

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



SEP 09 2005

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Serial No. 05-605  
KPS/LIC/RR: R1  
Docket No. 50-305  
License No. DPR-43

**DOMINION ENERGY KEWAUNEE, INC.**  
**KEWAUNEE POWER STATION**  
**LICENSEE EVENT REPORT LER 2005-013-00**

Dear Sirs:

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/LER 2005-013-00

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

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

Very truly yours,

A handwritten signature in black ink, appearing to read "M. Gaffney", is written over the typed name.

Michael G. Gaffney  
Site Vice President, Kewaunee Power Station

Attachment

Commitments made by this letter: NONE

JE22

cc: Mr. J. L. Caldwell  
Administrator Region III  
U.S. Nuclear Regulatory Commission  
2443 Warrenville Road  
Suite 210  
Lisle, IL 60532-4352

Mr. J. F. Stang  
Project Manager  
U.S. Nuclear Regulatory Commission  
Mail Stop O-8-H-4a  
Washington, D. C. 20555

Mr. S. C. Burton  
NRC Senior Resident Inspector  
Kewaunee Power Station

<b>NRC FORM 366</b> <b>U.S. NUCLEAR REGULATORY COMMISSION</b> (6-2004)	<b>APPROVED BY OMB NO. 3150-0104</b>	<b>EXPIRES 6-30-2007</b>
<b>LICENSEE EVENT REPORT (LER)</b> (See reverse for required number of digits/characters for each block)		
Estimated burden per response to comply with this mandatory collection request: 50 hours. 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, (3150-0066), 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.		

<b>FACILITY NAME (1)</b> <b>Kewaunee Power Station</b>	<b>DOCKET NUMBER (2)</b> <b>05000305</b>	<b>PAGE (3)</b> <b>1 of 3</b>
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**TITLE (4)**  
**The Throttle Valves to the Turbine Bearing Oil Coolers for the Turbine Driven AFW Pump Could be Blocked by Debris**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
07	13	2005	2005	-- 013 --	00	09	11	2005	FACILITY NAME	DOCKET NUMBER	
<b>OPERATING MODE (9)</b>		<b>N</b>		<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check all that apply) (11)</b>							
<b>POWER LEVEL (10)</b>		<b>100</b>		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)	
				20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)	
				20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)	
				20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)	
				20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A	
				20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)			
				20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)			
				20.2203(a)(2)(v)	X	50.73(a)(2)(i)(B)		50.73(a)(2)(vii)			
				20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)			
				20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)			

**LICENSEE CONTACT FOR THIS LER (12)**

<b>NAME</b> <b>Richard Repshas</b>	<b>TELEPHONE NUMBER (Include Area Code)</b> <b>(920) 388-8217</b>
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO					

**ABSTRACT**

On July 13, 2005, while the plant was operating at full power, it was determined that a reportable condition existed for an extended period. Valves throttled to the turbine driven auxiliary feedwater pump turbine bearing coolers could potentially plug from service water (Lake Michigan) debris if the system were aligned to service water. The service water system has strainers that strain larger than 0.125 inch debris from the service water. The turbine bearing cooler supply valves were throttled such that the clearances through the valves were less than 0.125 inches.

If the service water system was lined up to the auxiliary feedwater system to feed the steam generators, cooling to the turbine driven auxiliary feedwater pump turbine bearing oil coolers could be lost due to plugging of the throttled valves from service water debris. There was very low risk significance associated with this event. A plant design change was implemented to reroute the auxiliary feedwater pump lubrication flow paths which included calculations to define the valve minimum throttle position when using service water. No further corrective actions are necessary. This report does not describe a safety system functional failure.

**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

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Kewaunee Power Station	05000305	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**Event Description:**

On July 13, 2005, while the plant was operating at full power, it was determined that a reportable condition existed when valves [V] throttled to the turbine [TUR] driven auxiliary feedwater pump [P] [BA] turbine bearing coolers [CLR] could potentially plug from service water (Lake Michigan) [KE] debris if the system were aligned to service water. The system has strainers that strain larger than 0.125 inch debris from the service water. The turbine bearing cooler supply valves were throttled such that the openings through the valves were less than 0.125 inches. An operations prestartup checklist throttled the cooling water valves 1/3 and 1/2 turn open. This amounts to opening the valves 0.03 inches and 0.04 inches respectively. To meet the 0.125 inch passage requirement, the valves are required to be 3 turns open.

If the service water system was lined up to the auxiliary feedwater system to feed the steam generators, cooling to the turbine driven auxiliary feedwater pump turbine bearing oil coolers could be lost due to potential plugging of the throttled valves from service water debris. The manufacturer reported that the turbine driven auxiliary feedwater pump would operate for only a short period of time without cooling water before the turbine bearings would be expected to fail. This could result in the turbine driven auxiliary feedwater pump not meeting its performance requirements for analyzed events in the Kewaunee Power Station Updated Safety Analysis Report.

A plant design change was implemented to reroute the auxiliary feedwater pump lubrication flow paths which included calculations to define valve minimum throttle position when using service water. No further corrective actions are necessary.

This report does not identify a Safety System Functional Failure.

**Event Analysis:**

This event is being reported under 10 CFR 50.73(a)(2)(i)(B), Any operation or condition which was prohibited by the plant's Technical Specifications. The turbine driven auxiliary feedwater pump was considered inoperable extending for a period longer than the Technical Specification action statement of 72 hours.

**Safety Significance:**

Results provided by the manufacturer indicate the turbine driven auxiliary feedwater pump turbine bearings are unlikely to survive after loss of water to the bearing oil coolers. Analyzed events in the Updated Safety Analysis Report may require auxiliary feedwater pump operation including the turbine driven auxiliary feedwater pump.

The loss of service water cooling to the turbine driven auxiliary feedwater pump turbine bearing oil coolers was analyzed with the Kewaunee probabilistic risk assessment model. The increased risk due to not being able to operate the turbine driven AFW pump with service water is  $3.5 \times 10^{-7}$ /yr. This event is of very low risk significance.

**LICENSEE EVENT REPORT (LER)**  
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**Cause:**

The minimum open throttle position for the turbine driven auxiliary feedwater pump turbine bearing oil cooler supply valves to ensure the valves would be able to pass service water debris was not considered.

**Corrective Actions Completed:**

The auxiliary feedwater pumps lubricating oil cooler and bearing oil cooler drain flow paths were modified. The design included calculations showing any valves requiring throttling would have to be open a minimum of 0.125 inches to pass debris that may be present in the service water system. Following post-modification testing, the minimum throttle positions were included in plant operating procedures.

**Similar Events:**

None