

Clinton Power Station  
8401 Power Road  
Clinton, IL 61727



U-604429

10 CFR 50.73  
SRRS 5A.108

May 29, 2018

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Clinton Power Station, Unit 1  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

Subject: Licensee Event Report 2018-001-00

Enclosed is Licensee Event Report (LER) 2018-001-00: Degraded Personnel Airlock Interlock Results in Loss of Primary Containment. This report is being submitted in accordance with the requirements of 10 CFR 50.73.

There are no regulatory commitments contained in this report.

Should you have any questions concerning this report, please contact Mr. Dale Shelton, Regulatory Assurance Manager, at (217) 937-2800.

Respectfully,

A handwritten signature in black ink, appearing to read "T Stoner", with a long horizontal flourish extending to the right.

Theodore R. Stoner  
Site Vice President  
Clinton Power Station

KP/lam

Attachment: License Event Report 2018-001-00

cc: Regional Administrator - Region III  
NRC Senior Resident Inspector- Clinton Power Station  
Office of Nuclear Facility Safety - Illinois Emergency Management Agency

IEZZ  
NKR



**LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

(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/>)

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.

<b>1. Facility Name</b> Clinton Power Station, Unit 1	<b>2. Docket Number</b> 05000461	<b>3. Page</b> 1 OF 3
--	-------------------------------------	--------------------------

**4. Title**  
Degraded Personnel Airlock Interlock Results in Loss of Primary Containment

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
03	30	2018	2018	- 001	- 00	05	29	18	Facility Name	Docket Number 05000
									Facility Name	Docket Number 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 checked="" 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)(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)
<b>10. Power Level</b>	<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)
098	<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 checked="" 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)(ii)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(iii)
		<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**

<b>Licensee Contact</b> Mr. Dale Shelton, Regulatory Assurance Manager	<b>Telephone Number (Include Area Code)</b> (217) 937-2800
---	---

**13. Complete One Line for each Component Failure Described in this Report**

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES

<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)

On March 30, 2018, at 1305 CDT, with the reactor at 98 percent thermal power a contractor identified that both doors of the Primary Containment personnel airlock at 828 ft elevation were open simultaneously. This individual was closing the interior door when he noticed that the exterior door was off its seat and started to open. The interior airlock door was shut immediately and the Main Control Room was contacted. Operations entered Technical Specification (TS) Limiting Condition for Operation (LCO) 3.6.1.1, "Primary Containment," Required Action A.1 at 1305 CDT. The LCO was exited approximately one minute later. Primary Containment was inoperable during the time both airlock doors were open but restored with the closing of the interior airlock door. Maintenance personnel performed equipment troubleshooting and subsequently repaired the interlock. The cause of the event is due to component wear over time of the exterior airlock door interlock parts that resulted in the containment airlock interlock not functioning properly. Corrective action include creation of a preventative maintenance task to perform an in-depth inspection of the Primary Containment interlocks. This event is reportable under 10 CFR 50.73(a)(2)(ii)(A) as the condition of the nuclear power plant including its principal safety barriers, being seriously degraded, and 10 CFR 50.73(a)(2)(v)(C) as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. This has been evaluated to not constitute a safety system functional failure.



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

(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/>)

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.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Clinton Power Station, Unit 1	05000461	2018	- 001	- 00

**NARRATIVE**

**PLANT AND SYSTEM IDENTIFICATION**

General Electric -- Boiling Water Reactor, 3473 Megawatts Thermal Rated Core Power Energy Industry Identification System (EIS) codes are identified in text as [XX].

**EVENT IDENTIFICATION**

Degraded Personnel Airlock Interlock Results in Loss of Primary Containment

**A. Plant Operating Conditions Before the Event**

Unit: 1	Event Date: 03/30/18	Event Time: 1305
Mode: 1	Mode Name: Power Operation	Reactor Power: 98 percent

**B. Description of Event**

On March 30, 2018, at 1305 CDT, the 828 ft elevation Primary Containment airlock (1MC03W) doors[DR] were discovered to be open simultaneously. An individual who was moving equipment made the discovery as he proceeded through the interior airlock door headed into Primary Containment. He noticed that the exterior airlock door was not securely shut and starting to open. Upon discovery of this condition, he immediately closed the interior door and proceeded to contact the Main Control Room. At 1305 CDT, Operations entered Technical Specification (TS) Limiting Condition for Operation (LCO) 3.6.1.1, "Primary Containment," Required Action A.1. The LCO was exited approximately one minute later at 1306 CDT.

Maintenance personnel inspected airlock 1MC03W and discovered slight component wear on interlock parts of the exterior door. The interlock was repaired and both airlock doors were subsequently verified as functional. Based on recent maintenance records associated with the airlock doors, no issues had been identified.

A non-emergency eight-hour notification was made in accordance with 10 CFR 50.72.

**C. Cause of the Event**

Maintenance personnel performed equipment troubleshooting and determined the cause of the event as being due to component wear over time of the airlock door interlock parts that resulted in allowing both airlock doors to be able to be opened simultaneously.



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

(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/>)

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.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Clinton Power Station, Unit 1	05000461	2018	- 001	- 00

**NARRATIVE**

**D. Safety Consequences**

There was minimal safety consequence associated with this event. The condition of both airlock doors being open simultaneously lasted less than a minute and ended when the interior airlock door was closed. The event was evaluated against the required safety functions for the Primary Containment as described in the Technical Specifications and Updated Safety Analysis Report. Had a design basis accident loss of coolant accident occurred while both doors were open, the safety function of the Primary Containment would have been maintained. Due to release timing assumptions in the dose analysis, the interior door would have been closed prior to any radioactive release. The total dose released would have been within the 10 CFR 50.67 limits. Other Primary Containment safety functions were not impacted.

This event is reportable under the provisions of 10 CFR50.73(a)(2)(ii)(A) as the condition of the nuclear power plant including its principal safety barriers (Primary Containment), being seriously degraded, and 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

This event has been evaluated to not constitute a safety system functional failure based on an engineering evaluation.

**E. Corrective Actions**

The interior door was closed immediately which restored Primary Containment operability. Maintenance personnel conducted an investigation to establish the cause of the event then repaired the containment airlock interlock. Corrective actions include creation of a preventative maintenance task to perform an in-depth inspection of Primary Containment airlocks.

**F. Previous Similar Occurrences**

No previous events were identified associated with the loss of Primary Containment due to degraded airlock components.

**G. Component Failure Data**

None.