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

October 23, 2015

AEP-NRC-2015-100
10 CFR 50.73

Docket No.: 50-315
50-316

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

Donald C. Cook Nuclear Plant Units 1 and 2
LICENSEE EVENT REPORT 315/2015-004-00
Power Operated Relief Valve Technical Specification 3.4.11 Violation

In accordance with 10 CFR 50.73, Licensee Event Report (LER) System, Indiana Michigan Power Company, the licensee for Donald C. Cook Nuclear Plant Units 1 and 2, is submitting as an enclosure to this letter the following report:

LER 315/2015-004-00: "Power Operated Relief Valve Technical Specification 3.4.11 Violation."

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,

Samuel M. Partin
Plant Manager

RAW/ams

Enclosure

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

IE22
NRR

Enclosure to AEP-NRC-2015-100
LER 315/2015-004-00
Power Operated Relief Valve Technical Specification 3.4.11 Violation



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
Power Operated Relief Valve Technical Specification 3.4.11 Violation

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
08	26	2015	2015	004	00	10	23	2015	Donald C. Cook Nuclear Plant Unit 2	05000316
									FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(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)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
100	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<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)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	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 <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE MONTH: _____ DAY: _____ YEAR: _____
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On August 26, 2015, during a self-assessment, it was identified that a Pressurizer Power Operated Relief Valve (PORV) would be rendered inoperable if its associated Control Air Compressor (CAC) is unavailable.

One of the three PORVs is not provided with a source of back up air. Therefore, when considering a dual unit LOOP concurrent with the unavailability of the CAC, it was recognized that the associated PORV should be considered inoperable.

An evaluation concluded that the Unit 1 and Unit 2 CACs were not available when removed from service for maintenance on multiple occasions over the past three years. Further review concluded that Unit 1 and Unit 2 LCO 3.4.11, conditions B and H were not entered and the associated action requirements were not met for each occasion. Therefore, this event is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B).

To correct this condition, procedures for removing CACs from service are being revised to add a precaution to declare the affected PORV inoperable while the CAC is unavailable.



**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	6. LER NUMBER			3. PAGE	
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NARRATIVE

INTRODUCTION

On August 26, 2015, with both Unit 1 and Unit 2 operating in Mode 1 at 100% power, a self-assessment was conducted identifying that during a dual unit Loss of Offsite Power (LOOP), one of three Pressurizer Power Operated Relief Valves (PORVs)[AB][RV] would be rendered inoperable with the loss of power to the associated Control Air Compressor (CAC)[LD][CMP]. Two of three PORVs are equipped with back up air and thus would not be rendered inoperable during a LOOP. Subsequently it was recognized that when the CAC is rendered unavailable for any reason, the associated PORV without back up air would also be rendered inoperable.

An evaluation concluded that the Unit 1 and Unit 2 CACs were rendered unavailable when removed from service for maintenance on multiple occasions over the last three years. For each occasion identified, Unit 1 or Unit 2 Limiting Condition for Operation (LCO) 3.4.11 requirements were not met and is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B), Operation or Condition Prohibited by Technical Specifications.

EVENT DESCRIPTION

It was determined that on three occasions in Unit 1 and four occasions in Unit 2, the associated unit's CAC was made unavailable and LCO 3.4.11 requirements were not met. Event dates and durations were obtained for the CACs for the last three years.

Events

Occurrences with Unit 1 CAC rendered unavailable for greater than allowable action time for LCO 3.4.11.

- February 27, 2013 – Unit 1 CAC was removed from service for scheduled maintenance, duration 15.87 hours.
- November 8, 2014 – Unit 1 CAC was rendered unavailable for emergent maintenance, duration 24.95 hours.
- May 6, 2015 – Unit 1 CAC was removed from service for scheduled maintenance, duration 38.67 hours.

Occurrences with Unit 2 CAC rendered unavailable for greater than allowable action time for LCO 3.4.11.

- May 14, 2013 – Unit 2 CAC was removed from service for scheduled maintenance, duration 12.37 hours.
- January 16, 2014 – Unit 2 CAC was removed from service for scheduled maintenance, duration 13.63 hours.
- March 24, 2015 – Unit 2 CAC was removed from service for scheduled maintenance, duration 9.45 hours.
- May 4, 2015 – Unit 2 CAC was removed from service for scheduled maintenance, duration 9.00 hours.

EVENT ANALYSIS

The Pressurizer PORVs are credited in the mitigation of a Steam Generator Tube Rupture event. Two of three Pressurizer PORVs are equipped with backup air systems; therefore one of the Pressurizer PORVs is not. The normal supply of air to the PORVs is the Plant Air Compressor (PAC)[LD][CMP]. When the PAC is not available, the CAC supplies air to the PORVs. For the CAC to be considered operable/functional, power shall be available from its normal reserve feed supply [EK] or from its emergency CD emergency diesel generator [EK][DG] supply. Therefore, during a dual unit LOOP concurrent with unavailability of the CAC, the PORV without a back-up air supply should be considered inoperable. This applies when the associated unit's CAC is out-of-service for any reason.

**LICENSEE EVENT REPORT (LER)
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NARRATIVE

For LCO 3.4.11, each PORV and associated block valve shall be operable in modes 1, 2, and 3 with one or more PORVs inoperable and not capable of being manually cycled. Condition B requires closure of the associated block valve and for power to be removed from the associated block valve within one hour. If condition B is not met then condition H requires the unit to be in mode 3 within six hours. Therefore, each occasion when the CAC was unavailable and condition B and H were not met, is an "Operation or Condition Prohibited by Technical Specifications."

ASSESSMENT OF SAFETY CONSEQUENCES

NUCLEAR SAFETY

The Safety Significance of the CAC resulting in inoperability of a PORV is low, because this dependency is already accounted for in the baseline probabilistic risk assessment (PRA) model, including the consequences of a dual unit LOOP. Average unavailability of the CAC is also accounted for in the baseline PRA model. The risk associated with work on the CAC is managed under the Configuration Risk Management program and is considered a small risk for the durations identified. Thus, there is no significant change in risk associated with the identified condition.

INDUSTRIAL SAFETY

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

RADIOLOGICAL SAFETY

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

CAUSE

This scenario was not previously recognized as a condition that would affect the operability of the Pressurizer PORV (the PORV without a source of back up air), thus conditions for LCO 3.4.11 were never entered when the associated CAC was rendered unavailable.

CORRECTIVE ACTIONS

Immediate Corrective Actions Taken

Temporary compensatory actions were established to declare the associated PORV inoperable when the CAC is taken out of service for any reason.

Corrective Actions to Preclude Repetition

Revise operating and on-line risk management procedures to add a precaution to declare associated PORV inoperable when the CAC is made unavailable.

Evaluate the necessity for a plant modification to add back up air to the remaining PORV.

There are no further planned corrective actions.

PREVIOUS SIMILAR EVENTS

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