

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 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the 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. If 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.

FACILITY NAME (1)
Peach Bottom Atomic Power Station Unit 2

DOCKET NUMBER (2)
05000 277

PAGE (3)
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TITLE (4)
Failure to meet the Technical Specification Actions (TSA) for a suppression chamber-to-drywell vacuum breaker not being fully seated

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
08	24	98	98	005	00	09	18	98	FACILITY NAME	05000
									FACILITY NAME	05000

OPERATING	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)								
		20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)			50.73(a)(2)(viii)	
POWER LOWER (10)	66.7	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)	X	50.73(a)(2)(iv)			OTHER	
		20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)			Specify in Abstract below	
		20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)			or in NRC Form 336A	

LICENSEE CONTACT FOR THIS LER (12)

NAME
George Lengyel

TELEPHONE NUMBER (Include Area Code)
717 456-4115

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

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

On August 30, 1998, while preparing to perform ST-O-007-425-2, *Vacuum Breaker Position Verification*, an equipment operator (EO) informed shift management that the surveillance test could not be completed satisfactory. The EO had determined that AO-2-07B-2504C suppression chamber-to-drywell vacuum breaker was not in the closed and fully seated position and would not meet ST-O-007-425-2 testing requirements. Technical Specification 3.6.1.6, Action (TSA) B was entered for a suppression chamber-to-drywell vacuum breaker not in the fully seated position. The vacuum breaker was stroked to the fully seated position and the TSA exited. The vacuum breaker had previously been identified as not fully seated by an EO on rounds earlier in the week. This was not communicated to shift management and evaluated in a timely manner as the TS significance was not clearly recognized by the EO. Shift management assumed that the vacuum breaker out-of-specification reading on the round sheet was due to a different previously identified deficiency where the vacuum breaker failed to open. Corrective actions include revisions to the rounds to include these indications, a shift briefing sheet to all shifts, as well as EO training. There were no actual or potential safety consequences as a result of this event.

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

Requirements of the Report

This Licensee Event Report (LER) reports a failure to meet the Technical Specification Actions (TSA) for a suppression chamber-to-drywell vacuum breaker not being fully seated, and is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Unit Conditions at Time of Discovery

Unit 2 was operating at 66.7 percent thermal reactor power (EISS:RCT) due to end-of-cycle coastdown. There were no other inoperable systems, structures or components that contributed to the event.

Description of the Event

On August 30, 1998, while preparing to perform ST-O-007-425-2, *Vacuum Breaker Position Verification*, an equipment operator (EO) (utility:non-licensed) informed the senior licensed operator (SRO) (utility:licensed) that the surveillance test (ST) could not be completed satisfactory. During the EO's review of this ST, he had determined that AO-2-07B-2504C suppression chamber-to-drywell vacuum breaker (EISS:BF) was not in the closed and fully seated position and therefore would not meet ST-O-007-425-2 testing requirements. At 1000 hours, Technical Specification (TS) 3.6.1.6, Action B, was entered for a suppression chamber-to-drywell vacuum breaker not in the fully seated position. TS 3.6.1.6 requires twelve suppression chamber-to-drywell vacuum breaker shall be closed, except when performing their intended function. Condition B allows one suppression chamber-to-drywell vacuum breaker to not be closed with the required action of closing the open vacuum breaker within 10 hours.

An investigation was performed using A-C-41, *Troubleshooting, Rework, And Testing (TRT) Control Process*, to stroke AO-2-07B-2504C open and then closed. Upon completion of this TRT, the fully seated indication on AO-2-07B-2504C was restored, ST-O-007-425-2 was completed satisfactorily and the TSA was exited. Further investigation into the loss of fully seated indication revealed that an EO had previously identified this issue on August 24, 1998 and the appropriate TSA had not been entered at that time.

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Cause of the Event

Investigation into the event found two primary causes. First, the EO who discovered AO-2-07B-2504C closed but not fully seated on August 24, 1998, did not take all appropriate required actions. The EO did identify on the electronic round sheet that the valve did not indicate as required, and marked the vacuum breaker on the electronic round sheet as "no good" (NG). Shift management was not immediately notified by the EO because the EO did not recognize the TS significance of the vacuum breaker not being fully seated. In addition, the vacuum breaker closed but not fully seated was not added to the comment section of the round sheet per management expectations. The comment section did include a previously identified issue for the vacuum breaker. The previous discrepancy was identified on November 20, 1996 for failure of the vacuum breaker to open. An Action Request was written and the appropriate potential TSA entered at that time. The potential TSA was associated with TS 3.6.1.6, which requires that nine suppression chamber-to-drywell vacuum breakers shall be operable for opening.

The second cause of the issue was the failure of shift management to recognize that AO-2-07B-2504C was closed but not fully seated during the review of the round sheets. Shift management assumed that the vacuum breaker out-of-specification reading of "NG" was due to the previously identified discrepancy of failure to open that was noted in the comment section since November 1996. On August 30, 1998, a different EO raised the vacuum breaker indication issue to shift management thereby identifying the TS implication.

Analysis of the Event

No actual safety consequences resulted from this event. Upon discovery on August 30, 1998, the appropriate TSA was taken and the vacuum breaker was returned to its fully seated condition.

On August 30, 1998, the vacuum breaker was successfully stroked during a TRT and its fully seated position was verified during performance of ST-O-007-425-2. This provides reasonable assurance that the valve was not mechanically bound or physically restricted from full closing between August 24 and August 30, 1998. The vacuum breaker design is such that the motive forces applied to the vacuum breaker disc, due to gravity and any differential pressure between the drywell and the torus, tend to push the valve disc into its seat. A magnet on the vacuum breaker body functions to hold the valve disc in the fully seated position. The limit switches, associated with the fully seated position indication, are set to change state at approximately 0.030 inch movement of the valve disk from its seat. Operating history has shown that when fully seated indication is lost, minimal increases in drywell pressure result in the vacuum breaker returning to the fully seated position. These pressure changes are typically the result of normal drywell nitrogen make-up or performance of the drywell to torus bypass test. Therefore, engineering judgement indicates that during a design basis accident, the vacuum breaker would have moved further into its seat to the fully seated position during an initial increase in drywell pressure. This would minimize any resulting drywell to suppression chamber

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bypass leakage. Therefore, based on this engineering assessment there were no potential safety consequences for this event.

Corrective Actions

Completed corrective actions include the following:

- Temporary procedure changes were made to ST-O-098-01D-2(3), *Daily Surveillance Log*, to add verification that the suppression chamber-to-drywell vacuum breakers are closed and seated.
- A Shift Manager briefing sheet was issued to operations to re-emphasize the expectations of round performances and timely reviews as required by the Operations Manual. This briefing sheet specifically stated that Shift Management shall be notified immediately under the following circumstances:
 1. A value changes from in specification to out of specification.
 2. A significant change from the previous value for any reading (in specification or out).

Future corrective actions include the following:

- Evaluate EO training for the need to incorporate training on the bases of round sheet parameters and their impact on safety-related equipment.
- Inspect AO-2-07B-2504C, during the 2R12 refueling outage (October 1998), to verify proper operation of the vacuum breaker and proper setting of the limit switches. If the inspection indicates conditions different than assumptions made within the engineering assessment, then a revision will be submitted for this LER.
- Electronic round sheets will be revised to identify TS components.

Previous Similar Events

There have been no similar occurrences of missed TS actions associated with suppression chamber-to-drywell vacuum breaker.