

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)  
Duane Arnold Energy CenterDOCKET NUMBER (2)  
0 5 0 0 0 3 3 1 1 OF 0 2TITLE (4)  
Control Room Intake Air Standby Filter Units Initiation

| 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) |  |
| 0 1            | 0 2 | 8 4  | 8 4            | 0 0 3             | 0 0             | 0 2             | 0 1 | 8 4  | N/A                           | 0 5 0 0 0        |  |
|                |     |      |                |                   |                 |                 |     |      | N/A                           | 0 5 0 0 0        |  |

| OPERATING MODE (9)      | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11) |  |                  |                 |  |  |   |  |  |  |  |  |
|-------------------------|--|--|------------------|-----------------|--|--|---|--|--|--|--|--|
| POWER LEVEL (10)<br>9 9 | 20.402(b)  |  |                  | 20.405(c)       |  |  | <input checked="" type="checkbox"/> 50.73(a)(2)(iv) |  |  | 73.71(b)   |  |  |
|                         | 20.405(a)(1)(i)  |  |                  | 50.36(c)(1)     |  |  | <input type="checkbox"/> 50.73(a)(2)(v)             |  |  | 73.71(c)   |  |  |
|                         | 20.405(a)(1)(ii)   |  |                  | 50.36(c)(2)     |  |  | <input type="checkbox"/> 50.73(a)(2)(vii)           |  |  | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |  |  |
|                         | 20.405(a)(1)(iii)  |  |                  | 50.73(a)(2)(i)  |  |  | <input type="checkbox"/> 50.73(a)(2)(viii)(A)       |  |  |  |  |  |
|                         | 20.405(a)(1)(iv)   |  |                  | 50.73(a)(2)(ii) |  |  | <input type="checkbox"/> 50.73(a)(2)(viii)(B)       |  |  |  |  |  |
| 20.405(a)(1)(v)         |  |  | 50.73(a)(2)(iii) |                 |  | <input type="checkbox"/> 50.73(a)(2)(ix) |   |  |  |  |  |  |

LICENSEE CONTACT FOR THIS LER (12)  
NAME  
David B. Hamel, Technical Support EngineerTELEPHONE NUMBER  
AREA CODE  
3 1 9 8 5 1 - 7 2 3 8

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) |        |           |              |                   |       |        |           |              |                   |
|--|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
| CAUSE  | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRC | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRC |
| X  | V I    |           |              | N                 |       |        |           |              |                   |
|  |        |           |              |                   |       |        |           |              |                   |

SUPPLEMENTAL REPORT EXPECTED (14)  
☐ YES (If yes, complete EXPECTED SUBMISSION DATE) ☒ NOEXPECTED SUBMISSION DATE (15)  
MONTH DAY YEAR

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

On January 2, 4, 6, & 16, 1984, Auto-initiations of control building ventilation system, isolation mode, occurred from main inlet air low temperature (setpoint 40F). These occurrences resulted from freezing in the non-safety related hot water preheating coils and the resulting corrective maintenance activities. In the isolation mode the control building ventilation recirculates control room air to the control room, switchgear rooms and battery rooms, while the 1000 CFM make-up air (to balance the battery room exhaust) is treated through the standby filter units (SFU). The plant was operating normally at full power and the public health and safety was not affected. The isolation of the control building ventilation system due to low temperature is for operator comfort and to protect control building equipment. Previous problems with preheating main inlet air were not reportable under the pre-1984 criteria, see also LER 84-004. By design, three sets of preheating coils are stacked vertically through which inlet air passes. The damaged coils were removed for repair and the respective openings blocked until their return. Inadequate circulation from the non-safety related main hot water loop seems to be the root cause of freezing; investigation is continuing.

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PDR ADOCK 05000331  
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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

|                            |                     |                |                      |                    |          |     |        |
|----------------------------|---------------------|----------------|----------------------|--------------------|----------|-----|--------|
| FACILITY NAME (1)          | DOCKET NUMBER (2)   | LER NUMBER (6) |                      |                    | PAGE (3) |     |        |
| Duane Arnold Energy Center |                     | YEAR           | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER |          |     |        |
|                            | 0 5 0 0 0 3 3 1 8 4 | -              | 0 0 3                | -                  | 0 0      | 0 2 | OF 0 2 |

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

Repeated auto-initiations of the control building ventilation system isolation, including Standby Filter Units (SFU) actuation, resulted from low air temperature of the normal main inlet air. This was caused by failures and bypassing of the non-safety related preheating coils. The DAEC control building ventilation isolates the building from normal outside air intake, recirculates the ventilation air to the essential switchgear rooms, battery rooms, and the control room, and supplies treated make-up air through the standby filter units to balance the battery rooms exhaust. The safety related function of the SFU and control building isolation functions is to minimize operator radiation exposure by filtration of intake air and recirculating air rather than providing full flow makeup. The SFU also auto-initiates on low inlet temperature for the comfort of control room personnel and to protect equipment from eventually freezing on low inlet temperature as discussed in UFSAR chapter 9. Low inlet temperature causes an engineered safety feature (the SFU's) to initiate and is reportable under both 10CFR50.72 and 50.73. If the SFU's and control building isolation were not to occur on low inlet temperature ample time would be available for operators to protect equipment within the building from freezing. Inadequate circulation from the non-safety related main hot water loop seems to be the root cause of freezing the preheating coils; investigation is continuing. The plant continued to operate normally during and following the initiations.

Iowa Electric Light and Power Company

February 1, 1984

DAEC-84-54

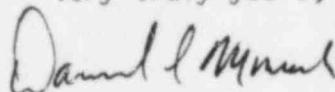
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Subject: Duane Arnold Energy Center  
Docket No. 50-331  
Op. License DPR-49  
Licensee Event Report No. 84-003

Gentlemen:

In accordance with 10 CFR 50.73 please find attached a copy of the subject Licensee Event Report.

Very truly yours,



Daniel L. Mineck  
Plant Superintendent - Nuclear  
Duane Arnold Energy Center

DLM/DBH/pv

attachment

cc: Mr. James G. Keppler  
Regional Administrator  
Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

NRC Resident Inspector - DAEC

File A-118a

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