



July 25, 2014

NG-14-0185
10 CFR 50.73

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

Duane Arnold Energy Center
Docket 50-331
Renewed Op. License No. DPR-49

Licensee Event Report #2014-003

Please find attached the subject report submitted in accordance with 10 CFR 50.73. This letter makes no new commitments or changes to any existing commitments.

A handwritten signature in black ink that reads "Richard L. Anderson".

Richard L. Anderson
Vice President, Duane Arnold Energy Center
NextEra Energy Duane Arnold, LLC

cc: Administrator, Region III, USNRC
Project Manager, DAEC, USNRC
Resident Inspector, DAEC, USNRC

Handwritten initials "IE22" above "MRK" in black ink.



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.

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4. TITLE
Both Doors in Secondary Containment Airlock Opened Concurrently

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
05	30	2014	2014	003	00	07	25	2014	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

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)
10. POWER LEVEL 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)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<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 checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(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 Laura B. Swenzinski, Senior Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (319) 851-7724
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	JM	IEL	Alarm Lock	N	N/A	N/A	N/A	N/A	N/A

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO				

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

On May 30, 2014, while operating at 100% power, workers opened doors concurrently when entering a secondary containment access airlock. The individuals involved each closed their respective doors upon encountering this unexpected condition; however, the result was a brief inoperability of secondary containment integrity. This resulted in an 8 hour reportable event. The Resident Inspector was notified, and Event Notification Number 50153 was made pursuant to 10 CFR 50.72(b)(3)(v)(C) due to a condition at the time of discovery that prevented the fulfillment of the Secondary Containment safety function.

The apparent cause of the event was determined to be excess strength of a permanent magnet on one of the doors. The monthly surveillance test will be revised to address the lag between the interlock lights turning off and the door latching, to document maintenance actions to allow trending and to quantify the gap between the interlock light turning off and the door latching.

This event did not result in a safety system functional failure. There were no radiological releases associated with this event.



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CONTINUATION SHEET**

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NARRATIVE

I. Description of Event:

On May 30, 2014 at 0750, while operating at 100% power, the Control Room Supervisor (CRS) received a call that Door 225 and Door 227, both in Secondary Containment Airlock 216 were opened concurrently. The doors being open at the same time caused a failure to meet SR 3.6.4.1.2 to verify that either the outer door(s) or the inner door(s) in each Secondary Containment access opening are closed. The identified condition caused Secondary Containment to be considered inoperable per TS LCO 3.6.4.1. The individuals involved immediately closed their respective doors upon encountering this unexpected condition. This action allowed SR 3.6.4.1.2 to be met, and restored Secondary Containment to an operable status. The CRS stationed individuals to control access to the door to ensure no other violations occurred.

This resulted in an 8 hour reportable event. The Resident Inspector was notified, and Event Notification Number 50153 was made pursuant to 10 CFR 50.72(b)(3)(v)(C) due to a condition at the time of discovery that prevented the fulfillment of the Secondary Containment safety function. Secondary containment leak tightness is required to ensure that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the secondary containment structure will be treated by the Standby Gas Treatment System prior to discharge to the environment.

The Secondary Containment airlock utilizes an interlock device with an adjustable permanent magnet (mounted on the door), and an electromagnet (on the door frame) arranged in an electrical circuit so that door(s) are held closed and/or are allowed to open. It was determined that the adjustable permanent magnet on Door 227 allowed the airlock to sense Door 227 was closed prior to it latching closed. Because of this, the interlock no longer prevented Door 225 from opening at that point in the door's travel, which ultimately led to both doors being opened concurrently. The Door 227 permanent magnet was adjusted, and surveillance testing was performed satisfactorily per Surveillance Test Procedure (STP) 3.6.4.1-02, Secondary Containment Airlock Verification, to verify the airlock was functioning properly. The airlock was then restored to functional status at 1335 on May 30, 2014.

There were no radiological releases associated with this event. There were no other structures, systems or components inoperable at the start of this event that contributed to the event.

II. Assessment of Safety Consequences:

There were no actual safety consequences associated with this event; the potential safety consequences were minimal. Both doors on the airlock were open simultaneously for less than 10 seconds, and were able to close immediately upon discovery of the condition.

This event will not be reported as a safety system functional failures since an engineering analysis (Corrective Action ACE1968923-01) was performed which determined that the system was capable of

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performing its safety function during events when the airlock was open for less than 10 seconds. The post-LOCA dose calculation does not credit secondary containment integrity for mitigation of on-site and off-site doses for the first 5 minutes of the event. Therefore, this event is bounded by the existing dose calculation.

This event did not result in a safety system functional failure. There were no automatically or manually initiated safety system responses.

III. Cause of Event:

An Apparent Cause Evaluation was completed. The evaluation identified the apparent cause of Door-225 and Door-227 being open at the same time as excess permanent magnet strength. After the permanent magnet was adjusted, the interlock was able to prevent both doors from opening.

IV. Corrective Actions:

An operational check of the Secondary Containment door interlocks is performed monthly via STP 3.6.4.1-02, Secondary Containment Airlock Verification. Engineering will address the lag between the interlock lights turning off and the door latching. STP 3.6.4.1-02 will be enhanced to:

- document maintenance actions to allow trending, and
- quantify the gap between the interlock light turning off and the door latching to improve magnet setup.

V. Additional Information:

Previous Similar Occurrences:

A review of DAEC Licensee Event Reports from the past 5 years identified two similar occurrences, reference LER 2013-006 and LER 2014-002.

A review of the corrective action program identified additional occurrences of airlock conditions causing momentary secondary containment inoperability - three additional occurrences in the past year and ten occurrences in the past two years.

EIIS System and Component Codes:

IEL Interlock

Reporting Requirements:

This event is being reported 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, 10CFR50.73(a)(2)(v)(C).