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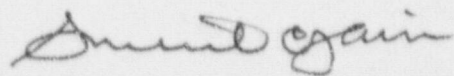
January 14, 1998
L-98-007

*Beaver Valley Power Station, Unit No. 1
Docket No. 50-334 License No. DPR-66
LER 97-042-00*

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

In accordance with Appendix A, Beaver Valley Technical Specifications, the following Licensee Event Report is submitted:

LER 97-042-00, 10 CFR 50.73(a)(2)(i), "Failure to Perform Axial Flux Difference Monitor Surveillance as Required by Technical Specifications."



S. C. Jain

JH/ds

Attachment

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January 14, 1998

L-98-007

Page 2

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NRC FORM 366 (4-95)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXCERPTS 04/30/98 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.6 HRS. FORWARD COMMENTS REGARDING BURDEN/ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNH-7714), 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.			
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)							
FACILITY NAME (1) Beaver Valley Power Station Unit 1				DOCKET NUMBER: 05000434		PAGE (3) 1 OF 4	
TITLE Failure to Perform Axial Flux Difference Monitor Surveillance as Required by Technical Specifications							
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY
12	15	97	97	042	00	01	14
						OTHER FACILITIES INVOLVED (8)	
						FACILITY NAME Beaver Valley Power Station Unit 2	
						DOCKET NUMBER 05000412	
						FACILITY NAME	
						DOCKET NUMBER	
OPERATING MODE (9)		5		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)			
POWER LEVEL (10)		000		20.402(b)			
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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		Y ¹ R	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 1	05000334	17	042	00	2 OF 4

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

PLANT AND SYSTEM IDENTIFICATION

Westinghouse-Pressurized Water Reactor

Containment Incore/Excore Monitoring System (IG/RI)*

*Energy Industry Identification System (EIIIS) codes and component function identifier

IDENTIFICATION OF OCCURRENCE

Discovery Date: December 15, 1997

A review of change history for procedures 1CM49.4L and 1OST5A.1 shows that manual monitoring of the indicated axial flux difference (AFD) for each operable excore channel at least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status was procedurally eliminated in 1993.

A review of change history for procedures 2OM49.4C and 2OST5A.1 shows that manual monitoring of the indicated AFD for each operable excore channel at least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status was procedurally eliminated in 1993.

CONDITIONS PRIOR TO OCCURRENCE

Unit 1: Mode 5

Unit 2: Mode 1 at 100 % power

There were no structural components, or systems that were inoperable that contributed to the event.

DESCRIPTION OF EVENT

On December 15, 1997, with Unit 1 in Mode 5 and Unit 2 in Mode 1 at 100 % power, it was discovered as part of an ongoing Technical Specification (TS) surveillance review that surveillance requirement 4.2.1.1.a.2 has historically not been complied with. This surveillance requirement states that "The indicated axial flux difference shall be determined to be within its limits during power operation above 15% of rated thermal power by monitoring the indicated AFD for each operable excore channel at least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status." The TS surveillance review determined that 1OST 5A.1, "Delta Flux Alarm Program Operability Check," 1OM49.4L, "Axial Flux Difference Monitoring," 2OST-5A.1, "Delta Flux Alarm Program Operability Check," and 2OM-49.4.C, "Axial Flux Difference Monitoring" provided direction that Monitoring of the AFD required by TS 4.2.1.1.a.2 was to be accomplished by automatic data acquisition utilizing the process computer, instead of manual logging by an operator. This failure to comply with TS 4.2.1.1.a.2 represents an operation or condition prohibited by TS and is reportable pursuant to the requirements of 10CFR50.73(a)(2)(i).

A review of procedure and correspondence history shows that in May, 1991, the Nuclear Operations Department requested Nuclear Safety Department concurrence for a TS interpretation to not consider the AFD alarm out of service for surveillance testing or computer program reload if no penalty minutes were accumulated in the 24 hours prior to computer reload or performance of the OST. By using this interpretation, once per hour manual logging by an operator could be eliminated. This would free up the operator for other duties.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

In making their request for concurrence, the Nuclear Operations Department noted that "If no penalty minutes have accumulated during and in the 24 hours prior to computer reload or performance of the OST then manually recording AFD hourly for 24 hours following completion of the OST is not required since zero penalty minutes existed before during and after the AFD program/alarm function test. The AFD program when returned to service with a functional alarm is capable of accumulating deviation time and simply monitoring and recording AFD hourly for 24 hours is redundant to the computerized AFD program. It is believed that the purpose of surveillance 4.2.1.1.a.2 is to provide a basis for treatment of penalty minutes if the AFD alarm is restored to operable from a truly inoperable condition since the previous 24 hour history could not be verified."

