



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

September 30, 2010

EA-10-139

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 FOLLOW-UP INSPECTION OF EMERGENCY ACTION LEVEL AND EMERGENCY PLAN CHANGES INSPECTION REPORT 05000305/2010502(DRS)

Dear Mr. Heacock,

On July 22, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed its review of an Unresolved Item (URI 05000305/2009005-01). The enclosed report documents the inspection finding which was discussed on September 7, 2010, with Mr. Brian Harris.

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 and interviewed personnel.

Based on the results of this inspection, one NRC-identified finding of very low safety significance was identified. The finding was also reviewed using the NRC Enforcement Policy and involved a violation of 10 CFR 50.54 (q), which contains provisions for making changes to a licensee's emergency plan. If a change that is made to a licensee's emergency plan results in a decrease in effectiveness (DIE), it must be submitted to the NRC for approval before implementing the change. In this case, a change was made to your emergency plan that resulted in a DIE and was not submitted to the NRC for prior approval. This violation was considered for escalated enforcement because it involved a decrease in effectiveness to an aspect of your emergency plan involving assessment. However, the NRC has classified this violation at Severity Level IV Non-Cited Violation (NCV), after determining that its actual and potential safety significance was very low based on the following considerations: (1) The Region recognizes that this issue is relatively isolated, in that the decrease in effectiveness resulted from a single mistake; (2) the impact of the issue was confined to two unusual event classifications, not any of the other higher event classifications; and (3) the revision was provided to the NRC for review after implementation, which reduced the impact to the regulatory process. We also recognize that this issue was entered in your corrective action program in order to correct it. Nonetheless, this violation demonstrates the importance of appropriately and thoroughly screening changes made to your emergency plan and submitting changes that result in a DIE for NRC approval.

If you contest the subject or severity of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U. S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U. S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Kewaunee Power Station. In addition, if you disagree with the characterization of 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. The information that you provide will be considered in accordance with Inspection Manual Chapter 0305.

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

Sincerely,

/RA/

Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 05000305/2010502(DRS)
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: 05000305/2010502

Licensee: Dominion Energy Kewaunee, Inc.

Facility: Kewaunee Power Station

Location: Kewaunee, WI

Dates: July 19 through September 7, 2010

Inspectors: M. Garza, Emergency Response Specialist

Approved by: Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000305/2010502; 7/19/2010 to 9/7/2010; Kewaunee Power Station; Emergency Action Level and Emergency Plan Changes

This report covers an approximate 6-week time period of follow-up inspection and review of the licensee's emergency action level and plan changes. One Green finding was identified by the inspectors. The finding was considered a Severity Level IV Non-Cited Violation (NCV) of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," (ROP) Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

- Severity Level IV/Green. The inspector identified a Green finding and an associated Severity Level IV NCV of 10 CFR 50.54(q) associated with 10 CFR 50.47(b)(2) because the licensee failed to obtain prior NRC approval for a change made to its emergency plan that decreased the effectiveness of the plan. Specifically, the licensee changed wording in their EAL technical basis document for EAL SU5 and CU1, RCS Leakage. The new wording eliminates leakage from the charging and letdown systems from consideration as RCS Leakage and therefore, leakage from these systems that meet the EAL thresholds would not constitute an Unusual Event declaration, using the licensee's revised wording. This change was made without prior NRC approval.

The performance deficiency was more than minor and of very low safety-significance using MC 0612 and MC 0609, Appendix B, because it is associated with the emergency preparedness cornerstone attribute of procedure quality for EAL and emergency plan changes, and it 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. Therefore, the performance deficiency was a finding. Using MC 0609, Appendix B, the inspectors determined that the finding had a very low safety significance. The inspectors also determined that the finding had a cross-cutting aspect in the area of Human Performance, decision-making because the licensee did not recognize that the change that was made to the EAL Technical Basis document decreased the effectiveness of the emergency plan. (H.1.(b)) (Section 1EP4)

B. Licensee-Identified Violations

No violations of significance

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

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

.1 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

This inspection was a follow-up review of URI 05000305/2009005-01. The issue was identified in December 2009 during a routine review of changes implemented to the Kewaunee Power Station Emergency Action Levels (EALs) and EAL Technical Basis Document. The inspectors reviewed applicable licensee documents and had discussions with licensee personnel.

b. Findings

(1) Changes to EAL CU1 and SU5 in the EAL Technical Bases Document Decreases the Effectiveness of the Plan without Prior NRC Approval

Introduction:

A finding of very low safety significance (Green) and an associated Severity Level IV Non-Cited Violation of 10 CFR Part 50.54(q) was identified by the inspectors for a change to the Emergency Action Level Technical Basis document that was made by the licensee without prior NRC approval that decreased the effectiveness of the Emergency Plan.

