

**NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL**  
(TEMPORARY FORM)

CONTROL NO: **8951**  
FILE: INCIDENT REPORT FILE

FROM: Iowa Electric Light & Power Cedar Rapids, Iowa G.G. Hunt		DATE OF DOC 8-22-75	DATE REC'D 8-28-75	LTR XXX	TWX	RPT	OTHER
TO: James G. Keppler		ORIG 1 Signed	CC	OTHER	SENT AEC PDR <u>XXXXX</u> SENT LOCAL PDR <u>XXXX</u>		
CLASS	UNCLASS XXXXx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-331		

**DESCRIPTION:**

Ltr trans the following.....

**ENCLOSURES:**

A/O # 75-44, on 8-14-75 on concerning Loose Connection on 480 volt Emergency Service Water Pump supply breaker, .....

( 1 cy. Encl. )

PLANT NAME: Duane Arnold

**FOR ACTION/INFORMATION**

VCR 8-29-75

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**EXTERNAL DISTRIBUTION**

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1 - ASLB	NEWMARK/BLUME/AGBABIAN	1 - AGMED (RUTH GUSSMAN) Rm B-127 GT
1 - Newton Anderson		1 - J. D. RUNKLES, Rm E-201 GT
5 - ACRS SENT TO LIC ASST		
** SEND ONLY TEN DAY REPORTS <i>Teets</i>		



THE UNITED STATES OF AMERICA

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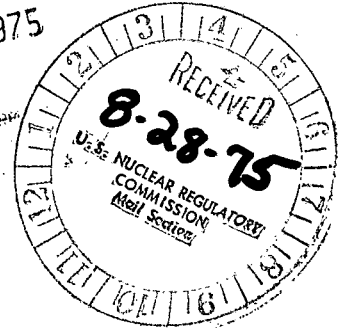
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# IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office  
CEDAR RAPIDS, IOWA  
DUANE ARNOLD ENERGY CENTER  
PALO, IOWA  
AUGUST 22, 1975  
DAEC - 75 -



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. AO 50-331/75-44

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 and Regulatory Guide 10.1, please find attached a final written report on the subject abnormal occurrence.

Very truly yours,

G. G. Hunt  
Chief Engineer  
Duane Arnold Energy Center

Docket 50-331

attachment

GGH/mg

cc: Director, Office of Nuclear Reactor Regulation (1)  
U. S. Nuclear Regulatory Commission  
1717 H Street N.W.  
Washington, D.C. 20545

Director, Office of Inspection and Enforcement (40)  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Director, Management Information and Program Control (1)  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

AUG 25 1975

8951

# IOWA ELECTRIC LIGHT AND POWER COMPANY

*General Office*

CEDAR RAPIDS, IOWA

Subject: Abnormal Occurrence  
Report Number: 50-331/75-44  
Report Date: August 21, 1975  
Occurrence Date: August 14, 1975  
Facility: Duane Arnold Energy Center, Unit No. 1, Palo, Iowa

## Identification of Occurrence

Loose connection on 480 volt Emergency Service Water Pump supply breaker, reportable in accordance with Appendix A to Operating License DPR-49, Specification 1.0.4.d.

## Conditions Prior to Occurrence

Reactor at steady-state power  
988 MWth  
337 MWe

## Description of Occurrence

At 1057 hours, the 480 volt supply breaker to Emergency Service Water Pump A sustained an electrical arc across the line side connectors. The arc resulted in a reactor scram and Group I isolation via the following sequence of events:

1. 480 volt load center 1B32 tripped.
2. Uninterruptible AC Bus (fed from 1B32) sustained momentary voltage dip prior to transfer to DC.
3. Voltage dip on Uninterruptible Bus caused loss of reactor vessel level signal, resulting in reactor scram and group one isolation.

## Designation of Apparent Cause of Occurrence

The apparent cause of the occurrence was inadequate tightening of the line side connectors during initial installation of the breaker.

August 21, 1975

Analysis of Occurrence

The occurrence did not present an unsafe plant condition. The reactor protection system and containment isolation system functioned as required during the transient.

As a result of the electrical arc, the line side connectors on the 480 volt breaker sustained partial melting, rendering the breaker unserviceable.

Corrective Action

The subject 480 volt circuit breaker was replaced.

