

# CATEGORY 1

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ACCESSION NBR: 9810150003      DOC.DATE: 98/10/09      NOTARIZED: NO      DOCKET #  
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana M 05000315  
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 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 98-043-00: on 980910, determined that containment air locks testing had not been performed IAW TS 4.6.1.3.a. Caused by personnel error. Plant procedures will be revised to include addl steps re air lock test results. With 981009 ltr.

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One Cook Plant  
Bridgman, MI 49106  
616 465 5901



October 9, 1998

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

Operating License DPR-58  
Docket No. 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 98-043-00, "Containment Air Locks Test Frequency Not Performed In Accordance with Technical Specification 4.6.1.3.a".

Sincerely,

A handwritten signature in cursive script that reads "John R. Sampson".

J. R. Sampson  
Site Vice President

/mbd

Attachment

c: J. L. Caldwell (Acting), Region III  
R. P. Powers  
P. A. Barrett  
J. B. Kingseed  
R. Whale  
D. Hahn  
Records Center, INPO  
NRC Resident Inspector

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digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY  
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REGULATORY COMMISSION, WASHINGTON, DC 20535-0001, AND TO THE  
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BUDGET, WASHINGTON, DC 20503

<b>FACILITY NAME (1)</b> Cook Nuclear Plant Unit 1	<b>DOCKET NUMBER (2)</b> 50-315	<b>PAGE (3)</b> 1 of 3
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<b>TITLE (4)</b> Containment Air Locks Testing Not Performed In Accordance with Technical Specification 4.6.1.3.a
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EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
09	10	98	98	- 043 -	00	10	09	98	Cook Unit 2	50-316	
<b>OPERATING MODE (9)</b> 5											
<b>POWER LEVEL (10)</b> 00											
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)											
<input type="checkbox"/> 20.2201 (b)											
<input type="checkbox"/> 20.2203(a)(1)											
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<input type="checkbox"/> 20.2203(a)(2)(iii)											
<input type="checkbox"/> 20.2203(a)(2)(iv)											
<input checked="" type="checkbox"/> 50.73(a)(2)(i)											
<input type="checkbox"/> 50.73(a)(2)(ii)											
<input type="checkbox"/> 50.73(a)(2)(iii)											
<input type="checkbox"/> 50.73(a)(2)(iv)											
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<input type="checkbox"/> 50.73(a)(2)(ix)											
<input type="checkbox"/> 73.71											
<input type="checkbox"/> OTHER											
Specify in Abstract below or in NRC Form 366A											

<b>LICENSEE CONTACT FOR THIS LER (12)</b>										
<b>NAME</b> Mr. Alberto Verteramo, Engineering Performance Testing Section Manager								<b>TELEPHONE NUMBER (Include Area Code)</b> 616/465-5901, x1537		

<b>COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)</b>										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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

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

On September 9, 1998, while reviewing the surveillance requirements for the containment air locks, engineering personnel discovered that the test frequency for the containment air lock door seals for both units was not controlled in accordance with Technical Specification (TS) 4.6.1.3a. The Technical Specification states that each containment airlock shall be demonstrated operable in accordance with 10 CFR 50 Appendix J Option B and Regulatory Guide 1.163. The Regulatory Guide directs use of Nuclear Energy Institute (NEI) 94-01 to meet the requirements of 10 CFR 50 Appendix J Option B. The trending of air lock test data, which is required if Option B is used, was not performed, however the test interval was extended to 30 days. This represents a failure to meet TS requirements, and is therefore reportable under 10 CFR 50.73(a)(2)(i)(B).

The root cause of this condition was personnel error. The guidance contained in NEI 94-0, pertaining to the recommended air lock test frequency, was misinterpreted, and the record keeping requirements for the air lock seal performance were not implemented. Plant procedures will be revised to include steps to evaluate the air lock test results and adjust the test frequency as required. The revised procedures will also include direction for record keeping in accordance with 10 CFR 50 Appendix J Option B.

Review of historical test data for containment airlock door seal performance since April 1996 indicated that door seal performance was satisfactory and containment integrity was not compromised. Therefore, the failure to test the containment airlocks in accordance with the requirements was of no safety significance.

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

**Conditions Prior to Event**

Unit 1 was in Mode 5, Cold Shutdown

Unit 2 was in Mode 5, Cold Shutdown

**Description of Event**

On September 9, 1998, while reviewing the surveillance requirements for the containment airlock door seals, engineering personnel discovered that the appropriate programmatic controls were not implemented in April 1996 to ensure that the containment air locks were tested in accordance with the requirements of Technical Specification (T/S) 4.6.1.3.a. The Technical Specification states that each containment air lock shall be demonstrated operable in accordance with 10 CFR 50 Appendix J Option B and Regulatory Guide 1.163.

