

Iowa Electric Light and Power Company

May 21, 1993
NG-93-2118

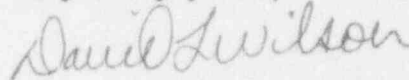
Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License DPR-49
Licensee Event Report #93-002

Gentlemen:

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

Very truly yours,



David L. Wilson
Plant Superintendent - Nuclear

DLW/JK/eah

cc: Director of Nuclear Reactor Regulation
Document Control Desk
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D. C. 20555

NRC Resident Inspector - DAEC

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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Duane Arnold Energy Center

DOCKET NUMBER (2)

05000 331

PAGE (3)

1 OF 5

TITLE (4) Missed Surveillance of Primary Containment Airlock Due To Different Interpretations of a Technical Specification Submittal

| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT NUMBER (7) | | | OTHER FACILITIES INVOLVED (8) | |
|--------------------|-----|------|---|-------------------|-----------------|-------------------|-----|------|-------------------------------|--|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| 04 | 28 | 93 | 93 | 002 | 00 | 05 | 21 | 93 | | 05000 |
| OPERATING MODE (9) | | N | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) | | | | | | | |
| POWER LEVEL (10) | | 095 | 20.402(b) | | | 20.405(c) | | | 50.73(a)(2)(iv) | 73.71(b) |
| | | | 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 |
| | | | 20.405(a)(1)(iii) | | X | 50.73(a)(2)(i) | | | 50.73(a)(2)(vi)(A) | (Specify in Abstract below and in Text, NRC Form 366A) |
| | | | 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

John D. Kerr, Technical Support Specialist

TELEPHONE NUMBER (Include Area Code)

(319) 851-7492

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 |
|-------|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
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| | | | | | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On April 28, 1993, while the plant was operating at 95.5% power, it was determined that the testing program for the primary containment airlock was not in full compliance with the Technical Specification and 10CFR50 Appendix J requirements. Leak testing after securing the airlock had not been performed. The cause of this was different interpretations of a 1984 Technical Specification revision that was based on a 1978 submittal.

The historical test results, the redundant design, and the low probability of an event requiring primary containment, support the conclusion that there is no effect on safe operation. The NRC has granted Enforcement Discretion until a temporary exemption request is reviewed. The airlock will not be opened until the next plant shutdown, scheduled for July 1993. The required leak tests will be performed prior to startup from the next shutdown. The Technical Specification revision process has been strengthened and communications have been improved since 1984.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

EXPIRES: 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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| FACILITY NAME (1) Duane Arnold Energy Center | DOCKET NUMBER (2) 05000331 | LER NUMBER(6) | | | PAGE(3) | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | |
| | | 93 | -002 | -00 | 2 | OF 5 |

TEXT (If more space is required, use additional NRC Form 386A) (17)

I. DESCRIPTION OF EVENT:

On April 28, 1993 the plant was operating at 95.5% power coasting down to a refueling outage scheduled to start July 29, 1993. As part of the preparation for the upcoming outage, activities were in progress to review lessons learned and to resolve action items from the previous refueling outage. One of the action items was to research the background of not performing a leak test on the drywell airlock after opening the airlock to conduct a 400 psig drywell inspection if a leak test had been performed within three days prior to the 400 psig inspection. The surveillance requirement in Technical Specification para. 4.7.A.2.d.2)c) states that "within three (3) days after securing the airlock when containment integrity is required, the airlock gaskets shall be leak tested at a pressure of Pa". Although docketed correspondence was found that shows that DAEC's original intent was to not perform the leak test a second time under these circumstances, the words quoted above have been in the DAEC Technical Specifications since August 1984. These words require a test within three days "after" securing the airlock, not "within three days".

On April 28, 1993 it was determined that DAEC has not been in full compliance with this Technical Specification requirement. Following a shutdown in January 1993, the surveillance test to leak test the airlock was conducted on January 28, 1993 and the 400 psig inspection was conducted on January 29, 1993 during startup. No leak test has been conducted since January 28, 1993. This constitutes a condition prohibited by the Technical Specifications.

Related to this requirement is para. 4.7.A.2.d.2)b) of the Technical Specifications. This states that the airlock shall be leak tested at least every six months unless there have been no airlock openings since the last successful test. The airlock was successfully leak tested on April 22, 1992 following the last refueling outage. The airlock was then opened to conduct the 400 psig drywell inspection on April 25, 1992 during startup. No airlock test was conducted between April 22, 1992 and January 28, 1993. This time period is greater than six months and constitutes a condition prohibited by the Technical Specifications.

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| FACILITY NAME (1) Duane Arnold Energy Center | DOCKET NUMBER (2) 0 5 0 0 0 3 3 1 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 93 | - 002 | - 00 | 3 | OF | 5 |

TEXT (If more space is required, use additional NRC Form 386A) (17)

II. CAUSE OF EVENT

On August 29, 1978 DAEC submitted a revision to the Technical Specifications (RTS-112) to implement 10CFR50 Appendix J leak testing requirements. This submittal included two exceptions to Appendix J requirements for airlock testing. One exception was to require airlock leak tests at least once per operating cycle rather than every six months. The second exception was to require a leak test following an airlock opening if it had been greater than three days since the last test, rather than requiring a test within three days after an airlock opening. A November 5, 1981 DAEC letter requested exemption from Appendix J for the same reasons. DAEC then initiated an airlock leak testing program based on these proposed requirements as described in RTS-112.