Conclusion

This report was reviewed and approved by the DAEC Operations Committee on August 21, 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

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

**NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)**

CONTROL NO: **9297**

FILE: INCIDENT REPORT FILE

FROM: Iowa Electric Light & Power Cedar Rapids, Ia G G Hunt		DATE OF DOC 8-22-75	DATE REC'D 9-2-75	LTR XXX	TWX	RPT	OTHER
TO: MR Keppler		ORIG none signed	CC	OTHER	SENT AEC PDR <u>XX</u> SENT LOCAL PDR <u>XX</u>		
CLASS	UNCLASS XXXXXXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-331		

DESCRIPTION:

Ltr trans the following:

ENCLOSURES:

Abnormal Occurrence #75-44 on 8-14-75 concerning loose connection on 480 volt emergency service water pump supply breaker.....

PLANT NAME: Duane Arnold

FOR ACTION/INFORMATION 9-2-75 ehf

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KNIEL (L) W/ Copies	PURPLE (L) W/ Copies	YOUNGBLOOD (E) W/ Copies	W/ Copies

**ACKNOWLEDGED**

**DO NOT REMOVE**

INTERNAL DISTRIBUTION

<del>REG FILE</del> <del>NRC PDR</del> OGC, ROOM P-506A GOSSICK/STAFF <del>CASE</del> GIAMBUSSO BOYD MOORE (L) DEYOUNG (L) SKOVHOLT (L) GOLLER (L) (Ltr) P. COLLINS DENISE REG OPR <del>FILE &amp; REGION (2)</del> <del>MIPC/PE (3)</del> STEELE	<del>TECH REVIEW</del> <del>SCHROEDER</del> <del>MACCARY</del> KNIGHT PAWLICKI SHAO **STELLO **HOUSTON **NOVAK <del>ROSS</del> <del>IPPOLITO</del> <del>TEDESCO</del> J. COLLINS LAINAS <del>VOLLMER</del>	DENTON **GRIMES GAMMILL KASTNER BALLARD SPANGLER  ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDR  HARLESS	LIC ASST R. DIGGS (L) H. GEARIN (L) E. GOULBOURNE (L) P. KREUTZER (E) J. LEE (L) M. RUSHBROOK (L) S. REED (E) M. SERVICE (L) S. SHEPPARD (L) M. SLATER (E) H. SMITH (L) S. TEETS (L) G. WILLIAMS (E) V. WILSON (L) R. INGRAM (L) M. DUNCAN (E)	A/T IND. BRAITMAN SALTZMAN MELTZ  PLANS MCDONALD CHAPMAN DUBE (Ltr) E. COUPE PETERSON HARTFIELD (2) KLECKER EISENHUT WIGGINTON F. WILLIAMS HANAUER
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1 - Newton Anderson		1 - J. D. RUNKLES, Rm E-201 GT
5 - ACRS SENT TO LIC ASST <u>Teets</u>		
** SEND ONLY TEN DAY REPORTS		

REGULATORY COMMISSION COPY

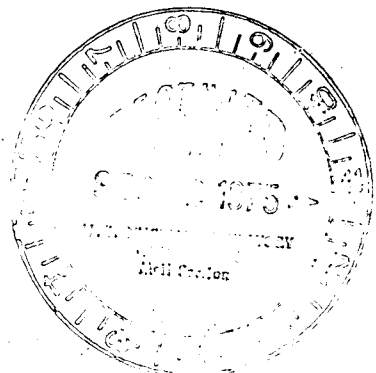
# IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA  
DUANE ARNOLD ENERGY CENTER  
PALO, IOWA

AUGUST 22, 1975

DAEC - 75 - 333



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. AO 50-331/75-44

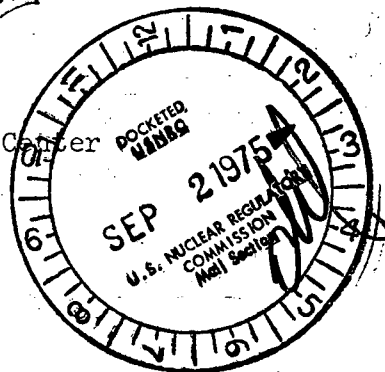
File: A-110, A-118a

Dear Mr. Keppler:

In accordance with Appendix A to Operating License DPR-49, Technical Specifications and Bases for Duane Arnold Energy Center and Regulatory Guide 10.1, please find attached a final written report on the subject abnormal occurrence.

