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Indiana Michigan Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
IndianaMichiganPower.com

January 18, 2016

AEP-NRC-2015-93
10 CFR 50.73

Docket No.: 50-315

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Donald C. Cook Nuclear Plant Unit 1
LICENSEE EVENT REPORT 315/2015-002-01
Technical Specification Violation Due to Inoperable Residual Heat Removal Pump

In accordance with 10 CFR 50.73, Licensee Event Report (LER) System, Indiana Michigan Power Company, the licensee for Donald C. Cook Nuclear Plant Unit 1, is submitting as an enclosure to this letter the following report:

LER 315/2015-002-01: "Technical Specification Violation Due to Inoperable Residual Heat Removal Pump"

There are no commitments contained in this submittal.

Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Manager, at (269) 466-2649.

Sincerely,

Q. Shane Lies
Site Vice President

MPH/ams

Enclosure

c: R. J. Ancona - MPSC
A. W. Dietrich - NRC Washington, DC
MDEQ - RMD/RPS
NRC Resident Inspector
C. D. Pederson - NRC Region III
A. J. Williamson - AEP Ft. Wayne

IE22
NRR

Enclosure to AEP-NRC-2015-93
LER 315/2015-002-01
Technical Specification Violation Due to Inoperable Residual Heat Removal Pump



LICENSEE EVENT REPORT (LER)
(See Page 2 for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 Donald C. Cook Nuclear Plant Unit 1	2. DOCKET NUMBER 05000315	3. PAGE 1 of 3
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4. TITLE
Technical Specification Violation due to Inoperable Residual Heat Removal Pump

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
06	14	2015	2015	002	01	01	18	2016	FACILITY NAME	DOCKET NUMBER
										05000
										05000

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

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(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)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	
10. POWER LEVEL	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<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)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT Michael K. Scarpello, Regulatory Affairs Manager	TELEPHONE NUMBER (Include Area Code) (269) 466-2649.
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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 **15. EXPECTED SUBMISSION DATE**

YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

MONTH	DAY	YEAR

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

On June 14, 2015, Donald C. Cook Nuclear Plant operations personnel identified an oil leak from the Unit 1 East Residual Heat Removal (RHR) pump (Train A) lower motor bearing oil reservoir. An engineering evaluation concluded that the leak rate would preclude the pump from meeting its 30-day mission time during accident conditions, thus rendering the Unit 1 East RHR pump inoperable. Review of oil addition logs concluded that this condition has existed, but was not recognized as such, since March 9, 2015. This exceeds the 72 hours allowed by Technical Specification (TS) Limiting Condition for Operation (LCO) 3.5.2, Condition A.

Concurrent with the Unit 1 East RHR pump inoperability while in Mode 1, the Unit 1 AB Emergency Diesel Generator (EDG) (Train B) was inoperable for a scheduled maintenance window commencing May 18, 2015, and ending with a TS required shutdown due to EDG failure. The inoperable AB EDG required the Unit 1 West RHR pump to be declared inoperable in accordance with LCO 3.8.1, Condition B.3 – "Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable." The Unit 1 West RHR Pump was not declared inoperable within four hours as required by TS LCO 3.8.1, Condition B.3.

The RHR pump oil leak and the EDG have been repaired and are operable. The apparent cause has been determined that Station leadership was not equipped with a consistent methodology to effectively manage risk associated with various station activities that possessed apparent low probability of occurrence.

Corrective actions to preclude repetition include enhancements to equipment monitoring and oil level management. Additionally, risk process management improvements were implemented, and a change management plan created to ensure that the correct questioning attitude is taking place during key station meetings.

NRC FORM 366A
(11-2015)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104

EXPIRES: 10/31/2018



LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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	2. DOCKET		3. LER NUMBER		
Donald C. Cook Nuclear Plant Unit 1	05000-	315	YEAR 2015	SEQUENTIAL NUMBER - 002	REV NO 01

NARRATIVE

INTRODUCTION

On May 18, 2015, at 0010, the Unit 1 AB (Train B) Emergency Diesel Generator (EDG) [EK] was declared inoperable when it was removed from service for a scheduled maintenance window while Unit 1 was in Mode 1 at 100 percent power.

On June 1, 2015, at 0231, the Unit 1 Reactor [RCT] was shut down to comply with Technical Specification Limiting Condition for Operation (LCO) 3.8.1, Condition G.1 when EDG damage during a post maintenance run could not be repaired within the required 14-day Completion Time.