AFD is used to provide assurance of fuel integrity during either normal operation or in the event of xenon redistribution following power changes. Although it is intended that the plant will be operated with the AFD within a target band, during rapid plant thermal power reductions AFD may deviate outside of the target band due to control rod motion. This is acceptable provided the duration of the deviation is limited. This deviation duration is tracked via penalty minutes. Penalty minutes are a measure of the amount of time that the AFD is outside of a target band and are specifically defined and accumulated on a time basis as specified in surveillance requirement 4.2.1.2. Should AFD deviate from the target band and penalty minutes accumulated on a rolling 24 hour basis be greater than values specified in limiting condition for operation 3.2.1, power reductions are required. Penalty minutes are normally tracked by the plant process computer, but may be tracked manually.

In reply to this request from the Nuclear Operations Department, in June, 1991, the Nuclear Safety Department agreed with the reasonableness of the Nuclear Operations Department interpretation, but noted that with the legalistic application of the TS, Licensing can not provide a favorable onsite interpretation. The reply also stated that the OST's should not be revised until regulatory concurrence is obtained.

In September, 1993, based on a Computer Engineering Section detailed technical evaluation/request from the Nuclear Operations Department and as a result of a previously reportable event that had occurred in 1992 (LER 2-92-001, failure to manually log AFD), the Nuclear Safety Department issued a letter concurring with "their proposal to assure the tech spec surveillance is addressed without the need to manually log values for 24 hours following AFD monitor reset". Associated procedures for both units were then revised to reflect the station's newly developed interpretation of surveillance requirement 4.2.1.1.a.2.

Upon discovery of this event on December 15, 1997, Condition Report 972301 was initiated.

There were no automatically or manually initiated safety system actuations in response to this event.

CAUSE OF THE EVENT

The apparent cause of the event was misunderstood instructions or information, which resulted in inadequate procedures. A TS interpretation letter misinterpreting written TS requirements concerning the performance of the surveillance for axial flux monitoring was inappropriately issued and implemented in site procedures.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Beaver Valley Power Station Unit 1	05000334	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTIONS

COMPLETED:

1. Units 1 and 2 procedures 1OM49.4L, 1OST5A.1, 2OM49.4C and 2OST5A.1 have been revised to eliminate the TS interpretation that computer data history prior to and during the period of inoperability can be used to satisfy the surveillance requirement monitoring criteria. This was completed on December 23, 1997.
2. A review of TS interpretations was conducted, which resulted in the deletion of the AFD interpretation. This review also removed other TS interpretations which were no longer applicable and reevaluated remaining TS interpretations to determine future disposition. This was completed on November 11, 1997.
3. A new section of the Safety & Licensing Administrative Manual was adopted which implemented a process for the control of Compliance Position Statements. This implementation was completed on January 29, 1997.

FUTURE:

4. A new section to the Units 1 and 2 Operating Manuals, Chapter 48, will be incorporated which will provide guidance to Nuclear Operations Department personnel regarding interpretation of TS. This will be completed by February 21, 1998.
5. This event will be reviewed with all Operating crews, members of the Onsite Safety Committee, members of the Safety & Licensing Department, and personnel qualified to make intent/non-intent determinations for procedure revisions. This will be completed by April 1, 1998.

SAFETY IMPLICATIONS

There is minimal safety consequence to this event. In order to procedurally substitute computer AFD monitoring for the hourly manual logging following the restoration of the AFD to service, it was required that there be zero penalty minutes for 24 hours prior to, and during, the AFD removal from service time period. Upon return of the AFD to service, the AFD was reset to zero minutes. This method eliminated any chance for bad data to affect the AFD calculation. Based on this, the number of penalty minutes accumulated, as defined by SR 4.2.1.2, prior to, during, and following restoration of the AFD was always known and accurate. Consequently, computer AFD monitoring of penalty minutes is technically equivalent to the manual once per hour logging specified in surveillance requirement 4.2.1.1.a.2. However, this does not strictly comply with TS 4.2.1.1.a.2.

SIMILAR EVENTS

A review of LERs for the past two years did not reveal any other instances of misunderstood instructions which resulted in misinterpretation of written Technical Specification requirements.