

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-8 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)

Waterford Steam Electric Station Unit 3

DOCKET NUMBER (2)

05000 382

PAGE (3)

1 OF 06

TITLE (4)

TS 3.0.3 Entry Due to Redundant Shield Building Ventilation Trains Being Inoperable

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	01	98	98	018	00	10	01	98	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

OPERATING MODE (9) 1

POWER LEVEL (10) 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

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)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)
20.2203(a)(2)(i)	20.2203(a)(3)(ii)		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

James R. Douet, Maintenance Manager

TELEPHONE NUMBER (Include Area Code)

(504) 464-3135

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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On September 1, 1998, with the Unit operating in Mode 1 at 100% power, two electricians were dispatched to the field to perform preventive maintenance on Shield Building Ventilation (SBV) valve 110A. Having arrived at what they perceived to be the job site, they commenced work. This action prompted the alarming of an annunciator and an inexplicable computer point status indication for SBV-110B in the Control Room. The ensuing investigation revealed that the electricians were performing maintenance on SBV-110B vice SBV-110A. The root causes of this mistake were noncompliance with an approved Station procedure and failure to employ self-checking techniques. The scope of work performed rendered SBV-110B, hence SBV Train B, inoperable. As SBV Train A and Train B were inoperable simultaneously, Technical Specification 3.0.3 was entered.

Although both Trains of SBV were unavailable, while in this condition, design limitations would not have been exceeded in the event of a design basis accident. Therefore, the health and safety of the public or plant personnel were not compromised.

**REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK**

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 48	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME 8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

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

REPORTABLE OCCURRENCE

Shield Building Ventilation (SBV) [VC] Train B was unintentionally rendered inoperable while SBV Train A was out of service. This condition required entry into Technical Specification (TS) 3.0.3 and is reportable per 10CFR 50.73(a)(2)(i)(B).

INITIAL CONDITIONS

At approximately 1120 on September 1, 1998, when work was inadvertently performed on SBV Train B vice Train A, the Unit was operating in Mode 1. The approximate thermal power level was 100%. Critical to this event, prior to and concurrent with this occurrence, SBV Train A was inoperable.

EVENT DESCRIPTION

On September 1, 1998 at approximately 0730, the Electrical Maintenance Supervisor conducted a pre-job brief in preparation for preventive maintenance to be performed on valves SBV-110A and SBV-114A. After conferring with Operations personnel, it was determined that maintenance would be performed on SBV-110A first, under Work Authorization (WA) packages #01168038 and #01153010, then, upon completion, maintenance would commence on SBV-114A.

At approximately 0922, the Operations Support Center (OSC) Supervisor opened the WA packages for SBV-110A. Next, the electricians verified that SBV Train A was de-energized by confirming that Motor Control Center 311A had been tagged out and that there was no voltage across the circuit breaker for motor operator SBVEMTR311A 9C. Final preparation for commencement of work involved their returning to the electrical shop to collect tools and instrumentation that would be needed for the job.

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At approximately 1105, the electricians arrived at the job site and checked the tag on the motor to ensure that they were about to begin work on the motor operator for SBV-110A, then began performing procedure ME-007-008, Motor Operated Valve. Approximately 15 minutes later (1120), annunciator C1210, "Battery SB Trouble" alarmed in the Control Room. This annunciator indicates a ground. Operators were dispatched, but could not ascertain the cause of the alarm. Therefore, it was regarded as spurious.

After a short break to obtain additional parts, the electricians returned to the job site and resumed work at approximately 1300. While work was in progress, at approximately 1346, Operations personnel noted an inexplicable computer point status indication for SBV-110B. At approximately 1411, the OSC Supervisor paged the electricians to inquire as to whether they were performing maintenance on SBV-110B. One of the electricians relayed an affirmative response. Upon realizing their error, one of the electricians notified the control room of the mistake.

The electricians provided information to Operations personnel as to the scope of work performed. After considering this information and assessing the situation, Operations personnel declared SBV-110B, hence SBV Train B, inoperable at approximately 1641. Since SBV Train A was also inoperable, TS 3.0.3 was entered. To demonstrate operability of the valve, OP-903-043, Shield Building Ventilation System Operability Check, was performed and upon its successful completion, SBV-110B was restored to operable status. Immediately thereafter TS 3.0.3 was exited at approximately 1742.

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CAUSAL FACTORS

The causal factors of this error, resulting in the electricians performing maintenance on the wrong component, were failure to follow procedure and failure to self-check. Having arrived at what they believed to be SBV-110A, the electricians did not adequately verify that the component was the component that had been scheduled for work. Although they looked at the motor operator's tag, they did not confirm that the mark number on the tag was identical to that cited in the WA package. Upon arriving at the valve, had the electricians complied with the instructions of procedure UNT-005-018, Control of Work on Electrical Equipment, and verified the circuit to be de-energized, they would have recognized that they were about to begin work on the wrong component. Further, implementation of proper self-checking techniques would have made them aware of the mistake.

An assessment of the work location revealed that environmental conditions were adequate for successful completion of the task: area lighting was sufficient, ambient noise was low, and equipment was labeled with tags clearly visible.

CORRECTIVE MEASURES

A panel debriefing was held with involved personnel and other interested parties in attendance to discuss the event to determine deficiencies. Corresponding corrective actions for implementation to prevent a recurrence are as follows:

- 1) The electricians involved in this event were disciplined in accordance with applicable Company policies. This included counseling on the proper conduct of electrical maintenance.
- 2) The Continuing Training program for Electrical Maintenance personnel will be enhanced to include thorough instruction on procedure UNT-005-018, Control of Work on Electrical Equipment. Training Request (TR) 980576 has been submitted for completion of this action.
- 3) Electrical maintenance personnel who were involved in this event will be retrained in self-checking techniques (i.e., STAR). This action has been initiated via TR-980576.

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SAFETY SIGNIFICANCE

SBV-110B is located downstream of the SBV filter system. Therefore, any release through this valve to the environment or back to the containment annulus would have been filtered. Accordingly, this condition would not have a significant adverse impact on radiological releases.

Another function of the SBV system is to maintain pressure in the annulus volume. If the annulus pressure increases drastically, there is a potential to fail the Shield Building. This would result in the creation of an unfiltered direct release path from the annulus to the environment. Assuming both Trains of SBV are unavailable following a large break LOCA, the maximum post-LOCA annulus pressure can be estimated based on the maximum post-LOCA calculated annulus temperature of 200 °F. Given an initial annulus temperature of 90 °F, which is the minimum allowed containment temperature, and a pressure of 14.7 psia, the resultant maximum post-LOCA annulus pressure is 2.94 psig. This value is below the Shield Building design pressure of 3.0 psig.

The worst case scenario for radiological releases through the annulus and annulus pressurization is the large break LOCA. The probability of a large break LOCA during the 6-hour period that both Trains were unavailable is 3.4E-8. In that this value is less than 1E-7, which is the threshold value for a non-risk significant temporary condition according to the EPRI PSA Applications Guide, this condition was not risk significant.

Based upon the foregoing analyses, this occurrence did not compromise the health and safety of the public or plant personnel.

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SIMILAR EVENTS

No previous similar reportable events involving human performance issues that resulted in work being performed on the incorrect component were found.

ADDITIONAL INFORMATION

Energy Industry Identification System codes are identified in the text within brackets [].