On June 14, 2015, with Unit 1 in Mode 5, operations personnel identified an oil leak from the Unit 1 East (Train A) Residual Heat Removal (RHR) [BP] pump [P] lower motor bearing oil reservoir [RVR]. An engineering evaluation concluded that the leak rate precluded the pump from meeting its required 30-day mission time during accident conditions, thus rendering the Unit 1 East RHR pump inoperable. Review of operator oil addition logs concluded that this leak had existed since March 9, 2015. The unrecognized inoperability of the 1 East RHR pump exceeded the 72 hours allowed by LCO 3.5.2, Condition A. This is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), Operation or Condition Prohibited by Technical Specifications. Unit 1 entered Mode 4 at 1821 on June 1, 2015, exiting the mode of applicability for LCO 3.5.2.

The inoperability of Unit 1 AB EDG concurrent with the inoperable Unit 1 East RHR Pump requires declaring the Unit 1 West RHR pump inoperable in accordance with LCO 3.8.1, Condition B.3 – Declare required feature(s) supported by the inoperable EDG inoperable when its required redundant feature(s) is inoperable. The inoperability of the Unit 1 East RHR pump was not recognized at this time, so the Unit 1 West RHR pump was not declared inoperable when the Unit 1 AB EDG was made inoperable.

In retrospect, had the Unit 1 East RHR pump been recognized as being inoperable, the Unit 1 West RHR pump should have been declared inoperable within four hours from when the Unit 1 AB EDG was declared inoperable on May 18, 2015, at 0010, until June 2, 2015, at 0410, when Unit 1 entered Mode 5, exiting the mode of applicability for LCO 3.8.1, AC Sources-Operating, and LCO 3.5.3, ECCS-Shutdown. This is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), Operation or Condition Prohibited by Technical Specifications.

The offsite power sources (preferred and alternate) remained operable and available for the duration that the U1 AB EDG was inoperable thus there is reasonable assurance that the Unit 1 West RHR pump remained capable of fulfilling its safety function. For this occurrence, safety function of the Emergency Core Cooling System [BP][BQ] was not lost.

In the event of a loss of offsite power (LOOP), the Unit 1 East RHR pump was available to perform its shutdown cooling function. Therefore, capability to mitigate a LOOP was not lost.

The Unit 1 East RHR oil leak has been repaired and the pump declared operable. The Unit 1 AB EDG has been repaired and declared operable.

ASSESSMENT OF SAFETY CONSEQUENCES

NUCLEAR SAFETY


The Probabilistic Risk Assessment (PRA) risk significance is considered low because the East RHR pump was available to operate greater than the PRA mission time. If a LOOP were to occur during the time in which the Unit 1 AB EDG was unavailable, the East RHR pump would have been considered available until offsite power was restored or the supplemental diesel generators were aligned to Train B to power the West RHR pump.

INDUSTRIAL SAFETY

There was no actual or potential industrial safety hazard resulting from the inoperable RHR pump.

RADIOLOGICAL SAFETY

There was no actual or potential radiological safety hazard resulting from the inoperable RHR pump.

NRC FORM 366A (11-2015)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0104	EXPIRES: 10/31/2018
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Donald C. Cook Nuclear Plant Unit 1	05000- <div style="border: 1px solid black; display: inline-block; width: 100px; height: 30px; text-align: center; vertical-align: middle;">315</div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">YEAR</td></tr> <tr><td style="text-align: center;">2015</td></tr> </table>	YEAR	2015	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">SEQUENTIAL NUMBER</td></tr> <tr><td style="text-align: center;">- 002</td></tr> </table>	SEQUENTIAL NUMBER	- 002	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">REV NO</td></tr> <tr><td style="text-align: center;">01</td></tr> </table>	REV NO	01
YEAR										
2015										
SEQUENTIAL NUMBER										
- 002										
REV NO										
01										

NARRATIVE

CAUSE OF EVENT

A common cause evaluation was performed, that included several other plant events, to determine the apparent cause of this event. The apparent cause has been determined to be that Station leadership was not equipped with a consistent methodology to effectively manage risk associated with various station activities that possessed apparent low probability of occurrence. A contributing cause was interdepartmental interface has been inadequate to provide appropriate challenge and support of risk related decisions.

EXTENT OF CONDITION

An extent of condition review was performed to identify where the station was vulnerable to the same or similar apparent cause. It was determined that this condition could be potentially applicable to all work being performed at the station by all work groups. The corrective actions have addressed the extent of condition identified.

CORRECTIVE ACTIONS

Corrective Actions completed to Preclude Repetition include:

Plant tour and equipment monitoring frequencies have been increased in the ECCS pump areas.

Enhancements were made to the oil addition process, to include supervisor engagement and add a requirement to enter oil additions into the corrective action program.

A risk assessment presentation was communicated to station personnel to heighten awareness of risk management issues.

Plant risk assessment processes have been improved through implementation of a new Nuclear Risk Management procedure and a station risk committee.

PREVIOUS SIMILAR EVENTS

A review of the past three years Licensee Event Reports identified no similar events.