

Dominion Energy Kewaunee, Inc.
N490 Highway 42, Kewaunee, WI 54216-9511



FEB 27 2009

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Serial No. 09-126
LIC/RR/RO
Docket No.: 50-305
License No.: DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
LICENSEE EVENT REPORT 2008-003-00

Pursuant to 10 CFR 50.73, Dominion Energy Kewaunee, Inc., hereby submits the following Licensee Event Report applicable to Kewaunee Power Station.

Report No. 50-305/2008-003-00

This report has been reviewed by the Facility Safety Review Committee and will be forwarded to the Management Safety Review Committee for its review.

If you have any further questions, please contact Mr. Richard Repshas at (920) 388-8217.

Very truly yours,

Stephen E. Scace
Site Vice President, Kewaunee Power Station

Attachment

Commitments made by this letter: NONE

IE22
NRR

cc: Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
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Mr. P. S. Tam
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NRC Senior Resident Inspector
Kewaunee Power Station

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME Kewaunee Power Station	2. DOCKET NUMBER 05000305	3. PAGE 1 OF 4
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4. TITLE **Door Bottom Seal Failure Results in Inoperability of Control Room Ventilation System**

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	30	2008	2008	003	00	02	27	2009	FACILITY NAME	

9. OPERATING MODE N	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)
10. POWER LEVEL 100	

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME Dale A. Patterson	TELEPHONE NUMBER (include Area Code) 920-388-8759
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On December 30, 2008 with the plant at full power, a Dominion Energy Kewaunee, Inc. plant operator was transiting through a door that was both a steam exclusion barrier and control room exclusion zone barrier (Door 141) when the seal at the bottom of the door separated from the door. The door was in this condition for forty-four minutes while the bottom seal was replaced. The opening caused by the missing seal exceeded the allowable opening size for the door's steam exclusion and control room exclusion zone barrier functions.

Technical Specification operability requirements for the control room post-accident recirculation system were impacted based on the control room post-accident habitability analysis assumption for air leakage to the control room envelope and the control room itself from the nonfunctional steam exclusion and control room exclusion zone barrier. The control room post-accident recirculation system and control room exclusion zone were declared inoperable.

This condition is being reported pursuant to 10 CFR 50.73(a)(2)(ii)(B) as a condition that resulted in the nuclear power plant being in an unanalyzed condition. Additionally, since both trains of the control room post-accident recirculation system were inoperable, this condition also meets the reporting criteria of 10 CFR 50.73(a)(2)(v)(B), any event or condition that could have prevented the fulfillment of a safety function.

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Event Description:

On December 30, 2008 at 1113 CDT with the plant at full power, a Dominion Energy Kewaunee, Inc. (DEK) plant operator was transiting into the control room air conditioning room through a door that was both a steam exclusion (SE) barrier and control room exclusion zone barrier (CREZ) (Door 141) [DR] when the seal [SEAL] separated from the bottom of the door. With the seal separated from the door, the resultant opening exceeded the allowable opening size for the door's SE and CREZ functions. The door was immediately closed and a watch posted at the door to prevent nonessential personnel from entering the room. The bottom seal was promptly replaced, thus returning functionality of the door. The door was in the degraded condition for forty-four minutes.

Door 141 is a SE barrier and CREZ barrier that supports both trains of control room post-accident recirculation system (CRPAR) [AHU] and the control room itself. Normal ingress and egress is allowed; however, hazard barrier doors are not allowed to have openings exceeding certain requirements. With the seal removed, the door was considered non-functional. Per the guidance of NRC RIS 2001-09, "Control of Hazard Barriers," a component "...that is credited with mitigating a HELB (high energy line break) event would be rendered inoperable if a barrier that is credited with protecting the (component) from the effects of the postulated HELB event is removed." Consequently, during the period the bottom seal was not in place, the control room post-accident recirculation system and CREZ were inoperable.

