

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 (T-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)

Susquehanna Steam Electric Station - Unit 1

DOCKET NUMBER (2)

05000387

PAGE (3)

1 OF 3

TITLE (4)

SCBL Maximum Path Exceeded For Unit 1

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
02	14	92	92	-- 020	-- 00	08	20	99	FACILITY NAME	DOCKET NUMBER
										05000
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)				
1	100	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(ii)		50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(iii)		50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Cornelius T. Coddington Senior Engineer - Nuclear Licensing

TELEPHONE NUMBER (Include Area Code)

610 / 774-4019

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On July 27, 1999, with Unit 1 in Mode 1 (Power Operation) at 100 percent power, it was determined by Engineering that on several previous occasions, the secondary containment bypass leakage (SCBL) limit was exceeded when the nitrogen supply line spectacle flange was in a position other than closed during unit operation. This determination was a result of an engineering investigation into the function of the nitrogen supply line spectacle flange in both units. The investigation concluded that a key function of the nitrogen supply line spectacle flange was to eliminate Secondary Containment Bypass Leakage (SCBL) in Modes 1, 2 and 3. Engineering performed an evaluation of the impact of the spectacle flange being in a position other than closed. In this configuration, the purge supply primary containment isolation valves represent an SCBL pathway. During a historic review of the Local Leak Rate Test (LLRT) results for the purge supply primary containment isolation valves, it was determined that on several occasions the SCBL limit at that time for Unit 1 had been exceeded. This was determined by adding the LLRT results for the purge supply primary containment isolation valves to the secondary containment bypass leakage total. Based on the SCBL exceeding 5 scfh, this event is reportable in accordance with 10CFR50.73(a)(2)(i). No definitive root cause for this event could be identified. The Nitrogen Supply Line spectacle flanges have been status tagged so that they remain closed in Modes 1, 2, and 3. Corrective actions to be completed include: (1) revising the FSAR to note that the spectacle flange may be in a position other than closed in Mode 1, 2, or 3 if the SCBL criteria is met (2) revising Operating procedures for both units to allow the spectacle flanges to be in a position other than closed in Mode 1, 2, or 3, and (3) revising administrative procedures to account for the spectacle flange being in a position other than closed in the SCBL calculations. The 10CFR100 limits would not have been exceeded. Therefore, there were no safety consequences or compromises to public health and safety as a result of this event.

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

EVENT DESCRIPTION

On July 27, 1999, with Unit 1 in Mode 1 (Power Operation) at 100 percent power, it was determined by Engineering that on several previous occasions the secondary containment bypass leakage limit had been exceeded when the nitrogen supply line (EIS Code: LK) spectacle flange was in a position other than closed during unit operation. This determination was a result of an engineering investigation for both units into the function of the nitrogen supply line spectacle flange. The investigation concluded that a key function of the nitrogen supply line spectacle flange was to eliminate Secondary Containment Bypass Leakage (SCBL) in Modes 1, 2 and 3. With the spectacle flange in a position other than closed, the purge supply primary containment isolation valves represent an SCBL pathway. Engineering performed an evaluation of the spectacle flange being in a position other than closed. During a historic review of the Local Leak Rate Test (LLRT) results for the purge supply primary containment isolation valves, it was determined that on several occasions the SCBL limit at that time for Unit 1 was exceeded (the most recent occurrence being February 14, 1992). This was determined by adding the LLRT results to the secondary containment bypass leakage.

CAUSE OF EVENT

No definitive root cause for this event could be identified. Since the original start-up of the units, the nitrogen supply line has been evaluated for SCBL and was not considered to be a SCBL pathway because the spectacle flange eliminated bypass leakage during normal operations. Technical Specifications Section 3.6.3.3 allows containment inerting in Modes 1, 2 and 3. To inert containment, the nitrogen supply spectacle flange must be open. It was not recognized that the opening of the spectacle flange made the nitrogen supply line a SCBL pathway.

REPORTABILITY/ANALYSIS

An Engineering evaluation was performed to assess the impact of the nitrogen supply line spectacle flange being in a position other than closed on SCBL. It is in this configuration (i.e., spectacle blind not closed) that the results of the LLRT for the purge supply penetrations impact SCBL and must be included in the SCBL calculations. The time period evaluated was from October 1990 to the present time for Unit 1 and from October 1989 to the present for Unit 2. The SCBL limit was revised in September 1996 from 5 scfh to 9 scfh. At the present time, the SCBL limit of 9 scfh is met for both units with the spectacle flange in a position other than closed. For the time period evaluated, the SCBL limit was not exceeded on Unit 2. The SCBL limit was exceeded on six (6) occasions during the time period evaluated on Unit 1. The latest occasion that the SCBL limit was exceeded was on February 14, 1992. During the occasions where the SCBL limit was exceeded, the SCBL limit at the time of 5 scfh was exceeded by no more than 0.85 scfh. Based on the SCBL having exceeded 5 scfh, this event is reportable in accordance with 10CFR50.73(a)(2)(i). If a DBA LOCA were to have occurred during the time period that the spectacle flange was open, 10CFR100 limits would not have been exceeded using realistic fuel failure analysis. In addition, based on the revised calculational method used to change the SCBL limit from 5 scfh to 9 scfh, the 10CFR100 limits would not have been exceeded using the accident fuel failure analysis. Therefore, there were no safety consequences or compromises to public health and safety as a result of this event.

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

In accordance with the guidelines provided in NUREG-1022, Revision 1, Section 5.1.1, the required submission date for this report was determined to be August 26, 1999. Also, in accordance with the guidelines provided in Section 5.2.3, Item 6 of NUREG-1022, Revision 1, the LER number is based on the year 1992 since that was the year in which the event occurred.

CORRECTIVE ACTION

The following corrective actions have been completed:

- Applied Status Control Tags to the Nitrogen Supply Line spectacle flange in both units to insure that they are not opened in Modes 1, 2, and 3.

The following corrective actions are to be completed:

- Revise FSAR footnote to state that the Nitrogen Supply Line spectacle flange is allowed to be in a position other than closed in Mode 1, 2 or 3 if the SCBL criteria are met.
- Revise the appropriate administrative procedures to address the SCBL criteria when the Nitrogen Supply Line spectacle flange is in a position other than closed.
- Revise the appropriate operating procedures for both units to allow the Nitrogen Supply Line spectacle flange to be in a position other than closed in Mode 1, 2 or 3 if the SCBL criteria are met.

ADDITIONAL INFORMATION

Past Similar Events: LER 98-007-00, Docket No. 387/License No. NPF-14

Failed Component: None