Description:

Kewaunee Power Station Emergency Action Level Technical Basis, Revision 4, for EALs SU5 and CU1 provides the basis for declaring an Unusual Event due to RCS Leakage. On February 26, 2009, Kewaunee Power Station staff added the following text to Revision 5 of this document: "Per Technical Specification 3.1.d.1 Bases, components that contain or transport the coolant to and from the reactor core make up the RCS. Component joints are made by welding, bolting, rolling, or pressure loading, and valves isolate connecting systems from the RCS. Therefore, a leak identified from Letdown or Charging would NOT constitute a declaration per this EAL." The inspector reviewed EAL Technical Basis Revision 4, and noted that, originally, leakage from the Charging or Letdown System was considered RCS leakage. Therefore, if the leakage coming from these systems meets the thresholds given in the EALs, it would lead to an emergency declaration. However, the change that was added to the EAL Technical Basis document in Revision 5, as written, would exclude leakage coming from the charging or letdown system from being considered as RCS leakage. Therefore, if there is leakage from the Charging or Letdown systems that met the EAL threshold, it would no longer constitute an emergency declaration. This was determined to be a DIE by NRC inspectors because the change that was made eliminated a pathway to make an emergency declaration using the revised wording. This change was not submitted to NRC for prior approval.

Analysis:

The inspector determined that changes made by the licensee to the EAL Technical Basis document decreased the effectiveness of the Emergency Plan and the change was implemented without prior NRC approval. The issue was determined to be a licensee performance deficiency that impacted the regulatory process and, in accordance with MC 0612 "Power Reactor Inspection Reports," was evaluated using the NRC's traditional enforcement policy as well as the Reactor Oversight Process (ROP).

Using the NRC's Enforcement Policy, this performance deficiency was considered for escalated enforcement. However, the NRC has classified this violation as a Severity Level IV, after determining that its actual and potential safety significance was very low based on the following considerations: (1) the issue was relatively isolated, in that the decrease in effectiveness resulted from a single mistake; (2) the impact of the issue was confined to two unusual event classifications, not any of the other higher event classifications; and (3) the revision was provided to the NRC for review after implementation, which reduced the impact to the regulatory process.

Using MC 0612 "Power Reactor Inspection Reports", Appendix B "Issue Screening", the performance deficiency was determined to be more than minor and, therefore, a finding, because it is associated with the emergency preparedness cornerstone attribute of procedure quality for EAL and emergency plan changes, and it 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. Specifically, the licensee made a change to its EAL Technical Basis Document, which was a DIE, because the change eliminated a pathway to get to an Unusual Event by excluding the Charging and Letdown System leakage from consideration as RCS leakage. And, this change was made without prior NRC approval.

The inspector determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Appendix B, "Emergency Preparedness Significance Determination Process." The finding is a failure to comply with 10 CFR 50.54(q) involving the risk significant planning standard 50.47(b)(4), which, in this case, is not considered degraded. This EAL Classification finding is GREEN because it involves two Unusual Event classifications (EAL CU1 and SU5).

This finding has a cross-cutting aspect in the area of human performance, decision-making, because the licensee failed to use conservative assumptions when making decisions and did not demonstrate that nuclear safety was an overriding priority. Specifically, the licensee changed its EAL Technical Basis to remove consideration of leakage from the Charging and Letdown system as RCS leakage and eliminated a pathway to declare an Unusual Event for two EALs (CU1 and SU5). This change was screened through the licensee's 50.54(q) process and was not identified as a DIE. However, after evaluation by the inspector, this change was determined to be a DIE of the emergency plan and it was not approved by the NRC before the change was implemented.

