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

January 24, 2013

EA-12-272

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 EMERGENCY PREPAREDNESS INSPECTION REPORT 05000305/2012503; PRELIMINARY WHITE FINDING

Dear Mr. Heacock:

On December 17, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an Emergency Preparedness inspection at your Kewaunee Power Station. The enclosed report documents the inspection findings, which were discussed on December 17, 2012, with Mr. S. Jordan and other members of your staff.

The inspections 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.

This report documents an NRC-identified finding that has been determined to be preliminarily White, a finding with low to moderate safety significance that may require additional NRC inspections. As described in Section 1EP5.1 of this report, a finding was identified for failure to comply with 10 CFR 50.54(q)(2) and 10 CR 50.47(b)(4). Specifically, from February 28, 2011, until March 30, 2011, Kewaunee Power Station's unidentified loss of System Particulate, Iodine, and Noble Gas (SPING) indication on the Plant Process Computer System (PPCS) and Radserv stations precluded action to restore the capability to classify emergency action levels RG1.1, General Emergency, and RS1.1, Site Area Emergency. The NRC believes that your staff had the opportunity to identify this condition at its onset. This finding was assessed based on the best information available, using the Emergency Preparedness Significance Determination Process (SDP). The final resolution of this finding will be conveyed in separate correspondence.

The finding is also associated with an apparent violation of NRC requirements and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy, which can be found on the NRC's Web site at http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html.

In accordance with NRC Inspection Manual Chapter 0609, we intend to complete our evaluation using the best available information and issue our final determination of safety significance within 90 days of the date of this letter. The SDP encourages an open dialogue between the NRC staff and the licensee; however, the dialogue should not impact the timeliness of the staff's final determination.

Before we make a final decision on this matter, we are providing you with an opportunity to either: (1) attend a Regulatory Conference where you can present to the NRC your perspective on the facts and assumptions the NRC used to arrive at the finding and assess its significance; or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. To announce the conference, a public meeting notice and press release will be issued. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of your receipt of this letter. If you decline to request a Regulatory Conference or submit a written response, you relinquish your right to appeal the final SDP determination; in that, by not doing either, you fail to meet the appeal requirements stated in the Prerequisite and Limitation Sections of Attachment 2 of IMC 0609.

In addition, if you disagree with the cross-cutting aspect assigned to the 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.

Please contact Donald Funk, Acting Chief, Plant Support Branch, at (630) 829-9822, and in writing within 10 days of the date of this letter to notify the NRC of your intended response. If we have not heard from you within 10 days, we will continue with our significance determination and enforcement decision. The final resolution of this matter will be conveyed in separate correspondence.

Since the NRC has not made a final determination in this matter, a Notice of Violation is not being issued for this inspection finding at this time. Please be advised that the number and characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review.

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

Kenneth G. O'Brien, Acting Director
Division of Reactor Safety

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

Enclosure: Inspection Report 05000305/2012503
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-305
License No:	DPR-43
Report No:	05000305/2012503
Licensee:	Dominion Energy Kewaunee, Inc,
Facility:	Kewaunee Power Station
Location:	Kewaunee, WI
Dates:	December 10 through December 17, 2012
Inspectors:	J. Beavers, Emergency Preparedness Inspector R. Jickling, Senior Emergency Preparedness Inspector R. Krsek, Senior Resident Inspector K. Barclay, Resident Inspector
Approved by:	D. Funk, Acting Chief Plant Support Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000305/2012503; 12/10/2012 – 12/17/2012; Kewaunee Power Station (KPS); Emergency Preparedness Focused Baseline Inspection.

