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CONTROL NO: 6157

FILE: INCIDENT REPORT FILE

FROM: Iowa Elec. Light & Pwr. Co. Palo, Iowa L.G.G. Hunt		DATE OF DOC 5-30-75	DATE REC'D 6-5-75	LTR XX	TWX	RPT	OTHER
TO: Mr. J. G. Keppler		ORIG 1 signed	CC	OTHER	SENT AEC PDR		XX
					SENT LOCAL PDR		XX
CLASS	UNCLASS XXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-331		
DESCRIPTION: Ltr trans the following:				ENCLOSURES: Abnormal Occurrence A0-50-331/ 75-19A(Suppl Report) re failure of the HPCI pump.....			
PLANT NAME: <u>Duane Arnold</u>				(1 Orig cy encl rec'd)			

FOR ACTION/INFORMATION

DHL 6-6-75

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** SEND ONLY TEN DAY REPORTS		

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA
DUANE ARNOLD ENERGY CENTER
PALO, IOWA
MAY 30, 1975
DAEC - 75-214



Mr. James G. Keppler, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission-Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: Abnormal Occurrence No. A.O. 50-331/75-19
FILE: A-110 A-118a

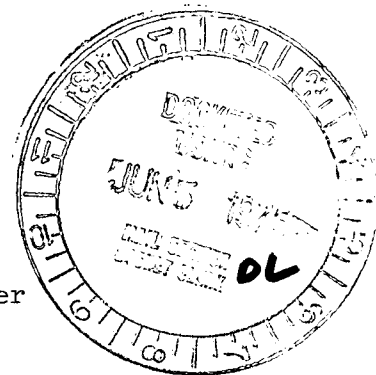
Dear Mr. Keppler:

In accordance with Appendix A to Operating License DPR-49, Technical Specifications and Bases for Duane Arnold Energy Center, please find enclosed a final written report on the subject abnormal occurrence. A preliminary report on the abnormal occurrence was transmitted to your office on April 24, 1975.

Very truly yours,

A handwritten signature in cursive script, appearing to read "G. G. Hunt".

G. G. Hunt
Chief Engineer
Duane Arnold Energy Center



DLW/GCH/mg

cc: B. C. Rusche
C. W. Sandford
J. A. Wallace
H. W. Rehrauer-Chairman, Safety Committee
J. R. Newman
E. L. Hammond

6157

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

Subject: Abnormal Occurrence 5-30-75
Report Number: A. O. 50-331/75-19A (Supplemental Report)
Report Date: May 30, 1975
Occurrence Date: April 14, 1975
Facility: Duane Arnold Energy Center, Unit No. 1, Palo, Iowa

Identification of Occurrence

HPCI Subsystem flow rate, reportable in accordance with Appendix A to Operating License DPR-49, Specifications 1.0.4.b, 3.5.D.1 and 4.5.D.1.e.

Description of Occurrence

During the performance of a Special Test to verify HPCI Subsystem flow capabilities it was determined that the HPCI pump was delivering approximately 2350 gpm when the flow controller was indicating 3000 gpm. In accordance with the DAEC Technical Specifications, the required HPCI Subsystem flow rate to the vessel is ≥ 3000 gpm.

As a result of the out-of-specification HPCI Subsystem flow rate, the HPCI Subsystem was declared inoperable on April 14, 1975 and surveillance of the RCIC, LPCI, Core Spray and ADS Subsystems was initiated to verify operability. The reactor was subsequently placed in cold shutdown on April 20, 1975 and remained in that condition until reactor heat-up for HPCI testing commenced on April 23, 1975.

Designation of Apparent Cause of Occurrence

The cause of the occurrence has been determined to be a flow element orifice whose dimensions were not compatible with the HPCI flow transmitter and HPCI flow controller combination. Although the flow transmitter and flow controller combination were properly calibrated with respect to the instrument data sheet supplied by the reactor vendor, it was determined that the flow orifice supplied by the vendor was not compatible with the instrument data sheet.

Analysis of Occurrence

The out-of-specification HPCI flow condition did not have a significant effect on plant safety. The Automatic Depressurization Subsystem is redundant to the HPCI Subsystem and was available throughout the period the HPCI flow was out-of-specification. Also, the reduced capacity of the HPCI Subsystem is not considered to have had a significant effect on plant safety due to the gross conservatism applied in both the design and analytical evaluation of system performance.

May 28, 1975

Corrective Action

The HPCI Subsystem flow has been returned to specified limits by installing an orifice of correct dimensions in the flow element and recalibrating the HPCI flow transmitter and flow controller combination. This action was followed by a special test to verify that the proper orifice was installed and that the HPCI flow capability was within limits specified by the Technical Specifications. This testing verified that the HPCI Subsystem was capable of performing the design objective of delivering 3000 gpm to the reactor vessel between rated pressure and 150 psig and was capable of reaching the design flow rate with 25 seconds following an initiation signal.

Conclusion

This report was reviewed and approved by the DAEC Operations Committee on May 30, 1975. The Committee concluded that the occurrence did not present a hazard to the health and safety of the public.



G. G. Hunt
Chief Engineer
Duane Arnold Energy Center

DLW/GGH/mg