Kewaunee Power Station Technical Requirements Manual (TRM) ALCO 3.0.9, "Steam Exclusion System," specifies that "all required steam exclusion boundaries such as walls, hatches, etc., shall be OPERABLE." TRM 3.0.9 Required Action A.1 directs that for an inoperable steam exclusion boundary, "declare all equipment supported by the inoperable steam exclusion barrier inoperable."

In accordance with TRM 3.0.9, all equipment supported by that steam exclusion door was inoperable. The supported zone included the control room air conditioning room and the control room. Thus, both trains of control room post-accident recirculation system and CREZ boundary were inoperable.

TS 3.0.c, "Standard Shutdown Sequence," was entered, and then exited forty-four minutes following completion of repairs. This directs within one hour to place the unit in at least HOT STANDBY within the next 6 hours, at least HOT SHUTDOWN within the following 6 hours, and at COLD SHUTDOWN within the subsequent 36 hours. The door was in this condition for forty-four minutes. The plant remained at full power throughout the event.

Since the control room post-accident recirculation system and the CREZ boundary were inoperable, this condition is being reported pursuant to 10 CFR 50.73(a)(2)(ii)(B) as a condition that resulted in the nuclear power plant being in an unanalyzed condition. Additionally, since the control room post-accident recirculation system was inoperable, this condition also meets the reporting criteria of 10 CFR 50.73(a)(2)(v)(B), any event or condition that could have prevented the fulfillment of a safety function. This condition was initially reported to the NRC via the Emergency Notification System (ENS) on December 30, 2008 (EN 44746).

Event and Safety Consequence Analysis:

The steam exclusion system aids in the mitigation of a high energy line break outside of containment. The primary functions of steam exclusion are to provide suitable environmental conditions for needed equipment operation, and a habitable environment for personnel in areas outside of containment which may require access should a high energy line break occur.

If a steam exclusion boundary is inoperable, a barrier that may be credited with protecting a supported

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component or system is no longer capable of providing that protection. This condition requires that all equipment supported by the inoperable steam exclusion barrier be immediately declared inoperable unless an evaluation has been performed to determine that required equipment supported by the inoperable steam exclusion barrier is OPERABLE.

Since the opening caused by the removed bottom seal on Door 141 was approximately 18 square inches and the SE and CREZ allowed opening were 5.7 and 3.0 square inches respectively, the door was judged to have been non-functional. Since the control room post-accident recirculation system and CREZ boundary were declared inoperable during the period that the door was degraded, this condition constitutes a safety system functional failure.

The CREZ function of Door 141 is to protect the operators from post-accident radiation. That function is not important to core damage risk because the dose likely would not be enough to prevent the operators from performing post-accident functions within the 24-hour mission time assumed in probabilistic risk assessment. Furthermore, the probability of an accident releasing radiation during the forty-four minute time the door was degraded is very low.

The steam exclusion function of Door 141 is to protect equipment in the control room heating and air conditioning equipment room from excess heat and humidity during a steam line break. The amount of piping in the area of the door consists of a portion of steam header 'A' that passes through the records storage room and a portion of the steam supply to the turbine driven auxiliary feedwater pump [P] that passes near stairwell F. The probability of a break in this limited amount of piping during the forty-four minute time that the door was degraded is very low.

Therefore, the safety significance of this event is very low.

Cause:

The cause of this condition was identified as loose and stripped screws that attach the bottom seal to Door 141. This resulted from the design of fastening the seal to the door due to the cyclic loads on the seal frame during operation of the door.

Corrective Actions:

As immediate corrective action, the SE barrier and CREZ barrier provided by Door 141 was restored to functional status by replacing the bottom seal on the door. Repairs to the door were completed in forty-four minutes.

Checks of important doors and the instructions for inspections have been incorporated into operator rounds.

A corrective action was initiated to present a project plan to improve design of vulnerable doors to the Plant Health Working Group.

A corrective action was initiated to perform a Maintenance Rule Evaluation of this condition.

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Similar Events:

A review of Licensee Event Reports covering the past three years identified a recent event with a steam exclusion boundary door as a result of partially dislodged weather stripping. It is discussed in LER 2008-002-00.