Specifically, 10 CFR 50 Appendix J, Option B states:

"The comparison to previous results of the performance of the overall containment system and of individual components within it must be documented to show that the test intervals established for the containment system and of individual components within it are adequate. These records must be available for inspection at plant sites."

T/S 4.6.1.3.a was amended in March 1996 under T/S Amendments 209 (Unit 1) and 193 (Unit 2) to allow performance of containment leak rate testing in accordance with 10 CFR 50 Appendix J Option B, and the test schedule was changed in April 1996 for both units. The frequency of testing was reduced as Option B allowed the test frequency to be adjusted based on the performance of the airlock door seals during testing. However, the trending of the test data, required if Option B is in effect, was not implemented.

In addition, Regulatory Guide 1.163 directs use of Nuclear Energy Institute (NEI) 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," to meet the requirements of 10 CFR 50 Appendix J Option B. NEI 94-01, Section 10.2.2.1 was endorsed to meet the surveillance requirements of TS 4.6.1.3a.

Specifically, Section 10.2.2.1 of NEI 94-01 states "When containment integrity is required, airlock door seals should be tested within 7 days after each containment access." NEI 94-01, Section 10.2.2.1 additionally states "For periods of multiple containment entries where the air lock doors are routinely used for access more frequently than once every 7 days (e.g., shift or daily inspection tours of the containment), door seals may be tested once per 30 days during this time period."

On April 22, 1996, the surveillance test procedure 1/2 EHP 4030 STP.227, "30 Day Airlock Door Test," was revised to change the containment airlock door seal test interval from every 3 days to every 30 days. This revision was based on a misinterpretation of the NEI guidance regarding routine access. Recent review of the issue determined that all the air lock doors are not routinely used for access greater than once every 7 days. Therefore, strict compliance to the guidance provided in NEI Section 10.2.2.1 would require that the containment airlock doors be tested more frequently to meet the requirements of T/S 4.6.1.3a.

**Cause of Event**

The root cause of this condition was personnel error. The guidance contained in the NEI document concerning the recommended air lock test frequency was misinterpreted, and as a result, the surveillance procedure was incorrectly revised when the T/S amendments were implemented.

In addition, there was an inadequate review of the T/S amendments for the impact of the new requirements. It was believed that the NEI 94-01 test interval requirements recommended 30 days if the airlocks were used frequently, without

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## Cause of Event (cont'd)

consideration for frequency of routine entries into containment. It was also incorrectly assumed that routine containment entries through all air lock doors would be greater than once every seven days.

Contributing to this event was a failure to proceduralize the record keeping requirements for the airlock door seals. Once Option B was in effect, the change to the 30 day airlock test frequency was not evaluated to determine if the test interval was adequate. This was to be accomplished by comparing current surveillance test results for the airlock seals with historical data. No controls existed to ensure that the performance of the seals was evaluated relative to the test frequency.

**Analysis of Event**

This LER is submitted in accordance with 10CFR50.73(a)(2)(i)(B), a condition or operation that is prohibited by the plant's Technical Specifications. It was determined that the containment airlock door seals were not being tested at the required frequency in accordance with T/S 4.6.1.3.a.

The testing of the air locks is required to verify that containment integrity is maintained in the event of design basis accidents. Prior to the implementation of Option B of 10 CFR 50 Appendix J, the containment airlock door seal surveillance was performed on a 3 day frequency.

A review was performed to determine if the acceptance criteria for the containment air lock seal leakage was met since the implementation of T/S amendments 209 and 193. The data for 12 EHP 4030 STP.227, "30 Day Airlock Door Test", performed since implementation of the 30 day testing frequency showed that the measured leakage for every seal test of all the containment air lock doors was acceptable. Therefore, containment integrity was not compromised during the period when the air locks were not tested in accordance with 10 CFR 50 Appendix J Option B and Regulatory Guide 1.163. Therefore, the condition was of no safety significance.

**Corrective Actions**

The plant procedures will be revised to include steps to evaluate the air lock test results and adjust the test frequency as required. Included in the revisions will be a discussion of the test interval requirements that are specified in NEI 94-01, Section 10.2.2.1 pertaining to the air lock door seals. Additionally, the procedures will be revised to include direction for record keeping in accordance with 10 CFR 50 Appendix J Option B.

To address the lack of an adequate impact review of the T/S amendment, a procedure will be developed to provide specific guidance and expectations for the review of T/S amendments and their supporting documentation.

**Failed Component Identification**

Not Applicable

**Previous Similar Events**

None