This report covers an announced baseline inspection by two regional inspectors and two resident inspectors. The inspectors identified a finding with a preliminary significance of White and one associated apparent violation (AV). The significance of inspection findings are indicated by their color (i.e., Greater Than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated June 2, 2011. The cross-cutting aspect is 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: Emergency Preparedness

- Preliminarily White: A finding having a significance of preliminarily White with one AV of 10 CFR 50.54(q)(2) associated with risk-significant planning standard 10 CFR 50.47(b)(4) was identified by the NRC for the licensee's failure to follow and maintain the effectiveness of its emergency plan. Specifically, from February 28, 2011, until March 30, 2011, KPS's unidentified loss of System Particulate, Iodine, and Noble Gas (SPING) indication on the Plant Process Computer System (PPCS) and Radserv stations precluded action to restore the capability to classify Emergency Action Levels (EALs) RG1.1, General Emergency, and RS1.1, Site Area Emergency. The NRC believes that the KPS staff had the opportunity to identify this condition at the time of the failures. On March 30, 2011, the system engineer identified the failure during a system walk down in CR 419976, and the server and computer point were subsequently restored to service.

  This finding was determined to be more than minor because it was associated with the Emergency Response Organization performance attribute of the Reactor Safety – Emergency Preparedness 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." As Appendix B was revised in February 2012, the finding was evaluated using both the version in effect at the time of the violation and the current version. Under both versions, other than changing the names of the involved Section and Sheet/Attachment, there was no effect on the final outcome. The issue was determined to be a Failure to Comply. The risk was evaluated using Section 4.0 of IMC 0609 and Sheet 1, "Failure to Comply," in the previous revision, and Section 5.0 and Attachment 2, "Failure to Comply Significance Logic," in the current revision, along with their associated narratives. With EALs, RG1.1 and RS1.1, ineffective, the inspectors considered mitigating factors, such as alternative EALs, within the same initiating condition and determined the alternative EALs were such that an accurate declaration of the initiating condition would have been made. Therefore, the inspectors determined that no loss of Risk-Significant Planning Standard (RSPS)

function existed. However, the alternative EAL classifications would have been delayed, and, therefore, the event would have been declared in a degraded manner. The finding was preliminarily determined to be of low to moderate safety significance (White) in that ineffective EALs, RG1.1, and RS1.1 existed, degraded an RSPS function, and affected the ability of the licensee to properly classify events involving a radiological release.

A cross-cutting aspect (P.1(d)) was identified within the Corrective Action Program component. The failure to identify the loss of SPING indication on the PPCS and Radserv stations prevented appropriate corrective actions to address the degradation of this risk significant planning standard function. (Section 1EP5.1)

B. Licensee-Identified Violations

No violations were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP5 Maintenance of Emergency Preparedness (71114.05)

.1 Maintenance of Emergency Preparedness

a. Inspection Scope

The inspectors performed in-office and on-site reviews of site procedures, documents, and corrective actions related to the unidentified loss of Kewaunee Power Station's (KPS's) Auxiliary Building and Reactor Building System Particulate, Iodine, and Noble Gas (SPING) high range effluent radiation monitor indication on the Plant Process Computer System (PPCS) and Radserv stations between February 28, 2011, and March 30, 2011, to determine compliance with the regulations 10 CFR 50.54(q)(2). Processes describing the identification, compensatory measures, and repair of Emergency Action Level (EAL)-related equipment were discussed with emergency preparedness and emergency response organization personnel. Documents reviewed are listed in the Attachment to this report.

This maintenance of emergency preparedness inspection constituted zero samples as defined in Inspection Procedure 71114.05-06.

b. Findings

Introduction: A finding having a significance of preliminarily White with one apparent violation of 10 CFR 50.54(q)(2) associated with risk-significant planning standard 10 CFR 50.47(b)(4) was identified by the NRC for the licensee's failure to follow and maintain the effectiveness of its emergency plan. Specifically, from February 28, 2011, until March 30, 2011, KPS's unidentified loss of SPING indication on the PPCS and Radserv stations precluded action to restore the capability to classify Emergency Action Levels, RG1.1, General Emergency, and RS1.1, Site Area Emergency.

