walkdown Results
- CR483475; BDB 2.3 Flooding NRC Question On Flooding Actions
- CR483697; Forebay Inspection Material Conditions
- Drawing A-213; General Arrangement Screenhouse And Circulating Water Discharge; Revision AA
- Drawing A-586-12; Door Weather Stripping; Revision B
- Drawing A-586-3-1; Door Schedule Doors 144-196; Revision D
- Drawing A-586-3-2; Door Schedule Doors 144-196; Revision D
- Drawing A-586-7; Door Notes; Revision K
- Drawing A-586-9; Door Frames; Revision B
- Drawing S-602; Screenhouse Floor Plan – El. 586'-0"; Revision Y
- EPRI Seismic Walkdown Guidance For Resolution Of Fukushima Near-Term Task Force Recommendation 2.3: Seismic; 2012 Technical Report
- ER-AA-BPM-101; Underground Piping And Tank Integrity Program; Revision 5
- ER-KW-BDB-FLD-001; Walkdown Of Flood Protection Features; Revision 0
- KW-F-2012-001-01; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 21, 2012
- KW-F-2012-002-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed July 23, 2012
- KW-F-2012-004-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 2, 2012
- KW-F-2012-018-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 2, 2012
- KW-F-2012-021B-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 2, 2012
- KW-F-2012-022B-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 2, 2012

- NEI 12-07; guidelines For Performing Walkdowns Of Plant Flood Protection Features; Revision 0-A
- RAS Documentation For CRS 348085, 348087, 348081 / RAS000105; September 18, 2009
- RP-AA-502; Groundwater Protection Program; Revision 4
- RP-AA-503; Radiological Decommissioning Records – 10 CFR 50.75(g) Program; Revision 0
- RP-AA-504; Remediation Process For The Groundwater Protection Program
- SA-KW-EVL-GEN-001; Planned Barrier Impairment Control; Revision 2
- SWC No. KW-WD-SWEL-006; Reactor Trip Breakers; Completed August 7, 2012
- SWC No. KW-WD-SWEL-038; EDG 1A Oil Cooler Water Outlet; Completed August 7, 2012
- SWC No. KW-WD-SWEL-039; Scrnhse Exh Fan 1A Disch Dmpr A SV; Completed July 13, 2012
- SWC No. KW-WD-SWEL-050; Outside Air Inlet Damper To EDG Room 1A; Completed August 7, 2012
- SWC No. KW-WD-SWEL-061; Diesel Generator 1A; Completed August 7, 2012
- SWC No. KW-WD-SWEL-066; Screenhouse 1A Area TS; Completed July 13, 2012
- SWC No. KW-WD-SWEL-067; D/G Room 1A Dmpr Control TS; Completed August 7, 2012
- SWC No. KW-WD-SWEL-089; safety Inj/Aux Coolant 1C1; Completed August 7, 2012
- SWC No. KW-WD-SWEL-091; Engineered Safeguard Train A; Completed August 7, 2012
- SWC No. KW-WD-SWEL-100; Refueling Water Storage Tank; Completed July 13, 2012
- SWC No. KW-WD-SWEL-013; Service Water Pump 1A1; Completed July 13, 2012
- Walkdown Package (WDP) For KW-F-2012-001-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed August 31, 2012
- Walkdown Package (WDP) For KW-F-2012-002-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed July 23, 2012
- Walkdown Package (WDP) For KW-F-2012-049-00; Beyond Design Basis Project – Walkdowns Of Flood Protection And Mitigation Features; Completed September 2, 2012

40A7 Licensee-Identified Violations

- ACE 019269; Concern If Surveillance Requirement 3.4.14.2 Is Met
- CA244523; Determine And Document Correct Setpoint Associated With RHR Interlock
- CR488003; Evaluate If Surveillance Requirement 3.4.14.2 (RHR Interlock @ 450 PSI) Is Met
- ETE-KW-2012-0044; RHR Pressure Interlock Setpoint; Revision 0
- LER 05000305/2012-008-00; Residual Heat Removal System Interlock Surveillance Not Met Due To Improper Setpoint
- MRE015560; Evaluation Of Residual Heat Removal (RHR) System Interlock Function