Very truly yours,

G. G. Hunt  
Chief Engineer  
Duane Arnold Energy Center



Docket 50-331

attachment

GGH/mg

cc: Director, Office of Nuclear Reactor Regulation (1)  
U. S. Nuclear Regulatory Commission  
1717 H Street N.W.  
Washington, D.C. 20545

Director, Office of Inspection and Enforcement (40)  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Director, Management Information and Program Control (1)  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

9237

# IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office  
CEDAR RAPIDS, IOWA

Subject: Abnormal Occurrence  
Report Number: 50-331/75-44  
Report Date: August 21, 1975  
Occurrence Date: August 14, 1975  
Facility: Duane Arnold Energy Center, Unit No. 1, Palo, Iowa

## Identification of Occurrence

Loose connection on 480 volt Emergency Service Water Pump supply breaker, reportable in accordance with Appendix A to Operating License DPR-49, Specification 1.0.4.d.

## Conditions Prior to Occurrence

Reactor at steady-state power  
988 MWth  
337 MWe

## Description of Occurrence

At 1057 hours, the 480 volt supply breaker to Emergency Service Water Pump A sustained an electrical arc across the line side connectors. The arc resulted in a reactor scram and Group I isolation via the following sequence of events:

1. 480 volt load center 1B32 tripped.
2. Uninterruptible AC Bus (fed from 1B32) sustained momentary voltage dip prior to transfer to DC.
3. Voltage dip on Uninterruptible Bus caused loss of reactor vessel level signal, resulting in reactor scram and group one isolation.

## Designation of Apparent Cause of Occurrence

The apparent cause of the occurrence was inadequate tightening of the line side connectors during initial installation of the breaker.



August 21, 1975

Analysis of Occurrence

The occurrence did not present an unsafe plant condition. The reactor protection system and containment isolation system functioned as required during the transient.

As a result of the electrical arc, the line side connectors on the 480 volt breaker sustained partial melting, rendering the breaker unserviceable.

Corrective Action

The subject 480 volt circuit breaker was replaced.

Conclusion

This report was reviewed and approved by the DAEC Operations Committee on August 21, 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

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

# IOWA ELECTRIC LIGHT AND POWER COMPANY

*General Office*

CEDAR RAPIDS, IOWA  
DUANE ARNOLD ENERGY CENTER  
PALO, IOWA  
AUGUST 15, 1975  
DAEC - 75 - 320

75-44

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

SUBJECT: Abnormal Occurrence Notification

FILE: A-110, A-118a

Dear Mr. Keppler:

In accordance with DAEC Technical Specifications, Specification 6.11.2.A.1, this letter is a notification of an abnormal occurrence at the Duane Arnold Energy Center on August 14, 1975. This letter, telecopied to your office, is intended to satisfy the requirements for notification by telegram within 24 hours of an abnormal occurrence.

## Identification of Occurrence

Damaged 480 volt Emergency Service Water Pump breaker, reportable in accordance with Appendix A to Operating License DPR-49, Specification 1.0.4.d.

## Description of Occurrence

At approximately 1100 hours, while the reactor was at power operation, the 480 volt supply breaker to Emergency Service Water pump A sustained an electrical arc across the line side connectors. The short resulted in a reactor scram via the following sequence of events:

1. 480 volt Load Center 1B3 tripped.
2. Uninterruptible AC Bus sustained momentary voltage dip causing a reactor vessel level instrumentation transient and a full open signal to the feedwater reg valves.
3. Feedwater pumps tripped on low suction.
4. Lo reactor water level caused reactor scram.
5. Lo Lo reactor water level caused Group One isolation.

AUG 21 1975

AO Notification  
Page 2  
August 15, 1975

The cause of the short at the circuit breaker has been determined to be a loose connection.

Investigation is continuing.

A formal written report will be submitted to the Office of Inspection and Enforcement within 10 days of the subject abnormal occurrence.

Very truly yours,



G. G. Hunt  
Chief Engineer  
Duane Arnold Energy Center

DLW/GGH/mg

cc: B. C. Rusche  
C. W. Sandford  
J. A. Wallace  
L. D. Root  
B. R. York  
D. L. Wilson  
R. R. Rinderman  
G. A. Cook  
H. W. Rehrauer - Chairman, Safety Committee  
E. L. Hammond  
Director, Office of Management  
Information and Program Control  
USNRC  
Washington, D.C. 20555