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· FU Box 4

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Koland Ward	From Vassello
CO. NRA	Co DLC
Dept.	Phone #

Telephone (412) 393-6000

January 2, 1992 ND3MN0:3233

Beaver Valley Power Station, Unit No. 1 Docket No. 50-334, License No. DPR-66 LER 91-032-00

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

Gentlemen:

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

LER 91-032-00, 10 CFR 50.73.a.2.V.A, "Ir dequate Ventilation Flow From High Head Safety Injection Fump Cubicles".

Very truly yours,

amen

T. P. Noonan General Manager Nuclear Operations

JWM/sl

Attachment

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Isolation damper, common to all three HHSI pumps, was failed in a partially closed position. The damper was repaired and placed in the proper position to meet flow requirements. The Nuclear Regulatory Commission was notified in accordance with 10 CFR 50.72.b.2.iii.A and this report is being submitted in accordance with 10 CFR 73.a.2.v.A as a condition that potentially could alone have prevented safe reactor shutdown. There was no adverse impact to the safety of the public as a result of this event.

LICENSEE EVENT	APMODVED DM& ND JISDQIDA & RAIRES 4/30/82 ISTIMATED BURDEN FER REPONSE TD COMPLY WITH TH INFORMATICY DOLLECTION REQUEST SOC WEE FORMAT COMMENTS FED ARDING BURDEN ETIMATE TO THE RE/DRE AND REPORTS MANAGE WITH BRANCH FS30 US NUCLEA REDULATORT COMMISSION MASHINGTON DC 20058 AND T UF FAREWORK REDUCTION PROJECT JISOCIDA OFSI DF MARAGEWORK REDUCTION PROJECT JISOCIDA OFSI DF MARAGEMOTA AD BUDDET WASHINGTON DC 2005)						
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# DESCRIPTION OF EVENT

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On 12/3/91, with Beaver Valley Unit 1 in Power Operation, Operational Mode 1, 100 percent power, it was conservatively determined that the plant's safe shutdown capability was potentially degraded. It had been discovered that due to a failed damper, VS-D-4-30, (Supplemental Laak Collection and Release System Balance Damper for the High Head Safety Injection/Charging Pump Cubicles) the measured exhaust flow from each High Head Safety Injection (HHSI) pump cubicle, during accident alignment, was less than that required by recently performed ventilation system calculations. These calculations were developed to determine the flow rate necessary to maintain the HTSI pump motor temperatures below the Chvironmental Qualification (EQ) limit of 120 F, during a Containment Isolation Phase B (CIB).

Prior to the discovery of the failed balance damper, while the unit was in Hot Shutdown, Operational Mode 4 (plant heat-up following an outage due to unrelated reasons), an ongoing engineering avaluation of ventilation flows from the HHSI pump cubicles was in progress. On 11/27/91, following entry into Hot Standby, Mode 3, an evaluation of exhaust flow data determined that HHSI pump cubicle flows were inadequate. At this time the Action Statement of Technical Specification 3.5.2 was entered and mode escalation was placed on hold due to the inoperability of support systems for two of three HHSI pumps. the An investigation determined that balance damper VS-D-4-30 was failed in a partially closed position. The damper was repaired and repositioned, allowing for adequate ex. 1st flows. Following additional engineering evaluation and management review, the Nuclear Regulatory Commission was notified via the Emergency Notification System (ENS) at 1347 hrs on 12/3/91, in accordance with 10 CFR 50.72. b. 2. iii. A. as a condition that potentially could alone have prevented safe reactor shutdown.

In addition to flow being restricted by the failed damper, VS-D-4-30, an engineering review of the original design calculations (performed by the Architect/Engineer for environmentally qualified areas) had revealed that assumptions made in the calculations for accident conditions were not in effect. Specifically, the original calculations assumed that

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and its come many a reductor we addression user: when there at (15)								
during an accident, te	mporary ventilation	would be suppl	ied to					
maintain the ambient ter	mperature of the HHS	I pump cubicles	below					
the Architect (Preincer	120 F for HHSI pump	mctors. Accord	ing to					
HEST DUMD cubicles	(A/E) calculations,	during a CIB wh	en the					
Collection and Release	A Svetom (CTOPE)	ne Supplementa	1 Leak					
cubicles could reach 17	O F. Without tempore	temperatures	in the					
temporary ventilation ;	requirement had neve	r been implemen	tod ac					
part of Beaver Valley's	Emergency Operating	Procedures (EO	Pal A					
preliminary calculation	n by Beaver Valley's	EQ Engineering	Group					
indicated that increasing	ng the flow from 200	0 standard cubi	c feet					
per minute (scim) to 300	00 scfm would be req	juired to mainta	in the					
F. Le s result the	e, expected during a	CIB, at or bel	OW 120					
determine the norribili	station initiated	an investigat	ion to					
pump cubicle during	accident alignment	e riow from eac	h HHSI					
concluded that increas	sing the SLCRS flow	from the We	IC WAS					
cubicles would be unacc	ceptable, because it	would reduce	r pump					
flow from other areas	s. A revision to th	a EOPs. inclu	ding a					
requirement for portal	ple temporary venti	lation was pr	oposed.					
This solution, however,	, was dismissed as i	t was judged t	hat an					
unreviewed safety quest;	ion would exist.							

### CAUSE OF EVENT

While the unit was shutdown in Mode 5 due to unrelated reasons, actual exhaust flow measurements were obtained at the request of EQ Engineering. Unacceptable results prompted an investigation which revealed the failed damper VS-D-4-30. The failure was determined to be due to a damper blade set screw that had become loose. This disengaged the damper blades from the shaft and allowed the blades to rotate toward a closed position.

#### CORRECTIVE ACTIONS

 Balance damper VS-D-4-30 was repaired and repositioned allowing adequate exhaust flow (3000 scfm). Increasing exhaust flow to 3000 scfm was found not to have an adverse effect on other areas as previously believed.

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There has been one previous reportable event in which the SLCRS flow rate was found to be less than required (LER 82-001).

## REPORTABILITY

This written report is being submitted in accordance with 10 CFR 50.73.a.2.v.A. as an event or condition which could have prevented safe reactor shutdown capability. In addition, the Mode change is considered to be a condition prohibited by Technical Specifications reportable under 10 CFR 50.73.a.2.i.B.

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# SAFETY IMPLICATIONS

There was no adverse impact to the safety of the public as a result of this event. Although a loss of HHSI capability during a loss of coolant accident is not analyzed in the UFSAR, it was considered as a possible scenario by the Westinghouse Owner's Group during EOP development. Accordingly, this situation is addressed in the station EOPs.