



May 4, 2005

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 2; Docket No. 50-318; License No. DPR 69
Licensee Event Report 2005-002
Personnel Air Lock Containment Penetration Closure Requirements Violation

The attached report is being sent to you as required by 10 CFR 50.73. Should you have questions regarding this matter, please contact Mr. L. S. Larragoite at (410) 495-4922.

Very truly yours,

A handwritten signature in black ink, appearing to read "D. Holm", written over a horizontal line.

David A. Holm
Plant General Manager

DAH/ALS/bjd

Attachment: As stated

cc: R. V. Guzman, NRC
S. J. Collins, NRC

Resident Inspector, NRC
R. I. McLean, DNR

IE22

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to Infocollects@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 Calvert Cliffs Nuclear Power Plant, Unit 2	2. DOCKET NUMBER 05000 318	3. PAGE 1 OF 005
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4. TITLE
Personnel Air Lock Containment Penetration Closure Requirements Violation

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	06	2005	2005	- 002 -	00	05	04	2005		05000
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9. OPERATING MODE 6	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)																																				
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12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME A. L. Simpson, Senior Engineer	TELEPHONE NUMBER (Include Area Code) 410-495-6913
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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

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

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

On March 6, 2005 at 1415, control element assembly coupling activities were commenced following reactor fuel shuffle activities. At that time the Personnel Air Lock (PAL) door interlocks were removed and both PAL doors were open. In this condition the plant's Technical Specifications require the PAL to be capable of being closed by an operable PAL door under administrative control, which require a designated individual available immediately outside the PAL to close the operable door. However, when the control element assembly coupling commenced on March 6, 2005 at 1415 there was no one available immediately outside the PAL specifically designated to close the PAL door. The designated individual had been released from that responsibility at approximately 0630 on March 6, 2005 by the Containment Job Path Manager. The initiating error was failure to contact the Operations Work Control when the PAL watch was secured. The Operations Work Control has ownership and responsibility for containment closure controls. The root cause of this event is not having a formal process for documenting and communicating the transfer from one closure control method to another. Corrective actions include procedure changes to establish a formal process.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
CALVERT CLIFFS, UNIT 2	05000 318	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	02 O F 005		
		2005	- 002	- 00			

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

I. DESCRIPTION OF EVENT

On March 6, 2005 at 1415, Control Element Assembly (CEA) coupling activities were commenced following the Unit 2 reactor fuel shuffle activities. At that time the Personnel Air Lock (PAL) door interlocks were removed and both PAL doors were open. In this condition Technical Specification 3.9.3 requires that the PAL must be capable of being closed by an operable PAL door under administrative control. The administrative controls consist of a designated individual available immediately outside the PAL to close the operable door. Should a fuel handling accident occur inside the Containment Structure, one PAL door will be closed following the evacuation of the Containment Structure.

When CEA coupling commenced on March 6, 2005 at 1415, there was no one available immediately outside the PAL specifically designated to close the PAL door. The designated individual had been released from that responsibility at approximately 0630 on March 6, 2005 by the Containment Job Path Manager. The Containment Job Path Manager believed that the watch was no longer required now that refueling was completed and because shutdown cooling had been restored. However, the Containment Job Path Manager did not notify the Operations Work Control (OWC) Senior Reactor Operator (SRO) that the PAL watch was no longer stationed.

Containment closure controls are established by performing Surveillance Test Procedure (STP) O-55A-2, "Containment Closure Verification" to establish the known condition of each penetration. During core alterations, deviations to containment closure are not authorized. However, the PAL may remain open in accordance with the Technical Specifications if a designated individual is available immediately outside the PAL.

During non-core alteration periods closure deviations are authorized and are permitted under procedure Nuclear Operations (NO)-1-114, "Containment Closure" with the use of a "Containment Closure Deviation Sheet." These forms determine the penetration closure method based on the time to boil.

Containment Closure Deviation Sheets may be used as a tracking method for the penetration during core alterations, and to track the assigned individual responsible for closure of the PAL. A Containment Closure Deviation Sheet for the PAL was being tracked in the shutdown log during the time of the subject event. This specific form was being used during both core alterations and non-core alteration periods. However, due to the lack of notification that the PAL watch had been secured, the OWC SRO believed a person was stationed at the PAL and authorized CEA coupling activities to begin.

The initiating error was the failure to contact the OWC when the PAL watch was secured. The OWC has ownership and responsibility for containment closure controls. The Containment Job Path Manager did not have the authority to secure the PAL watch.

