

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8705060392 DOC. DATE: 87/05/01 NOTARIZED: NO DOCKET #
 FACIL: 50-305 Kewaunee Nuclear Power Plant, Wisconsin Public Service 05000305
 AUTH. NAME AUTHOR AFFILIATION
 SHEMBARGER, K. M. Wisconsin Public Service Corp.
 HINTZ, D. C. Wisconsin Public Service Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-004-00: on 870401, while reestablishing, steam generator
 blowdown (SEB) radiation monitor reached high alarm setpoint
 of 5,000 cpm. Caused by residual contamination from tube
 leak. High alarm setpoint increased. W/870501 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD3-3 LA	1 1	PD3-3 PD	1 1
	QUAY, T	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	1 1
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	NRR/DEST/ADE	1 0
	NRR/DEST/ADB	1 0	NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1
	NRR/DEST/SGB	1 1	NRR/DLPQ/HFB	1 1
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1
	NRR/DREP/EPB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<u>REG FILE</u> 02	1 1
	RES SPEIS, T	1 1	RGN3 FILE 01	1 1
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1

TOTAL NUMBER OF COPIES REQUIRED: LTTR 41 ENCL 39

LICENSEE EVENT REPORT (LER)

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

TITLE (4) **Steam Generator Blowdown and Blowdown Sampling Isolation Due to Residual Radiation in the 1A Steam Generator**

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	4	0	1	8	7	8	7	0	0	4	0	0	0	5	0	1	8	7	NA	0 5 0 0 0

OPERATING MODE (9) **N**

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 72.71(b)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(a)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 72.71(a)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.38(a)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 308A)
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)	
<input type="checkbox"/> 20.405(a)(1)(vi)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **Kris M. Shembarger - Plant Nuclear Engineer** TELEPHONE NUMBER **4 11 14 318181-12 15 6 10**

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) **N/A** MONTH DAY YEAR

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

On April 1, 1987, the plant was in hot shutdown preparing for startup from the 1987 refueling outage. At 2145, while plant operators were reestablishing blowdown for the 1A Steam Generator, R-19, the Steam Generator Blowdown Radiation Monitor, reached its high alarm setpoint of 5000 cpm. As a result, Steam Generator Blowdown and Blowdown Sampling were automatically isolated as required by system design.

The root cause of the event was residual contamination resulting from a tube leak which occurred in the 1A Steam Generator prior to the 1987 refueling outage. When blowdown from the 1A Steam Generator was manually isolated earlier in the evening, a build up of residual contamination occurred due to deposits of contaminated sludge in the blowdown line. As a result, when blowdown was reestablished, R-19 detected an increased level of radiation, which resulted in automatic isolation of Steam Generator Blowdown and Blowdown Sampling.

To reduce the frequency of this event, on April 4 the high alarm setpoint for R-19 was increased to 80,000 cpm, which by conservative analysis would correspond to eighty percent of the Radiological Effluent Technical Specification default release limit.

This event is being reported as required by 10 CFR 50.73(a)(2)(iv) as an event that resulted in the automatic actuation of an Engineered Safety Feature. Since the plant was at hot shutdown at the time of the event and the level of residual contamination detected was below the release limit established in Radiological Effluent Technical Specifications, there are no safety concerns.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Kewaunee Nuclear Power Plant	DOCKET NUMBER (2) 050003015	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	-0104	-010	02	OF 03

TEXT (if more space is required, use additional NRC Form 388A's) (17)

DESCRIPTION OF EVENT

On April 1, 1987, the plant was in hot shutdown (547°F and 2235 psig) preparing for startup from the 1987 refueling outage. At 2145, while plant operators were reestablishing blowdown for the 1A Steam Generator (SG), R-19, the Steam Generator Blowdown Radiation Monitor (DET), reached its high alarm setpoint of 5000 cpm. As a result, Steam Generator Blowdown and Blowdown Sampling (WI) were automatically isolated as required by system design.

