

**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: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (7-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  
Clinton Power Station

DOCKET NUMBER (2)  
05000461

PAGE (3)  
1 OF 4

TITLE (4)  
Inadequately Tested Auxiliary Building Roof Plug Leads to Secondary Containment Inoperability While Secondary Containment was Required by the Technical Specifications

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
03	22	95	96	014	01	10	01	97	None
									DOCKET NUMBER
									05000
									FACILITY NAME
									None
									DOCKET NUMBER
									05000

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)					
5	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)		
POWER LEVEL (10) 0	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)		
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	73.71		
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	OTHER		
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A		
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)			

LICENSEE CONTACT FOR THIS LER (12)  
NAME: S. P. O'Riley, Plant Engineer  
TELEPHONE NUMBER (Include Area Code): (217) 935-8881, Extension 3491

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

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

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

During the fifth refueling outage in March 1995, an alternate roof plug (ARP) was used in place of the permanent roof plug on the Auxiliary Building section that is part of the secondary containment boundary. Adequate testing was not performed to determine that the ARP satisfied the secondary containment leakage requirements. The ARP was in place when secondary containment was required by Technical Specification 3.6.4.1. The cause of the event was attributed to a problem with the design change procedure in place at the time the alternate roof plug was designed, and a lack of specificity when identifying the testing required for the design change. Corrective actions for this event include: requiring necessary testing when the ARP is installed, providing a seminar to appropriate design-change-qualified personnel on the need for specific testing requirements, and including a discussion of this event during operator requalification training.

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

DESCRIPTION OF EVENT

On October 17, 1996, during the current refueling outage (RF-6) at Clinton Power Station, engineering personnel were asked to determine the testing required to support secondary containment operability after the installation of an alternate roof plug on the Auxiliary Building (NF). The alternate roof plug was allowed to be installed by Engineering Change Notice (ECN) 28962. The testing was required to ensure the operability of secondary containment since the alternate roof plug would constitute part of the secondary containment boundary and was planned to be installed when secondary containment was required by the Technical Specifications. The alternate roof plug design was installed to allow easier movement of material in and out of the Auxiliary Building section of the steam tunnel during Modes 4 (COLD SHUTDOWN) and 5 (REFUELING). The testing specified in the ECN required that the standby gas treatment system (BH) be verified operable by running the system after initial installation of the alternate plug. The ECN did not describe the specific procedure or acceptance criteria required.

The procedure in place at the time that this design change (ISED procedure D.55) was installed did not contain as much detailed information on determining the installation and testing requirements as the current design change procedure (CPS No. 1003.01 "CPS Hardware Change Program"). Step 8.4.1 section b of the current procedure specifically addresses including the testing required to demonstrate the integrity of a structure, component or system.

The alternate plug was also installed during the last refueling outage (RF-5, March 1995). Engineering personnel reviewed the testing that was performed during RF-5 to determine how the operability of secondary containment was verified. The testing that was performed during RF-5 operated the standby gas treatment system for about one hour but did not verify that secondary containment could be maintained at less than or equal to 0.25 inches of water vacuum by the standby gas treatment system as required by Technical Specification 3.6.4.1, "Secondary Containment." Condition Report 1-96-10-229 was initiated to document this condition while further investigation was conducted to determine whether the alternate roof plug was adequately sealed during RF-5. During the investigation of the condition report it was decided not to use the alternate roof plug during RF-6 when secondary containment was required.

On October 24, 1996, engineering personnel determined, through interviews and by reviewing logs from RF-5, that the seal around the alternate roof plug may not have been adequate to ensure that secondary containment was maintained as required by Technical Specification 3.6.4.1. On March 27, 1995, outage logs describe that rain water leaked into the Auxiliary Building section of the steam tunnel from the Auxiliary Building roof where the alternate roof plug interfaces with the Auxiliary Building roof. The alternate roof plug was installed on March 20, 1995, but secondary containment was not required to be operable at that time. However, core alterations were initiated on March 22, 1995, at 1610 hours, the plant was in Mode 5 (Refueling), the reactor pressure vessel head was removed and reactor coolant temperature was being maintained between 90 and 100 degrees Fahrenheit. During core alterations Technical Specification 3.6.4.1 requires that secondary containment be operable. When secondary containment is inoperable during core alterations, the required action specified by the Technical Specifications is to immediately suspend core alterations.

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On March 28, 1995, a silicone sealant was installed where the alternate roof plug interfaces with the Auxiliary Building roof to stop the water from leaking into the steam tunnel. After the silicone sealant was installed, standing water was observed above the top of the alternate roof plug opening and no leakage into the steam tunnel was identified.

No other equipment or components were inoperable at the start of this event to the extent that their inoperable condition contributed to this event.

However, the performance of core alterations concurrent with the time the alternate roof plug was installed, such that secondary containment was inoperable, constituted an operation or condition prohibited by the Technical Specifications. The alternate roof plug was removed April 4, 1995.

## CAUSE OF EVENT

The cause of the event was attributed to a problem with the design change procedure in place at the time the alternate roof plug was designed in that it did not contain adequate information to determine the necessary testing, and a lack of specificity when identifying the testing required for the design change.

## CORRECTIVE ACTION

CPS No. 1003.01 which details the design change process had sufficient detail when this event was discovered to address the issue of inadequate procedural guidance for determining post modification testing, further changes to this procedure are not warranted. The design change for the alternate roof plug will be revised to specify the necessary secondary containment integrity testing prior to its next usage during mode 4 or 5 when secondary containment is required. A training seminar will be provided to appropriate design-change-qualified personnel on the need for specific testing requirements. This event will be referenced in that training. A discussion of the this event was included in operator requalification training seminar RC95017-01 during requalification cycle 97.5.

## ANALYSIS OF EVENT

This event is reportable under the provisions of 10CFR50.73(a)(2)(i)(B) since the performance of core alterations concurrent with the time when secondary containment was inoperable during RF-5, while the alternate roof plug may have been inadequately sealed, constituted an operation or condition prohibited by the plant Technical Specifications.

This event is of low safety significance. It is indeterminate if the installed alternate roof plug would have met the leakage requirements specified by the Technical Specifications. These leakage requirements are specified to limit radioactive release during accidents and certain transients. The alternate roof plug design change was only authorized in Modes 4 and 5 which precluded several of these accidents.

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During core alterations, the secondary containment was maintained at or below 0.25 inches vacuum of water as required by Technical Specifications. No fuel clad damage occurred during fuel handling. Based on the knowledge that the Technical Specification limit of greater than or equal to 0.25 inches vacuum of water was maintained during refueling activities, and no fuel cladding damaged occurred, IP is assured that an unmonitored release did not occur during this period.

ADDITIONAL INFORMATION

No other equipment or components failed during this event.

A review of past events showed no other occurrences of the failure to properly specify modification testing in recent history.

For further information regarding this event, contact S. P. O'Riley, Plant Engineer, at (217) 935-8881, extension 3491.