

# CATEGORY 1

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ACCESSION NBR: 9812230013      DOC. DATE: 98/12/17      NOTARIZED: NO      DOCKET #  
FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana M 05000315  
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SAMPSON, J.R.      Indiana Michigan Power Co. (formerly Indiana & Michigan Ele  
RECIPIENT NAME      RECIPIENT AFFILIATION

SUBJECT: LER 98-047-00: on 981117, potential for increase leakage from reactor coolant pump seals was identified. Util is working with W to resolve issue. Current expectations are to submit update to LER by 990215. With 981217 ltr.

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December 17, 1998

United States Nuclear Regulatory Commission  
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Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73 entitled Licensee Event Report System, the following interim report is being submitted:

LER 315/98-047-00, "Interim - Potential for Increase Leakage from Reactor Coolant Pump Seals Identified"

No commitments were identified in this preliminary submittal

Sincerely,

J. R. Sampson  
Site Vice President

/mbd  
Attachment

- c: J. L. Caldwell (Acting), Region III  
R. P. Powers  
P. A. Barrett  
J. B. Kingseed  
R. Whale  
D. Hahn  
Records Center, INPO  
NRC Resident Inspector

IE221

9812230013 981217  
PDR ADDCK 05000315  
S PDR

NRC Form 366 (6-1998)	U.S. NUCLEAR REGULATORY COMMISSION  <b>LICENSEE EVENT REPORT (LER)</b>  (See reverse for required number of digits/characters for each block)	APPROVED BY OMB NO. 3150-0104    EXPIRES 06/30/2001  <small>ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503</small>
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FACILITY NAME (1)  <p style="text-align: center;">Cook Nuclear Plant Unit 1</p>	DOCKET NUMBER (2)  <p style="text-align: center;">05000-315</p>	PAGE (3)  <p style="text-align: center;">1 of 1</p>
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TITLE (4)  
**Interim - Potential for Increase Leakage from Reactor Coolant Pump Seals Identified**

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 NAME	DOCKET NUMBER	
11	17	1998	1998	-- 047 --	00	12	17	1998	DC Cook - Unit 2	05000-316	
OPERATING MODE (9)		5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)		00	20.2201 (b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)		
			20.2203(a)(1)		20.2203(a)(3)(i)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)		
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71		
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER		
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		<small>Specify in Abstract below or on NRC Form 366A</small>		
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)				

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

NAME  <p style="text-align: center;">Mr. Gary Brassart, Nuclear Safety Analysis Supervisor</p>	TELEPHONE NUMBER (Include Area Code)  <p style="text-align: center;">616/697-5106</p>
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

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

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)			
<input checked="" type="checkbox"/>	YES	(If Yes, complete EXPECTED SUBMISSION DATE).	<input type="checkbox"/>	NO	02	15	98

**Abstract (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

On November 17, 1998, with Units 1 and 2 in Mode 5, Cold Shutdown, it was identified that in some cases the Reactor Coolant Pump (RCP) thermal barrier heat exchanger might not be able to maintain seal leak-off temperatures below the 235 degree Fahrenheit (F) limit during a loss of seal injection. The Cook UFSAR states that the RCPs can be operated "indefinitely since the thermal barrier cooler has sufficient capacity to cool the reactor coolant flow which would pass through the thermal barrier cooler and seal leakoff from the pump volute". This implies that the Component Cooling Water (CCW) flow to the thermal barrier heat exchanger provides redundant cooling for the RCP seals. As a result of questions asked by plant personnel regarding the range of allowable CCW flow rates to the thermal barrier heat exchanger for the range of seal leakoff flows permitted by Cook operating procedure, Westinghouse determined that if the RCP seal leakoff flow were less than 2 gallons per minute, and the CCW temperature were above 95 degrees F, the seal leakoff temperature could potentially flash to steam and cause damage to the RCP number 1 seal. The postulated RCP number 1 seal damage due to flashing may degrade the ability to perform its function of RCS pressure boundary. At this time it is not known if the potential seal damage would be extensive enough to allow increased leakage along the RCP shaft. Westinghouse has been informed of this issue, the Westinghouse Safety Review committee has begun their investigation, and Westinghouse has put this issue into their Part 21 review process.

As Cook has operated in the past with seal leak-off flow less than 2 gpm, this potential condition was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B), as a condition which resulted in the nuclear power plant being in a condition that was outside the design basis of the plant, as the plant was designed to have a certain amount of leakage along the shaft. Cook is working with Westinghouse to resolve this issue. Current expectations are to submit an update to this LER by February 15, 1999.