NRC-Identified Condition Reports

- CR489875; 2012 PI&R – Minor violation Appendix R Issues Related To Active Fire Impairment
- CR489877; 2012 PI&R – Observation – SW Deadleg Replacement
- CR489879; 2012 PI&R Inspection Observation – Radiac Calibration Worksheet Completeness
- CR489887; 2012 PI&R Inspection Observation – RP Instrument Response Investigation Evaluation
- CR489954; 2012 PI&R Inspection – Actions Required To Resolve Impairment No. 07-100
- CR489958; 2012 PI&R NRC Non Cited Violation-Improper Restraint Of Battery BRB-101
- CR490084; Impact Of VPL Tmod On Swap From Imp In To Imp Out
- CR490161; NRC Question On RHR Area Flood Barriers
- CR490174; 2012 CDBI ECA-0.0 Step 38 RNO (a) Question
- CR490187; NRC Concern With Engineering Technical Evaluation ETE-CME-2012-0015
- CR490292; NRC Questions Integrity Of SI-3 As Isolation Valve With Degraded Support

- CR490316; 2012 CDBI CC Pump Recirc Valves (CC-21A, -22A, -23B, -24B) Are Not Sealed
- CR490353; 2012 CDBI: Intermediate Time Critical Operator Actions In An SGTR Event
- CR490378; 2012 CDBI – Request For Performing A Future Service Water System Flow Test
- CR490659; Minor Oil Leak Under IA dryer B Control Panel
- CR490860; NRC Inspector Questions Procedure Clarity
- CR490887; Ability To Assess EALs May Have Been Degraded Due To SPING Failures In 2011
- CR490976; 2012 CDBI – NRC Identified That NOP-SW-001 Needs To Be Updated
- CR491044; NRC Identified Potential Discrepancy In Priority For PMs On EP Equipment
- CR491149; 2012 CDBI Identified No Acceptance Criteria In The Battery Surveillance Procedure
- CR491405; 2012 CDBI – DC MOV Calculation Not Readily Available At KPS
- CR491721; NRC Non Cited Violation – Inadequate Evaluation Of A Heavy Load Evolution
- CR491765; 2012 CDBI: Incorrect Battery Voltage Values In USAR And Tech Spec Bases
- CR491773; 2012 CDBI Identified Issue With EOP ES-1.3
- CR491901; NRC Finding – Timeliness Of OD-239 (X/Q) Update Regarding Locked Rotor Analysis
- CR492079; 2012 CDBI: CDBI Areas For Improvement On Calculation C11723
- CR492138; 2012 CDBI – Minor Water Intrusion In Gas Circuit breaker Control Cabinets
- CR492170; 2012 CDBI: Calculation C11727 Non-Conservative Assumption
- CR492363; NRC Questions N/A Vs. Operable But Non-Conforming In CR475077
- CR492485; 2012 CDBI TCA Validation Criteria Does Not Agree With Engineering Basis Document
- CR493206; SFP Cooling USAR Section May Not Fully Reflect Amendments 150 & 172
- CR493834; 2012 CDBI – Calculation C-038-002 Rev. 4 Add. D
- CR493890; 2012 CDBI – EDG Starting Air Leakage Testing
- CR493894; 2012 CDBI – Amperage Of M&TE Utilized To Measure As-Found Contact Resistance
- CR493897; NRC Questioned The Completeness Of GMP-172
- CR494071; 2012 CDBI: Voltage Discrepancy For LOCA-2B And SA-7003B
- CR494294; 2012 CDBI – Review IEE Document Update Process
- CR494297; 2012 CDBI: Potential MOV Stalls Not Proven By Calculation To Not Occur
- CR495689; Placekeeping Error Identified – MA-KW-MPM-MDS-001
- CR495694; Potential Discrepancy In component Classification, RSC D/G Starting Batteries
- CR495716; NRC Resident Notified Control Room Of A Pen In Trench Near Door 8
- CR496976; Water Was Flowing Onto Service Water Strainer Pressure Switch 16420
- CR497117; 2012 CDBI – ETE For DC Bus Minimum Voltages
- CR498294; 2012 CDBI CC Pump Recirc Valves – Followup For NCV
- CR498310; Potential Improvement Identified During Discussion With NRC
- CR498692; Incorrect RCS Identified Leakrate Logged
- CR499447; Light White Dry boric Acid At Pipe Cap Near SI-35
- CR499872; HELB Jet Impingement On Circuit Not Appropriately Documented In OD 222
- CR499941; Breaker 16211, Bus 52 & 62 Tie Green Open Local Indicating Light Burnt-Out
- CR500141; Lake Michigan Is Projected To Be Below Historic Low Levels
- CR500145; EAL Chart Table H-2 Uses 1955 IGLD For Lake Level
- CR500352; NRC Question On UHS LCO
- CR500442; NRC Feedback On Control Room Performance
- CR500703; Procedure Change Identified During The EOC Review For ACE019342 – CC
- CR500705; Procedure Change Identified During The EOC Review For ACE019342 – SI
- CR500706; Procedure Change Identified During The EOC Review For ACE019342 – ICS
- CR500707; Procedure Change Identified During The EOC Review For ACE019342 – RHR