Description: On February 28, 2011, KPS lost indication of the Auxiliary Building and Reactor Building SPING high range effluent radiation monitors due to a server failure between the local instruments and the primary plant computer system. Indications of this failure were immediately available in the control room and on both the master and slave servers in separate facilities. No record of this issue was documented on the date of the failure or subsequent weeks by control room personnel monitoring the primary plant computer system, by instrument and control personnel that maintain the server, or by radiation protection personnel that continuously occupy the room in which the master server and local electronic alarm panel resides. Accordingly, the NRC believes that KPS staff had the opportunity to identify this condition. On March 30, 2011, 30 days later, the system engineer identified the failure during a system walk down in CR 419976, and the server and computer point were subsequently restored to service the same day. For 30 days, SPING indication was not available from the PPCS or on the Radserv stations. On October 9, 2012, the NRC resident inspector raised a question on a potential degradation associated with the failed SPING instrumentation. As a result, CR 490887 was generated. On October 10, 2012, the licensee generated Event Notification 48397,

Reduced Radiation Monitoring Capability for Auxiliary Building and Containment Vent Stacks, stating that the SPING instruments would not have been sufficient to identify EALs, RG1.1, General Emergency, and RS1.1, Site Area Emergency. From October 15, 2012, through October 19, 2012, this issue of concern was reviewed during an Emergency Preparedness Baseline Inspection. Interviews with operations, radiation protection, engineering, and emergency preparedness staff demonstrated an incomplete understanding of the initial failure and local instrument availability by the station's staff. An additional in-office inspection was scheduled upon completion of the licensee's assessment of the loss of SPING indication.

The licensee approved a final assessment of the EAL Effectiveness Review, PPCS Loss of SPING Indication, on November 11, 2012. The assessment determined that the actual SPING radiation monitors remained functional, but the PPCS and Radserv stations indications had been lost during the period in question. Without control room indications available during a radiological release of the magnitude in question, the shift manager would have processed multiple indications; identified the failed indications, evaluated alternative indications; briefed a damage control team on the job task, radiological risks, and tracking methods; and dispatched personnel to the local SPING monitor. The damage control team would then travel to the local indicators, obtain the local readings, and communicate the local readings to the control room. The control room would then process the validated local readings and evaluate them using the station's EALs for appropriate classification.

The inspectors determined that operations knowledge and use of the local SPING monitor for EAL classification was not documented in any procedure or training material. Accordingly, the NRC does not believe that the availability of the local indication was a viable mitigating factor.

The NRC determined the unidentified loss of the SPING instrumentation at the PPCS and Radserv stations and resultant lack of licensee response failed to restore the capability to classify EALs, RG1.1 and RS1.1, and rendered them ineffective. Additionally, the instrument failure would also inhibit the licensee's ability to continually assess the magnitude of a radioactive material release.

Analysis: The inspectors determined the failure of KPS to identify the loss of the SPING instrumentation at the PPCS and Radserv stations, involved a failure to meet a requirement and was within the licensee's ability to foresee and correct. Therefore, it met the definition of a performance deficiency. This finding was determined to be more than minor because it was associated with the Emergency Response Organization performance attribute of the Reactor Safety – Emergency Preparedness 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." As Appendix B was revised in February 2012, the finding was evaluated using both the version in effect at the time of the violation and the current version. Under both versions, other than changing the names of the involved Section and Sheet/Attachment, there was no effect on the final outcome. The issue was determined to be a Failure to Comply. The risk was evaluate

using Section 4.0 of IMC 0609 and Sheet 1, "Failure to Comply," in the previous revision, and Section 5.0 and Attachment 2, "Failure to Comply Significance Logic," in the current revision, along with their associated narratives. With EALs, RG1.1 and RS1.1, ineffective, the inspectors considered mitigating factors, such as alternative EALs, within the same initiating condition and determined the alternative EALs were such that an accurate declaration of the initiating condition would have been made. Therefore, the inspectors determined that no loss of Risk-Significant Planning Standard (RSPS) function existed. However, the alternative EAL classifications would have been delayed, and, therefore, the event would have been declared in a degraded manner. The finding was preliminarily determined to be of low to moderate safety significance (White) in that ineffective EALs, RG1.1, and RS1.1 existed, degraded an RSPS function, and affected the ability of the licensee to properly classify events involving a radiological release.