Earlier that same evening at 1710, the control room operators isolated blowdown from the 1A Steam Generator to discharge the 1A Chemical Volume and Control Monitor Tank (TK). At 2145, following completion of the discharge, plant operators reestablished blowdown from the 1A Steam Generator. Immediately after opening the blowdown isolation valves (ISV), R-19 reached 6000 cpm. This exceeded its high alarm setpoint of 5000 cpm, and isolated Steam Generator Blowdown and Blowdown Sampling. Based on the analysis of chemistry samples taken throughout the day, it was determined that activity in the 1A Steam Generator was due to contaminated sludge. The sludge had become contaminated as a result of a tube leak in the 1A Steam Generator prior to the 1987 refueling outage. At 2305, R-19 was switched to reset, allowing blowdown sampling from the 1A Steam Generator to be established. This cleared the buildup of sludge which had settled in the blowdown line and allowed plant operators to reestablish 1A Steam Generator Blowdown at 2334.

Following the event, a Temporary Change was written to increase the high alarm setpoint on R-19 from 5000 cpm to 20,000 cpm. The increase in the setpoint was permissible due to the conservatism of the setpoint and the absence of a tube leak. At 0048 on April 2, the Temporary Change was implemented and the setpoint was increased to 20,000 cpm to prevent further inadvertent isolations and to allow blowdown flow for cleanup of the 1A Steam Generator.

CAUSE OF EVENT

The root cause of the event was contaminated sludge. The sludge had become contaminated as a result of a tube leak in the 1A Steam Generator prior to the 1987 refueling outage (see LER 87-1). When blowdown from the 1A Steam Generator was manually isolated earlier in the evening, a build up of residual contamination occurred in the blowdown line from contaminated sludge. As a result, when blowdown was reestablished, R-19 detected an increased level of radiation. Upon reaching its setpoint it automatically isolated Steam Generator Blowdown and Blowdown Sampling.

ANALYSIS OF EVENT

This event is being reported as required by 10 CFR 50.73(a)(2)(iv) as an event that resulted in the automatic actuation of an Engineered Safety Feature. Since the plant was at hot shutdown at the time of the event and the level of residual contamination detected was below the release limit established in Radiological Effluent Technical Specifications, there are no safety concerns.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Kewaunee Nuclear Power Plant	DOCKET NUMBER (2) 0 5 0 0 0 3 0 5	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 7	- 0 0 4	- 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

CORRECTIVE ACTIONS

To reduce the frequency of this event, on April 4 the high alarm setpoint for R-19 was increased to 80,000 cpm, which corresponds to eighty percent of the Radiological Effluent Technical Specification default release limit. Continued operation of Steam Generator Blowdown will eventually clean up the residual contamination in the Steam Generator. A Design Change Request has been generated to consider a change in the system logic to provide only an alarm at a level slightly above background and an alarm and initiation of Steam Generator Blowdown and Blowdown Sampling Isolation at a level closer to the Radiological Effluent Technical Specification default release limit.

ADDITIONAL INFORMATION

Component Failures: None

Similar Events: LER 87-01



WISCONSIN PUBLIC SERVICE CORPORATION

600 North Adams • P.O. Box 19002 • Green Bay, WI 54307-9002

May 1, 1987

10 CFR 50.73

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 87-004-00

In accordance with the requirements of 10 CFR 50.73, "Licensee Event Report System", the attached Licensee Event Report for reportable occurrence 87-004-00 is being submitted.

Very truly yours,

Charles A. Schrock for

D. C. Hintz
Vice President - Nuclear Power

TJW/jms

Attach.

cc - INPO Records Center
Suite 1500, 1100 Circle 75 Parkway
Atlanta, GA 30339
Mr. Robert Nelson, NRC Resident Inspector
RR #1, Box 999, Kewaunee, WI 54216
US NRC, Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

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