Enforcement:

Title 10 of the Code of Federal Regulation (CFR) 50.54(q) states, in part, "A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in §50.47(b) and the requirements in appendix E of this part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of §50.47(b) and the requirements of appendix E to this part."

Title 10 CFR 50.47(b)(4) states, in part, "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, since February 26, 2009, the licensee made a change to the emergency classification process which decreased the effectiveness of their emergency plan by removing classifiable conditions from an emergency action level. Specifically, they made a change to their EAL Technical Basis document which eliminated leakage from the charging and letdown systems from being considered as a part of the overall calculation of RCS leakage. As a result, leakage from the charging or letdown systems that met the EAL threshold would not lead to an emergency declaration. This change is a decrease in the effectiveness of the Emergency Plan and was made without prior NRC approval.

Because this violation impacted the regulatory process, was of very low safety significance and was also entered into the licensee's corrective action program (as CR390889), this violation is being treated as a Severity Level IV Non-Cited Violation, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000305/2010502-01). This issue has also been dispositioned as a Finding of very low safety significance (Green) (FIN 05000305/2010502-01).

The URI 05000305/2009005-01, "Changes to EAL CU1 and SU5 in the EAL Technical Bases Document Potentially Decreases the Effectiveness of the Plan without Prior NRC Approval" is closed.

4OA6 Management Meetings

.1 Exit Meetings

Meetings were conducted for:

- Follow-up and closure of URI 05000305/2009005-01 with the licensee staff, via telephone on August 10, 2010; and
- Discussion of cross-cutting aspect with licensee staff via telephone on September 7, 2010.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Egdorf, Emergency Preparedness Supervisor
B. Harris, Emergency Preparedness Manager
J. Gadzala, Licensing

Nuclear Regulatory Commission

R. Krsek, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000305/2010502-01	NCV	(Traditional Enforcement) Changes to EAL Technical Bases Document Decreases the Effectiveness of the Plan without Prior NRC Approval
05000305/2010502-02	FIN	Changes Made to EAL Technical Bases that Decreased the Effectiveness

Closed and Discussed

05000305/2009005-01	URI	Changes to EAL CU1 and SU5 in the EAL Technical Bases Document Potentially Decreases the Effectiveness of the Plan without Prior NRC Approval
05000305/2010502-01	NCV	(Traditional Enforcement) Changes to EAL Technical Bases Document Decreases the Effectiveness of the Plan without Prior NRC Approval
05000305/2010502-02	FIN	Changes Made to EAL Technical Bases that Decreased the Effectiveness

LIST OF DOCUMENTS REVIEWED

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

1EP4 Emergency Action Level and Emergency Plan Changes

Kewaunee Power Station Emergency Plan; Revision 32

Kewaunee Power Station Emergency Plan; Revision 33

Kewaunee Power Station EAL Technical Basis; Revision 4

Kewaunee Power Station EAL Technical Basis; Revision 5

CR016408; KEWA—Is a Letdown/Charging Leak an EAL?

CR390889; Proposed NRC Violation for Inadequate NRC Approval for Change Made to EALs

OPERXK-100-10; Flow Diagram Reactor Coolant System; Revision BT

SDBD-KPS-RC; Reactor Coolant System; Revision 0

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
CFR	Code of Federal Regulations
CR	Condition Report
DIE	Decrease in Effectiveness
DRS	Division of Reactor Safety
EAL	Emergency Action Level
IMC	Inspection Manual Chapter
IR	Inspection Report
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U. S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
RCS	Reactor Coolant System
ROP	Reactor Oversight Program
SDP	Significance Determination Process
URI	Unresolved Item

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Sincerely,

/RA/

Hironori Peterson, Chief
 Operations Branch
 Division of Reactor Safety

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

Enclosure: Inspection Report 05000305/2010502(DRS)
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Letter to David A. Heacock from Hironori Peterson, dated September 30, 2010.

SUBJECT: KEWAUNEE POWER STATION FOLLOW-UP INSPECTION OF EMERGENCY
ACTION LEVEL AND EMERGENCY PLAN CHANGES INSPECTION REPORT
05000305/2010502(DRS)

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