NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Beaver Valley Power Station, Unit 1	0 5 0 0 0 3 3 4	1 OF 0 2

TITLE (4)
Failure To Meet ASME Section XI IST Requirements

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 NAMES	DOCKET NUMBER(S)
									N/A	0 5 0 0 0
1 0	2 4	8 4	8 4	0 1 3	0 0	1 1	2 3	8 4	N/A	0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	1 0 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Terry McGhee, Acting Technical Advisory Engineer	AREA CODE 4 1 2 6 4 3 - 4 0 6 5

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)

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

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

On June 13, 1984, during full power operation, the "A" Reactor Plant Component Cooling Water pump was declared inoperable following a surveillance test due to low discharge pressure as compared to the nominal discharge pressure determined from the approved pump curve. Following an investigation it was determined that the flow instrument used in the test was out of calibration. It was noted however that the approved pump curve was different from the manufacturer's curve which the Technical Specifications surveillance requirements specify are to be used to verify pump operability. Also the surveillance testing procedure, while meeting the Technical Specification surveillance requirements of the Component Cooling Water pumps for calculation methodology, was found not to be in accordance with ASME calculation method which is also required under Technical Specification 4.0.5.

Further investigation into this incident found that the approved pump curve was conservative as compared to the manufacturer's curve. The calculations in the test procedure were found to be non-conservative with regard to ASME. The test procedure was modified to meet all ASME requirements. Additionally, the manufacturer's curve is being incorporated into the test procedure in addition to the present curve.

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

On June 13, 1984 during full power operation, the "A" Reactor Plant Component Cooling Water pump was declared inoperable. It was declared inoperable because it had failed to meet its surveillance test criteria for discharge pressure.

The surveillance test calculation method starts with the operator determining the pump flow. Nominal pump head is then determined using an approved Duquesne Light generated curve of pump head versus flow. The surveillance test acceptance criteria requires the measured discharge pressure to be at least 93% nominal. The surveillance test calculations use data obtained off of an approved pump curve of pump head versus pump flow. This nominal pump head is then converted to nominal discharge pressure.

It was determined that the root cause of this failed surveillance test was instrument drift of the pump flow instrumentation. During the course of the investigation it was also discovered that there were deficiencies in the surveillance procedure. Beaver Valley Technical Specifications presently require that the measured discharge pressure is at least 93% of the nominal as determined from the Manufacturer's pump curve. An engineering evaluation found that the Duquesne Light curve used in the surveillance test was conservative. At no time was a pump declared operable with a discharge pressure less than 93% of the nominal as per the Manufacturer's curve.

It was also found that the surveillance test procedure did not meet the ASME pump head criteria. The surveillance test only compared the pump discharge to a nominal discharge. The ASME pump head criteria requires that pump suction pressure be subtracted from discharge pressure to calculate pump head. The pump head is then to be compared to a nominal pump head. The same engineering evaluation also found that the discharge pressure criteria used in the surveillance did not meet ASME pump head criteria. This prevented a valid application of Duquesne Technical Specifications concerning inservice inspection of an ASME code class 1 component.

The surveillance test was changed to meet the ASME Section XI criteria. The Duquesne Light generated curve is being used as per ASME requirements to calculate nominal pump head. The Manufacturer's curve is also being incorporated into the surveillance test to provide direct confirmation of adequate discharge pressure.

Duquesne Light

Nuclear Division
P.O. Box 4
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Telephone (412) 393-6000

November 23, 1984
NDISS1:2257

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
LER 84-013

Dr. Thomas E. Murley
Regional Administrator
United States Nuclear Regulatory Commission
Region I
Park Avenue
King of Prussia, PA 19046

Gentlemen:

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

LER 84-013, 10 CFR 50.73.a.2.i, "Failure To Meet ASME Section XI IST Requirements".

Very truly yours,

Wm. S. Lacey
Plant Manager

md

Attachment

1/1 IE22

cc: Director of Management & Program Analysis
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