- CR500710; Procedure Change Identified During The EOC Review For ACE019342 – SW
- CR500931; EDG A And B Air Sample Valves QA Typing Inconsistent With Valve Use
- CR500940; Checklist Shows Incorrect Position On SA-16093-1
- CR500963; Checklist Shows Incorrect Component / ID For EDG(C)-16439
- CR500996; EDG Fuel Oil Day Tank 1B2 Leaking Fuel

LIST OF ACRONYMS USED

°F	Degrees Fahrenheit
ABSV	Auxiliary Building Special Ventilation
ACE	Apparent Cause Evaluation
ADAMS	Agencywide Document Access Management System
AFW	Auxiliary Feedwater
ALARA	As-Low-As-Is-Reasonably-Achievable
ANS	Alert and Notification System
AOP	Abnormal Operating Procedure
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CO ₂	Carbon Dioxide
CR	Condition Report
CSP	Containment Spray Pump
DC	Design Change
DRP	Division of Reactor Projects
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ERO	Emergency Response Organization
ESF	Engineered Safety Feature
FP	Fire Protection
FW	Feedwater
HELB	High Energy Line Break
IDLH	Immediately Dangerous to Life and Health
IGLD	International Great Lakes Datum
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ITS	Improved Standard Technical Specification
JPM	Job Performance Measure
KNPP	Kewaunee Nuclear Power Plant
KPS	Kewaunee Power Station
kW	Kilowatt
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LORT	Licensed Operator Requalification Training
MSO	Multiple Spurious Operation
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NRC	U.S. Nuclear Regulatory Commission
NSR	Non-Safety-Related
OOS	Out-of-Service
OWA	Operator Workaround
PARS	Publicly Available Records System
PI	Performance Indicator

PIM	Plant Issue Matrix
PMT	Post-Maintenance Testing
PORV	Power-Operated Relief Valve
PPR	Plant Performance Review
PRA	Probabilistic Risk Assessment
PSIG	Pounds Per Square Inch Guage
RHR	Residual Heat Removal
RP	Radiation Protection
RWST	Refueling Water Storage Tank
SAT	Systems Approach to Training
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SG	Steam Generator
SI	Safety Injection
SL	Severity Level
SPING	Special Particulate Iodine Nobel Gas
SR	Safety-Related
SR	Surveillance Requirement
SSC	Systems, Structures, and Components
SW	Service Water
SWEL	Seismic Walkdown Equipment List
TDAFW	Turbine-Driven Auxiliary Feedwater
TI	Temporary Instruction
TRM	Technical Requirements Manual
TS	Technical Specification
TSC	Technical Support Center
URI	Unresolved Item
USACE	United States Army Corp of Engineers
USAR	Updated Safety Analysis Report
VCT	Volume Control Tank
WO	Work Order

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

Sincerely,

/RA by Nirodh Shah for/

Kenneth Riemer, Branch Chief
Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000305/2012003;
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

DISTRIBUTION:

John Cassidy
RidsNrrDorlLp13-1 Resource
RidsNrrPMKewaunee
RidsNrrDirslrib Resource
Chuck Casto
Cynthia Pederson
Steven Orth
Allan Barker

Christine Lipa
Carole Ariano
Linda Linn
DRPIII
DRSIII
Tammy Tomczak
ROPreports.Resource@nrc.gov

DOCUMENT NAME: Kewaunee IR 2012005

Publicly Available Non-Publicly Available Sensitive Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII		RIII		RIII
NAME	NShah for KRiemer:rj						
DATE	2/8/13						

OFFICIAL RECORD COPY