LICENSEE EVENT REPORT (LER)

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CALVERT CLIFFS, UNIT 2	05000 318	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	03 ^O / _F 005		
		2005	- 002	- 00			

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

II. CAUSE OF EVENT

The root cause of this event is not having a formal process for documenting and communicating the transfer from one closure control method to another. The process for documenting and communicating the transfer of one containment closure control method to another is not clear and specific. Nuclear Operations procedure (NO-1-114) clearly states that during core alterations a dedicated person must be stationed directly outside the PAL if the doors are open. What is not clear is the documentation of which closure method is in effect or whether the closure sheets must be closed out when changing closure methods. The directions for "Method of Restoration for Closure" in NO-1-114 do not adequately address how to document the use of a person stationed at the PAL. Containment Closure Deviation Sheets that were reviewed only indicated that the door must be shut when notified. There was no documentation of a person stationed at the door. This lack of procedural control allows closure deviation sheets to remain in the shutdown log even when the closure control method changes. This practice led to assumptions on penetration status.

III. ANALYSIS OF EVENT

The potential consequence of a failure to maintain containment closure would be an uncontrolled and unplanned release to the environment during a fuel handling event. The closure controls are established to mitigate the consequences of such an event.

The plant's safety analysis assumes that a fuel handling incident is initiated when a fuel assembly is dropped during fuel handling in the Containment Structure or the spent fuel pool. The subject condition existed during CEA coupling (core alterations) only and not during the movement of irradiated fuel assemblies. The containment penetration closure requirements are applicable during performance of core alterations because a potential for a fuel handling incident exists. The subject event did not affect the method of performing CEA coupling as described in the Updated Final Safety Analysis Report. Therefore, the probability of a fuel handling incident was not increased. A fuel handling incident as described in the Updated Final Safety Analysis Report does not credit closure of the PAL at the beginning of the event.

The direct consequence was the failure to meet the requirement for containment closure. This resulted in a condition prohibited by the plant's Technical Specifications. As stated above, the PAL was not capable of being closed by an operable PAL door under administrative control as required per Technical Specification Limiting Condition of Operation 3.9.3.c.2. Technical Specification 3.9.3 is applicable during core alterations and specifies a required action to immediately suspend core alterations if the condition exists where one or more containment penetrations are not in the required status. The PAL, a containment penetration, was not in the required status during core alterations, and the required action to immediately suspend core alterations was not performed. Therefore, this event is reportable per 10 CFR 50.73(a)(2)(i)(B).

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
CALVERT CLIFFS, UNIT 2	05000 318	2005	- 002	- 00	04 OF 005

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

IV. CORRECTIVE ACTIONS

A. Change applicable procedures to:

1. Require that closure deviation sheets are closed out when the method for closure control is changed.
2. Provide clear and specific direction for all steps and blanks on the closure deviation sheet.
3. Ensure that the OWC SRO is the only person who may authorize termination of a closure deviation.
4. Require that each work period has a work leader signature for the personnel they are responsible for.
5. Include a verbal confirmation from the designated PAL closure watch.

B. Change Job Path Manager Qualifications to include PAL closure control requirements and information on this event.

C. Provide training to necessary plant personnel on the procedure changes and the results of the root cause analysis associated with this event.

V. ADDITIONAL INFORMATION

A. Component Identification

Component	IEEE 803 EHS Function	IEEE 805 System ID
Reactor Containment Structure	PEN	NH

B. Previous Occurrences

A review of Calvert Cliffs' licensee event reports (LERs) over the past three years was performed. The review identified one similar reportable event where containment penetration closure requirements were violated due to personnel errors. Specifically, as documented in LER 318/2003-001, the Technical Specification closure requirements for the emergency air lock temporary closure device were violated. In this event maintenance personnel ran tubing through the penetration without authorization. They also failed to properly seal the penetration.

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Contributing causes to that event were inadequate work packages and inadequate communications, both of which were the result of human performance errors.

The previous similar event involved the same underlying concern regarding containment penetration closure controls. However, prior corrective actions established did not prevent recurrence because the corrective actions were established to address a different root cause. Specifically, the previous similar event was the result of inadequate preparation of maintenance work packages and inadequate communications during performance of maintenance activities. Therefore, prior corrective actions included changes to the procedures controlling preparation of maintenance work packages and improvements regarding communications during performance of maintenance activities.