A cross-cutting aspect (P.1(d)) was identified within the Corrective Action Program component. The failure to identify the loss of SPING indication on the PPCS and Radserv stations prevented appropriate corrective actions to address the degradation of this risk significant planning standard function. (Section 1EP5.1)

Enforcement: Title 10 CFR 50.54(q)(2) requires that a holder of a nuclear power reactor operating license follow and maintain the effectiveness of an emergency plan that meets the requirements in Appendix E to this part and the planning standards of 10 CFR 50.47(b). 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."

An apparent violation of 10 CFR 50.54(q)(2) associated with risk-significant planning standard 10 CFR 50.47(b)(4) was identified by the NRC for the failure to follow and maintain the effectiveness of its emergency plan. Specifically, from February 28, 2011, until March 30, 2011, KPS's unidentified loss of SPING indication on the PPCS and Radserv stations precluded action to restore the capability to classify EALs, RG1.1, General Emergency, and RS1.1, Site Area Emergency.

The SPING indications on the PPCS and Radserv stations were restored the same day the loss was identified as described in CR 419976. The finding and associated apparent violation of 10 CFR 50.54(q)(2) and risk-significant planning standard 10 CFR 47(b)(4), is of preliminarily White significance pending completion of the final significance determination **(AV 05000305/2012503-01, Degraded Emergency Action Level Scheme)**.

4. OTHER ACTIVITIES

4OA6 Management Meetings

.1 Interim Exit Meeting

On December 17, 2012, the inspectors presented the focused baseline inspection results to Mr. S. Jordan and other members of your staff. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Asbel, Outage & Planning Manager
C. Edwards, Maintenance Supervisor
M. Haese, Licensing
B. Harris, Emergency Preparedness Manager
S. Jordan, Site Vice President
D. Lawrence, Operations Manager
J. Murphy, System Engineer
T. Olson, Engineering Director (Acting)
D. Pederson, Nuclear Specialist
R. Repshas, Licensing Supervisor
J. Stafford, Safety & Licensing Director
E. Streich, Engineering Supervisor
S. Yuen, Decommissioning Director

Nuclear Regulatory Commission

K. Barclay, Resident Inspector
J. Beavers, Emergency Preparedness Inspector
B. Jickling, Senior Emergency Preparedness Inspector
R. Krsek, Senior Resident Inspector
J. Mancuso, Reactor Engineer
K. Riemer, Branch Chief, Division of Reactor Projects
R. Skokowski, Branch Chief, Plant Support Branch

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000305/2012503-01	AV	Degraded Emergency Action Level Scheme (Section 1EP5.1)

Closed/Discussed

None

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.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

- PPCS Loss of SPING Indication Part 1; November 9, 2012
- PPCS Loss of SPING Indication Part 2; December 17, 2012
- CR 419976; SPING Readings Bad on PPCS and Failed on Radserv Terminal
- CR 490887; EAL Assessment May Have Been Degraded Due to SPING Failures
- Event Notification 48397; October 19, 2012
- ACE 002423; Consequences of SPING Units Being Out of Service Long-Term; September 30, 2003
- KPS Emergency Plan; Revision 36
- KPS EAL Technical Bases Document; Revision 9

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AV	Apparent Violation
CFR	Code of Federal Regulations
EAL	Emergency Action Level
IMC	Inspection Manual Chapter
IR	Inspection Report
KPS	Kewaunee Power Station
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PPCS	Plant Process Computer System
RSPS	Risk-Significant Planning Standard
SDP	Significance Determination Process
SPING	System Particulate, Iodine, and Noble Gas

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

Kenneth G. O'Brien, Acting Director
Division of Reactor Safety

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

Enclosure: Inspection Report 05000305/2012503
w/Attachment: Supplemental Information

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