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AUTH.NAME AUTHOR AFFILIATION
SCHOMMER,K.J. Wisconsin Public Service Corp.
SCHROCK,C.A. Wisconsin Public Service Corp.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-007-00:on 930326,LLRT vol associated w/RC pump exceeds TS requirements due to check valve not seating properly.valve replaced & an investigation of future replacement of valves in progress.W/930426 ltr.

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April 26, 1993

10 CFR 50.73

U. S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 93-007-00

In accordance with the requirements of 10 CFR 50.73, "Licensee Event Report System," the attached Licensee Event Report for reportable occurrence 93-007-00 is being submitted.

Sincerely,

C. A. Schrock

C.A. Schrock
Manager-Nuclear Engineering

KJS

Attach.

cc - INPO Records Center
US NRC Senior Resident Inspector
US NRC, Region III

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 5/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Kewaunee Nuclear Power Plant	0 5 0 0 0 3 0 5	1 OF 0 4

TITLE (4) Local Leak Rate "As Found" Leakage Exceeds Technical Specification Requirements Due to a Check Valve Not Seating Properly.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 3	2 6	9 3	9 3	— 0 0 7	— 9 3	0 4	2 6	9 3	N/A	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): N

POWER LEVEL (10): 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (AREA CODE)
Keith J. Schommer - Plant Nuclear Engineer	4 1 4 3 8 8 - 2 5 6 0

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	K O	I S V	K 0 8 5	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On March 26, 1993, with the plant in refueling shutdown, the local leak rate test volume associated with the reactor coolant pump A seal injection line could not be pressurized to the required 46 psig. The test volume did not pressurize due to check valve CVC-205A not seating properly. As a result Kewaunee's total "as found" maximum pathway leakage exceeded 0.60La. For Kewaunee, 0.60La is equal to a leakage of 322,800 standard cubic centimeters per minute (sccm). The redundant seal injection line check valve indicated a leakage of 5.6 sccm. The seal injection line is a 2 inch line that supplies water to the reactor coolant pump A seals.

There are no safety implications associated with this event since the redundant valve had a satisfactory leak rate. Excluding CVC-205A leakage, Kewaunee's total "as found" maximum pathway leakage was 42,147.9 sccm. Kewaunee's total "as found" minimum pathway leakage was 15,013 sccm.

On April 7, 1993, with the plant in refueling shutdown, CVC-205A was replaced and a retest indicated an "as left" leakage of 6.8 sccm. As of April 14, 1993, Kewaunee's total "as left" maximum pathway leakage was 8,143.4 sccm. Kewaunee is investigating the future replacement of the other seal injection check valves.

Description of Event

This report describes an event which resulted in a condition prohibited by Kewaunee's Technical Specifications (TS). TS 4.4.b.8.a requires a combined leak rate from all type B and C local leak rate tests be less than 0.60La. On March 26, 1993, with the plant in refueling shutdown, the local leak rate test volume associated with the reactor coolant pump (RXCP) [P] A seal injection line did not pressurize to the required 46 psig. This test volume did not pressurize due to check valve [ISV] CVC-205A not seating properly. CVC-205A is a Kerotest model 9911S spring loaded piston check valve. As a result, Kewaunee's "as found" maximum pathway leakage exceeded 0.60La. For Kewaunee, 0.60La is equal to a leakage of 322,800 standard cubic centimeters per minute (sccm). The redundant seal injection line check valve CVC-206A indicated an acceptable leakage of 5.6 sccm. The seal injection line is a two inch line that supplies water to the RXCP A seals.

With the exclusion of the leakage from CVC-205A, Kewaunee's total "as found" maximum pathway leakage was 42,147.9 sccm. Kewaunee's total "as found" minimum pathway leakage was 15,013 sccm. Maximum pathway leakage is the sum of the highest barrier leak rates at each penetration, whereas minimum pathway leakage is the sum of the lowest barrier leak rates at each penetration. On April 11, 1993, prior to the plant exceeding 200°F, the total "as left" maximum pathway leakage had been reduced to 8,048 sccm and the total "as left" minimum pathway leakage was 4,601.1 sccm.

Cause of Event

Initially during the test of CVC-205A, the valve did not seat properly. After the "as found" condition was recorded, the valve was manipulated and the valve seated. A retest resulted in an acceptable leakage rate. Therefore, the cause of the leakage is attributed to mechanical binding of the valve or relaxation of the valve spring.

Analysis of Event

As a result of the 1993 containment isolation valve leak rate testing, it was discovered that Kewaunee exceeded its technical specification concerning total allowable leakage for type B and type C testing. This event is being reported in accordance with 10CFR50.73 (a)(2)(i)(B) as a condition prohibited by TS 4.4.b.8.a.

There are no safety implications associated with this event since the redundant valve had an acceptable leak rate of 5.6 sccm and the total "as found" minimum pathway leakage was 15,013 sccm. Since the minimum pathway leakage was below 1.0La, Kewaunee operated within its design bases.

A complete summary of the 1993 local leak rate test results will be included in the 1994 integrated leak rate test report.

Corrective Actions

On April 7, 1993, with the plant in refueling shutdown, CVC-205A was replaced with a Kerotest model 31516V Y-type spring loaded piston check valve. A retest the same day indicated an acceptable leakage of 6.8 sccm. Kewaunee has experienced similar events in the past (LER 92-005), and is investigating the future replacement of the other seal injection line check valves (CVC-206A, CVC-205B, and CVC-206B).

Additional Information

Similar Events:

LER	Title
77-002	Leakage rate for the reactor containment building purge and relief line isolation valves could not be measured.
77-012	Five containment isolation valves were found with above specification leak rates.
80-025	Five containment isolation valves with unacceptable as-found leakage.
84-006	Redundant containment isolation valves with excessive leakage.
86-002	Local leak rate test results exceed Tech. Spec. limits due to degraded component performance at three penetrations.
92-005	Local leak rate "as found" leakage exceeds technical specifications.

Equipment Failures:

CVC-205A is a two inch stainless steel spring loaded piston check valve. The check valve is manufactured by Kerotest Corporation (model 9911S).