



**INDIANA  
MICHIGAN  
POWER**

A unit of American Electric Power

Indiana Michigan Power  
Cook Nuclear Plant  
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Bridgman, MI 49106  
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November 26, 2019

AEP-NRC-2019-55  
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 315/2019-002-00

Condition Prohibited by Technical Specification Due to an Inoperable Steam Generator Stop Valve  
Dump Valve

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 315/2019-002-00: Condition Prohibited by Technical Specification Due to an Inoperable Steam Generator Stop Valve Dump Valve.

There are no commitments contained in this submittal.

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

Sincerely,

Q. Shane Lies  
Site Vice President

MPH/kmh

Enclosure: Licensee Event Report 315/2019-002-00: Condition Prohibited by Technical Specification Due to an Inoperable Steam Generator Stop Valve Dump Valve

IE22  
NRR

c: R. J. Ancona – MPSC  
R. F. Kuntz – NRC Washington DC  
EGLE – RMD/RPS  
NRC Resident Inspector  
D. J. Roberts – NRC Region III  
A. J. Williamson – AEP Ft. Wayne

Enclosure to AEP-NRC-2019-55

Licensee Event Report 315/2019-002-00

Condition Prohibited by Technical Specification Due to an Inoperable Steam Generator Stop  
Valve Dump Valve

<b>NRC FORM 366</b> (04-2018)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>  <b>LICENSEE EVENT REPORT (LER)</b> (See Page 2 for required number of digits/characters for each block)			<b>APPROVED BY OMB: NO. 3150-0104</b> 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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to <a href="mailto:Infocollcts.Resource@nrc.gov">Infocollcts.Resource@nrc.gov</a> , 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.				<b>EXPIRES: 03/31/2020</b>	
<b>1. FACILITY NAME</b> Donald C. Cook Nuclear Plant Unit 1					<b>2. DOCKET NUMBER</b> 05000315		<b>3. PAGE</b> 1 OF 4			
<b>4. TITLE</b> Condition Prohibited by Technical Specification Due to an Inoperable Steam Generator Stop Valve Dump Valve										
<b>5. EVENT DATE</b>			<b>6. LER NUMBER</b>			<b>7. REPORT DATE</b>			<b>8. OTHER FACILITIES INVOLVED</b>	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	29	2019	2019	002	00	11	26	2019	N/A	05000
<b>9. OPERATING MODE</b>			<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>							
1			<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)(VII)(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)(VII)(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)(A)	
			<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)	
100			<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	
<b>12. LICENSEE CONTACT FOR THIS LER</b>										
<b>LICENSEE CONTACT</b>  Michael K. Scarpello, Regulatory Affairs Director								<b>TELEPHONE NUMBER (Include Area Code)</b>  (269) 466-2649		
<b>13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT</b>										
CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO ICES	CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	
X	SB	DV	FISHER	Y						
<b>14. SUPPLEMENTAL REPORT EXPECTED</b>  <input type="checkbox"/> YES (If yes, complete 15 EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO					
<b>15. EXPECTED SUBMISSION DATE</b>					MONTH	DAY	YEAR			
ABSTRACT (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)										
<p>On May 6, 2019, 1-MRV-222, Steam Generator 2 Stop Valve Train 'B' Dump Valve, was stroke timed in Mode 4, coming out of the U1C29 refueling outage. The valve stroked in approximately 4.4 seconds with an allowable time of 2.0 seconds. A second stroke was performed and the valve appeared to stroke much faster. After the packing was wetted, the valve was then retested and passed with a stroke time of 1.76 seconds.</p> <p>On May 29, 2019, 1-MRV-222 was stroked for its quarterly test, and again failed with a stroke time of 6.84 seconds.</p> <p>A Past Operability Determination Evaluation was performed and concluded that 1-MRV-222 was inoperable from May 7, 2019, when Unit 1 entered Mode 3, until it passed its surveillance after being repacked and tested on May 30, 2019. The time period over which 1-MRV-222 was inoperable exceeded the time allowed by Technical Specification (TS) 3.7.2, SGSVs. Unit 1 also entered a Mode of applicability with 1-MRV-222 inoperable, which is prohibited without meeting LCO 3.0.4.</p> <p>Therefore, this event is reportable as an Operation or Condition Prohibited by TS in accordance with 10 CFR 50.73(a)(2)(i)(B).</p>										

