



April 19, 2002

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Operating Licenses DPR-58  
Docket Nos. 50-315

Document Control Manager:

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

LER 315/2002-002-00: "Pressurizer Power Operated Relief Valves Inoperable due to Control Switch Position." The following commitment was identified in this submittal:

- The appropriate procedures will be revised to re-order the restoration steps such that the pressurizer PORVs are placed in the AUTO position before the associated block valves are opened.

Should you have any questions regarding this correspondence, please contact Mr. Gordon P. Arent, Manager, Regulatory Affairs, at (616) 697-5553.

Sincerely,

A handwritten signature in black ink that reads 'Joseph E. Pollock'.

Joseph E. Pollock  
Site Vice President

BO/pae  
Attachment

c: G. P. Arent  
A. C. Bakken  
L. Brandon  
K. D. Curry  
J. E. Dyer, Region III  
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JE22

# LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 EB), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE0B-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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>1. FACILITY NAME</b> Donald C. Cook Nuclear Plant Unit 1	<b>2. DOCKET NUMBER</b> 05000-316	<b>3. PAGE</b> 1 of 3
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**4. TITLE**  
Pressurizer Power Operated Relief Valves Inoperable due to Control Switch Position

5. EVENT DATE			6. LER NUMBER				7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
02	19	2002	2002	-- 002 --	00	04	19	2002	FACILITY NAME	DOCKET NUMBER	

<b>9. OPERATING MODE</b>	1	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (Check all that apply)								
<b>10. POWER LEVEL</b>	100%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)					
		<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)					
		<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 73.71(a)(4)					
		<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(5)					
		<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A					
		<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)						
		<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)						
		<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)						
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
<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)(B)								

**12. LICENSEE CONTACT FOR THIS LER**

<b>NAME</b> Brenda W. O'Rourke, Compliance Engineer	<b>TELEPHONE NUMBER (Include Area Code)</b> (616) 465-5901, x 2604
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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		MONTH	DAY	YEAR
YES (If Yes, complete EXPECTED SUBMISSION DATE).	X	NO						

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

On February 19, 2002, stroke testing of the Unit 1 pressurizer power operated relief valve (PORV) block valves 1-NMO-152 and 153 was being performed in accordance with surveillance test procedure 01-IHP-4030-STP-053, "Pressurizer Power Operated Relief Valve Functional Test." During the test, a reactor operator noticed that the control switches for pressurizer PORVs 1-NRV-152 and 153 were positioned slightly to the left of the AUTO position. Subsequent investigation identified that the control switches had been out of position from February 6, 2002, to February 19, 2002. As such, the pressurizer PORVs were declared inoperable due to the loss of automatic function to control reactor coolant system pressure below the setting of the pressurizer code safety valves. This condition is reportable in accordance with 10 CFR 50.72(a)(2)(i)(B), for a condition prohibited by plant technical specifications.

The cause of this event was the lack of awareness by the reactor operators to the potential for mis-positioning the pressurizer PORVs when placing the control switch in the AUTO position.

This event has minimal safety significance since the Donald C. Cook Plant Nuclear Plant accident analyses do not take credit for the automatic actuation of the pressurizer PORVs for overpressure protection of the reactor coolant system. In addition, the valves would still be capable of operating in manual to mitigate a steam generator tube rupture accident.

The Unit 1 pressurizer PORV control switches were restored to the AUTO position and the PORVs were declared operable. A lessons learned memo was issued to all plant operators regarding proper pressurizer PORV control switch manipulation. The appropriate procedures will be revised to re-order the restoration steps such that the pressurizer PORVs are placed in the AUTO position before the associated block valves are opened.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

1. FACILITY NAME  Donald C. Cook Nuclear Plant Unit 1	2. DOCKET NUMBER  <b>05000-315</b>	6. LER NUMBER				3. PAGE  2 of 3
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
		2002	--	002	--	

17. TEXT (If more space is required, use additional copies of NRC Form (366A))

**Conditions Prior to Event**

Unit 1 - 100 percent power  
Unit 2 - Mode 5A

**Description of Event**

On February 19, 2002, stroke testing of the Unit 1 pressurizer power operated relief valve (PORV) block valves 1-NMO-152 and 153 was being performed in accordance with surveillance test procedure 01-IHP-4030-STP-053, "Pressurizer Power Operated Relief Valve Functional Test." During the test, a reactor operator noticed that the control switches for pressurizer PORVs 1-NRV-152 and 153 were positioned slightly to the left of the AUTO position. After completion of the test, the actual position of the control switches was verified which concluded that both 1-NRV-152 and 1-NRV-153 were not fully engaged in the AUTO position. As a result, the pressurizer PORVs were declared inoperable due to the loss of automatic function to control reactor coolant system (RCS) pressure below the setting of the pressurizer code safety valves.

