

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 4401

FILE: 440

FROM: Iowa Electric Light & Power Co. Cedar Rapids, Iowa 52408 G. G. Hunt			DATE OF DOC 5-10-74	DATE REC'D 5-18-74	LTR X	MEMO	RPT	OTHER
TO: J. G. Keppler			ORIG NONE	CC	OTHER	SENT AEC PDR X SENT LOCAL PDR X		
CLASS	UNCLASS XXXX	PROP INFO	INPUT	NO CYS REC'D 1		DOCKET NO: 50-331		

DESCRIPTION:

Ltr trans the following:

**DO NOT REMOVE
ACKNOWLEDGED**

PLANT NAME: Duane Arnold

ENCLOSURES:

Unusual Event DPR-49/74-UE-2: Regarding a Core spray piping restraint at elevation 726'0", GBB-10" Sr-18, was damaged due to the impact force of a sudden discharge of water on the piping elbows.

(1 cy rec'd)

FOR ACTION/INFORMATION

5-20-74 GC

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INTERNAL DISTRIBUTION

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EXTERNAL DISTRIBUTION

1 - LOCAL PDR Cedar Rapids, Iowa	(1)(2)(10)-NATIONAL LAB'S	1-PDR-SAN/LA/NY
1 - TIC (ABERNATHY)	1-ASLBP(E/W Bldg, Rm 529)	1-GERALD LELLOUCHE
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1 - ASLB	1-CONSULTANT'S	1-AGMED(Ruth Gussman)
1 - F. R. DAVIS (AEROJET NUCLEAR)	NEWMARK/BLUME/AGBABIAN	RM-B-127, GT.
16 - CYS ACRS XXXXXX SENT TO LIC. ASST.	1-GERALD ULRIKSON...ORNL	1-RD..MULLER..F-309 GT
5-20-74 MAIGRET	1-B & M SWINEBROAD, Rm E-201 GT	

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office
CEDAR RAPIDS, IOWA

Regulatory Docket File

May 10, 1974

DAEC-74-180

Mr. James G. Keppler
Regional Director
Directorate of Regulatory Operations, USAEC
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137



SUBJECT: Unusual Event No. DPR 49/74-UE-2
FILE: A-118d

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 written report on the subject Unusual Event.

Yours very truly,

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

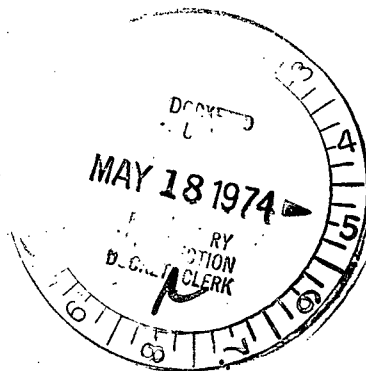
G. G. Hunt
Chief Engineer
Duane Arnold Energy Center

Encl.

GAE/CGH/mak

cc: John O'Leary
Washington, D. C.

C. W. Sandford
J. A. Wallace
E. L. Hammond
B. R. York
D. L. Wilson
H. W. Rehrauer, Chairman, Safety Committee
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IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

SUBJECT: Unusual Event
REPORT NUMBER: DPR-49/74 - UE-2
REPORT DATE: May 1, 1974
EVENT DATE: APRIL 10, 1974
FACILITY: Duane Arnold Energy Center, Unit Number 1, Palo, Iowa

IDENTIFICATION OF EVENT

Core spray piping restraint at elevation 726'0", GBB-10" SR-18, was damaged due to the impact force of a sudden discharge of water on the piping elbows.

DESCRIPTION OF THE EVENT

On April 10, 1974, at 0959, the core spray system was inadvertently started. The core spray system was initiated by inadvertent activation of a test switch which was connected to simulate a high drywell pressure signal. The full report of the initiation is documented on Abnormal Occurrence Report No. DPR 49/74-2. The discharge line was partially full of water and the piping experienced a shock load resulting from the water flow. The cinch anchors on the restraint at elevation 726'0", GBB-10" SR-18, were pulled from the wall due to the impact force of the water on the elbows.

Fill pump 1P-70 was not in operation prior to core spray system initiation. One of the functions of the fill pump is to keep the core spray pump discharge header filled with water. The fill pump had been tripping off under small loads and on April 7, 1974, a Maintenance Action Request had been initiated to effect repairs on the pump. At the time of the event, 9:59 A.M., the fill pump was not back in service. The core spray system was not required to be operable at that time - i.e.: phase III of the simultaneous preoperational and startup test program.

ANALYSIS OF EVENT


The damage to the restraint indicated that the maximum movement of the pipe in the restraint location was in the N-S direction and of approximately $\frac{1}{2}$ " in magnitude. There was no apparent movement of the pipe in the E-W direction at this location.

The piping has been analyzed by Bechtel Engineering and IEL&P Engineering considering the maximum movement determined from the observed restraint movement. The results of the analysis indicate that the reactions on the core spray pump discharge nozzle are well within the allowable values specified by the pump vendor. It is, therefore, concluded that the pump can safely sustain the imposed forces and movement due to the design seismic and thermal loads.

CORRECTIVE ACTION

A Maintenance Action Request was issued and repairs were completed on April 25, 1974. The existing concrete anchors were abandoned, extra steel was added to the existing restraint, and new anchors were installed.

A surveillance test of the core spray system will be conducted prior to accepting the system as operational.



G. G. Hunt
Chief Engineer
Duane Arnold Energy Center