<b>NRC FORM 366A</b> (04-2018)	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>   <b>LICENSEE EVENT REPORT (LER)</b> <b>CONTINUATION SHEET</b>	<b>APPROVED BY OMB: NO. 3150-0104</b> <b>EXPIRES: 03/31/2020</b>  <small>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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to <a href="mailto:Infocollections.Resource@nrc.gov">Infocollections.Resource@nrc.gov</a>, 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.</small>
<small>(See NUREG-1022, R.3 for instruction and guidance for completing this form <a href="http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/">http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/</a>)</small>		
<b>1. FACILITY NAME</b>	<b>2. DOCKET NUMBER</b>	<b>3. LER NUMBER</b>
Donald C. Cook Nuclear Plant Unit 1	05000315	YEAR
		2019
		SEQUENTIAL NUMBER
		- 002
		REV NO
		- 00
<p><b>NARRATIVE</b></p> <p><b>EVENT DESCRIPTION</b></p> <p>On May 6, 2019, 1-MRV-222, Steam Generator 2 Stop Valve [SB][ISV] Train 'B' Dump Valve [DV] , was stroke timed in Mode 4, coming out of the U1C29 refueling outage. The valve stroked in approximately 4.4 seconds with an allowable time of 2.0 seconds. A second stroke was performed and the valve appeared to stroke much faster. After the packing was wetted, the valve was then retested and passed with a stroke time of 1.76 seconds.</p> <p>On May 29, 2019, 1-MRV-222 was stroked for its quarterly test, and again failed with a stroke time of 6.84 seconds.</p> <p>Technical Specification (TS) Limiting Condition for Operation (LCO) 3.7.2, requires four SGSVs and their associated actuator trains (including dump valves) to be OPERABLE, in MODE 1, and MODES 2 &amp; 3 except when all SGSVs are closed. If one SGSV actuator train becomes INOPERABLE, the REQUIRED ACTION is to restore the actuator train to OPERABLE status within 7 days. If this 7 day COMPLETION TIME is not met, then the associated SGSV is required to be declared inoperable.</p> <p>One SGSV inoperable in MODE 1, has a REQUIRED ACTION, to restore the SGSV to OPERABLE status within 8 hours. If this COMPLETION TIME is not met, then the Unit is to be placed in MODE 2 within 6 hours. Therefore, the max time allowable, from actuator train inoperability, to the time the Unit is required to be in MODE 2 is 7 days, 14 hours.</p> <p>A Past Operability Determination Evaluation was performed and concluded that 1-MRV-222 was inoperable from May 7, 2019, when Unit 1 entered Mode 3, until it passed its surveillance after being repacked and tested on May 30, 2019. The time period over which 1-MRV-222 was inoperable exceeded the time allowed by TS 3.7.2, SGSVs.</p> <p>Also, since LCO 3.0.4 is applicable to TS 3.7.2 for Unit 1, entry into a Mode Of Applicability for TS 3.7.2 without meeting the LCO is prohibited. Therefore, entering a Mode Of Applicability (MODES 2 &amp; 3 except when all SGSVs are closed, and MODE 1) with 1-MRV-222 inoperable is prohibited with LCO 3.0.4 requirements not met.</p> <p>Therefore, this occurrence is considered reportable as an Operation or Condition Prohibited by Technical Specification in accordance with 10 CFR 50.73(a)(2)(i)(B).</p>		

**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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollects.Resource@nrc.gov](mailto: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.

(See NUREG-1022, R 3 for instruction and guidance for completing this form  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO
Donald C. Cook Nuclear Plant Unit 1	05000315	2019	- 002	- 00

**COMPONENT**

1-MRV-222, Steam Generator 2 Stop Valve Train 'B' Dump Valve

**CAUSE OF THE EVENT**

During the initial failure, on May 6, 2019, an incorrect assumption was made that the packing would be wetted once steam was on the valve. Therefore, after the initial failure, the packing was wetted to simulate system operating conditions. The valve was then retested and passed with a stroke time of 1.76 seconds. When the quarterly stroke time surveillance was conducted on May 29, 2019, the valve did not pass. Further investigation determined that wetting of the packing does not occur with the system in operation, with this valve, and therefore the packing had time to dry out, resulting in an increased stroke time.

**ASSESSMENT OF SAFETY CONSEQUENCES****NUCLEAR SAFETY**

Each SGSV has a pair of dump valves that operate in complete redundancy. This means that only one of these valves needs to open for the adequate removal of steam head. Since 1-MRV-221 (Steam Generator 2 Stop Valve Train 'A' Dump Valve) was available, limiting the impact the sole failure of 1-MRV-222 has on plant risk, there was no significant increase to the likelihood of a nuclear safety hazard resulting from the inoperable SGSV Dump Valve.

**INDUSTRIAL SAFETY**

There was no actual or potential industrial safety hazard resulting from the inoperable SGSV Dump Valve.

**RADIOLOGICAL SAFETY**

There was no actual or potential radiological safety hazard resulting from the SGSV Dump Valve.

**PROBABILISTIC RISK ASSESSMENT**

Probabilistic Risk Assessment of the event determined it to have very low safety significance.

<b>NRC FORM 368A</b> <small>(04-2018)</small>	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>   <b>LICENSEE EVENT REPORT (LER)</b> <b>CONTINUATION SHEET</b>	<b>APPROVED BY OMB: NO. 3150-0104</b>  <small>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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-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.</small>	<b>EXPIRES: 03/31/2020</b>
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<b>1. FACILITY NAME</b>	<b>2. DOCKET NUMBER</b>	<b>3. LER NUMBER</b>	
Donald C. Cook Nuclear Plant Unit 1	05000315	<small>YEAR</small>	<small>SEQUENTIAL NUMBER</small>
		2019	- 002
<b>REV NO</b> - 00			
<p><b>CORRECTIVE ACTIONS</b></p> <p>An acceptable temporary packing configuration was installed on 1-MRV-222, and the valve subsequently passed the stroke time surveillance. The permanent packing configuration will be installed during the next scheduled Unit 1 Refueling Outage in Fall of 2020 (U1C30).</p> <p><b>PREVIOUS SIMILAR EVENTS</b></p> <p>Licensee Event Reports for Cook Nuclear Plant Units 1 and Unit 2 were reviewed for the previous five years and found no similar events.</p>			