In response to these letters, a January 17, 1984 letter from the NRC Division of Licensing stated that the airlock testing interval could extend up to the next refueling outage if there had been no airlock openings since the last successful test. This letter also stated that testing the airlock within three days of airlock opening is acceptable and no exemption was required on that issue. This letter requested that DAEC propose Technical Specifications to reflect these decisions.

DAEC submitted proposed Technical Specifications (RTS-112B) on March 16, 1984. This submittal incorporated the approved extension of the testing interval up to the next refueling outage as discussed in the January 17, 1984 letter. This submittal also incorporated language similar to Appendix J requiring a test within three days after securing the airlock. DAEC concluded that the NRC had determined that the August 29, 1978 submittal on this issue was in compliance with, or provided an acceptable alternative to, Appendix J. RTS-112B was approved and issued as Amendment 106 on August 24, 1984 and these requirements have not changed since. DAEC continued the testing program based on the 1978 submittal.

The NRC Division of Licensing may have interpreted DAEC's August 29, 1978 submittal concerning the three day interval test as being in compliance with, or providing an acceptable alternative to, Appendix J while DAEC's interpretation of the submittal was an exception to Appendix J, as explained above. DAEC submitted RTS-112B using language for the three day interval test that did not accurately describe DAEC's testing program. This happened because the January 17, 1984 letter said that no exemption was required on this issue. The cause of this event (condition) was different interpretations of the 1978 submittal.

LICENSEE EVENT REPORT (LER)
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| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 93 | - 002 | - 00 | 4 | OF | 5 |

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

III. ANALYSIS OF EVENT

This event had no effect on safe operation of the plant, nor would it have an effect on safe operation during any other plant conditions. DAEC has reviewed the historical surveillance test performance of the drywell airlock and has determined that there is a very high probability that the airlock seals are performing as required. The airlock consists of two doors, each designed and constructed to the performance requirements of primary containment. Only one secured door is necessary to maintain primary containment integrity. The potential consequence of an airlock leak is minimized by the fact that primary containment is located within secondary containment which would retain any small leakage and filter it through the standby gas treatment system. In addition, there is an extremely low probability of an event that would require primary containment. Details supporting the above analyses are included in a Request for Enforcement Discretion dated April 29, 1993 to the Office of Nuclear Reactor Regulation (letter NG-93-1842). See Corrective Actions.

Also included in this letter is a discussion of options for testing the airlock now as opposed to waiting until the scheduled July 29, 1993 refueling outage. Testing the airlock at full power would result in significant radiation exposure to test personnel. Reducing reactor power to reduce radiation exposure would require a reduction in recirculation pump speed. This disturbance could challenge the leakage characteristics of the pump seal which is currently exhibiting increased leakage. In addition, the risks associated with challenging reactor systems for a forced shutdown to perform the test at acceptable exposure rates are higher than those associated with continued power operation. Details of these analyses are also in this letter.

IV. CORRECTIVE ACTIONS

On April 28, 1993 this condition was discussed with the Office of Nuclear Reactor Regulation. Enforcement Discretion was verbally requested to allow relief from primary containment airlock testing required by Appendix J until a temporary exemption request can be reviewed by that office. Enforcement Discretion was verbally granted on April 28, 1993. A written request for Enforcement Discretion was provided in letter NG-93-1842 dated April 29, 1993. A written grant of Enforcement Discretion was received from the Office of Nuclear Reactor Regulation dated April 30, 1993. Letter NG-93-1842 also included the temporary exemption request. This temporary exemption request would allow continued operation of the DAEC until the next shutdown without performing a primary containment airlock test as required by Appendix J. In addition, the applicable Technical Specification surveillance requirements have been reviewed and a revision for clarification will be submitted.

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FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER(6)

PAGE(3)

Duane Arnold Energy Center

05000331

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TEXT (If more space is required, use additional NRC Form 368A) (17)

As a compensatory measure during the intervening period of Enforcement Discretion, DAEC will prohibit opening the airlock between now and the next plant shutdown sequence. The required leak tests will be performed prior to startup from the next plant shutdown.

The Licensing Department, which is responsible for all Technical Specification submittals, has been deeply involved in the analysis of this condition and, via this involvement, has been reminded of the need for careful comparison of the regulations, the Technical Specification requirements, and the programs in effect at DAEC that implement the regulations and requirements, in order to ensure compliance.

The Technical Specification revision process has been strengthened since 1984. These improvements include initiation meetings, more engineering involvement during preparation, and more documented reviews. There has also been improved communications with NRC and utility owners' groups in recent years.

V. ADDITIONAL INFORMATION

A. Previous Similar Events

A review of DAEC LERs since 1984 identified LERs 91-11 and 85-32 as reporting missed surveillances required by the Technical Specifications, but neither of these concern airlocks.

B. EIIIS System and Component Codes

BH-Standby Gas Treatment System
JM-Containment Isolation Control System
VB-Drywell Environment Control System
AL-Airlock

This report is being submitted pursuant to 10CFR50.73(a)(2)(i)(B).