Subsequent investigation identified that Unit 1 pressurizer PORVs 1-NRV-152 and 153 had last been stroke tested on February 6, 2002. The investigation concluded that upon completion of the stroke test, the test personnel did not fully return the pressurizer PORV control switches to the AUTO position.

Technical Specification (TS) 3.4.11.c states that with two PORVs inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORVs to operable status or close the associated block valves and remove power from the block valves; restore at least one of the inoperable PORVs to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Because 1-NRV-152 and 153 were inoperable from February 6, 2002, to February 19, 2002, the TS action statement was not met. As such, this condition is reportable in accordance with 10 CFR 50.72(a)(2)(i)(B), for a condition prohibited by plant TS.

A similar condition occurred on February 11, 2002, during testing of the Unit 2 pressurizer PORVs 2-NRV-152 and 153 on. However, this condition is not reportable since it occurred before the Unit 2 PORVs were returned to service during the refueling outage.

**Cause of Event**

The cause of this event was the lack of awareness by the reactor operators to the potential for mis-positioning the pressurizer PORVs when placing the control switch in the AUTO position. During testing, the reactor operators manipulate the PORV control switches by slowly rotating them from the CLOSE to the AUTO position. This cautious approach was intended to prevent overshooting the AUTO switch position and inadvertently opening the pressurizer PORVs. However, the reactor operators failed to verify that the control switches were fully engaged in the AUTO position.

**Analysis of Event**

Overpressure protection of the RCS is provided by three spring-loaded pressurizer code safety valves. The valves are designed to limit RCS system pressure to 110 percent of design pressure. The pressurizer PORVs operate automatically to control RCS system pressure below the setting of the pressurizer code safety valves, thereby reducing the challenge to the code safety valves. However, the Donald C. Cook Plant Nuclear Plant (CNP) accident analyses do not take credit for the pressurizer PORVs for overpressure protection of the RCS.

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TEXT CONTINUATION**

1. FACILITY NAME	2. DOCKET NUMBER	6. LER NUMBER				3. PAGE
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
		2002	--	002	--	

Donald C. Cook Nuclear Plant Unit 1

**05000-315**

3 of 3

**17. TEXT** (If more space is required, use additional copies of NRC Form (366A))

The pressurizer PORVs are required by the CNP accident analyses to be available in Modes 1, 2 and 3, for manual operation to mitigate a steam generator tube rupture (SGTR) accident and for plant shutdown. During the recovery process for a SGTR accident, one PORV is sufficient to reduce primary pressure. The pressurizer PORVs are also credited for providing low temperature over pressure protection (LTOP) for the RCS in Modes 5 and 6.

Although the pressurizer PORV control switches for 1-NRV-152 and 153 were not fully engaged in the AUTO position, the valves were still capable of being operated in manual to mitigate a SGTR accident or for plant shutdown. In addition, the LTOP function was not impacted since the pressurizer PORVs are not required in Modes 1 through 3. As such, this event has minimal safety significance.

**Corrective Actions**

The Unit 1 pressurizer PORV control switches were restored to the AUTO position and the PORVs were declared operable. Caution tags were hung on the Unit 1 and Unit 2 pressurizer PORVs to alert operators of the potential problem with positioning the control switch in AUTO.

The appropriate procedures will be revised to re-order the restoration steps such that the pressurizer PORVs are placed in the AUTO position before the associated block valves are opened.

A lessons learned memo was issued to all plant operators regarding proper pressurizer PORV control switch manipulation. Switch position is controlled by an indent wheel attached to the main shaft.

**Previous Similar Events**

On December 10, 2001, plant operators were restoring the Unit 2 PORVs to the normal system alignment following a functional test and calibration. During restoration, the plant operators noticed that the control switches for pressurizer PORVs 2-NRV-151 and 153 did not appear to be fully engaged in the AUTO position. The suspected cause of the condition was attributed to the manner in which the plant operators manipulated the control switches. The valves were subsequently verified to be in the AUTO position. Therefore, this condition was not reportable.

Suggested enhancements included revising the functional test and calibration procedure to require placing the PORVs in the AUTO position prior to opening the associated block valve. However, the corrective actions associated with this December 10, 2001, event had not been implemented by the time this current condition was identified.