

DCS

Iowa Electric Light and Power Company

February 9, 1990  
NG-90-0318

Mr. James Lieberman, Director  
Office of Enforcement  
U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Op. License No: DPR-49  
Reply to Notice of Violation and Proposed Imposition of  
Civil Penalty (EA 89-214)  
File: A-102, A-289

Dear Mr. Lieberman:

A letter from Mr. A. Bert Davis, USNRC Region III Regional Administrator, to Iowa Electric Light and Power Company dated January 10, 1990, transmitted a Notice of Violation and Proposed Imposition of Civil Penalty. The letter and NRC regulations require Iowa Electric to reply within thirty days. This letter and its attachments constitute the required reply.

Pursuant to the requirements of 10 C.F.R. § 2.201(a), in Attachment 1, "Reply to a Notice of Violation," Iowa Electric admits the violation and identifies the reasons for the violation, the corrective steps that have been taken and the results achieved, the corrective steps that will be taken to avoid further violations, and the date when full compliance was achieved. Attachment 2, filed pursuant to 10 C.F.R. § 2.205, is Iowa Electric's "Answer to the Proposed Imposition of Civil Penalty." In that Answer, we ask that NRC reconsider its decision to impose a penalty in this case and we set forth the basis for that requested action.

We believe that the facts of this case argue strongly for the NRC to exercise its discretion under 10 C.F.R. Part 2, Appendix C to refrain from imposing a civil penalty. That the violation occurred and persisted over a long period is acknowledged. However, the Iowa Electric personnel who detected and resolved this problem did an excellent job. Iowa Electric is proud of their performance. We note that in the referenced letter of January 10, 1990, the NRC stated, "The alertness and understanding demonstrated... is commendable."

During a scheduled maintenance outage, a persistent and imaginative Iowa Electric system engineer identified a hole in ventilation shaft ductwork. The SGTS surveillance test was performed immediately -- and unsuccessfully. Iowa Electric personnel promptly began a deliberate and careful process of defining the problem. Precise problem identification was complex as was the development of comprehensive corrective action. Although that resolution may seem obvious in hindsight, it was not. Iowa Electric personnel analyzed the problem and conducted tests to develop information about the various DAEC ventilation

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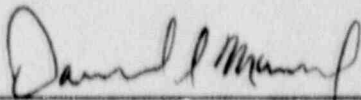
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systems and the interactions between and among those systems in a comprehensive and prudent manner. Corrective actions (including revision of the SGTS surveillance procedure) were decided upon and implemented with careful attention to detail and in accordance with the applicable procedures.

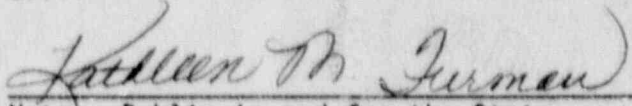
The system engineer who identified this subtle problem has been commended and rewarded for his initiative and persistence. We are equally pleased with the deliberate, careful, and effective way in which Iowa Electric personnel evaluated the problem and resolved it. In our view, imposition of a civil penalty sends a wrong signal to a staff whose diligence and thorough understanding of the plant led to the identification and resolution of this problem. We urge NRC to consider whether imposition of the penalty is consistent with the NRC's goal of encouraging and supporting licensee initiatives to identify and comprehensively correct problems.

This response, consisting of the letter and attachments, is true and accurate to the best of my knowledge and belief.

IOWA ELECTRIC LIGHT AND POWER COMPANY

By   
DANIEL L. MINECK  
Manager, Nuclear Division

Subscribed and sworn to before me on  
this 9<sup>th</sup> day of February  
1990.

  
Notary Public in and for the State  
of Iowa

DLM/PMB/pjv+

- Attachments: (1) Response to a Notice of Violation  
(2) Answer to Proposed Imposition of Civil Penalty

- cc: P. Bessette  
L. Liu  
L. Root  
R. McGaughy  
J. R. Hall (NRC-NRR)  
A. Bert Davis (Region III)  
NRC Resident Office  
Commitment Control #900007

IOWA ELECTRIC LIGHT AND POWER COMPANY  
Response to Notice of Violation  
Transmitted with Inspection Report 89-026

NRC NOTICE OF VIOLATION (SEVERITY LEVEL III)

10 CFR Part 50, Appendix B, Criterion XI, Test Control, requires, in part, that a test program be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

Technical Specification Limiting Condition for Operation (LCO) 3.7.C.1 requires secondary containment integrity to be maintained during all modes of plant operation unless specific exception criteria are met. In addition, Technical Specification Surveillance Requirement 4.7.C.1.c requires that the Standby Gas Treatment System capability to maintain 1/4 inch of water vacuum under calm wind (< 5 MPH) conditions with a filter train flow rate of not more than 4,000 SCFM, shall be demonstrated at each refueling outage prior to refueling.

Contrary to the above, from 1974 until September 20, 1989, the licensee failed to establish an adequate surveillance test to demonstrate that the Standby Gas Treatment System could maintain 1/4 inch of water vacuum under calm wind conditions with a filter train flow rate of not more than 4000 SCFM. The surveillance test was inadequate in that interaction with other ventilation systems was not properly considered.

RESPONSE TO NOTICE OF VIOLATION

1. Admission of the Violation

Iowa Electric Light and Power Company (IELP) admits that the secondary containment surveillance test procedure in place on September 20, 1989, was not adequate to ensure that the Standby Gas Treatment System (SGTS) could maintain the Reactor Building (RB) at the required 1/4 inch of water vacuum.

2. Reasons for the Violation

This violation was caused by our failure to recognize that negative pressure regions adjacent to secondary containment could affect the results of this test. Operation of the plant exhaust fans during the test, while not prohibited, masked a breach in the ventilation shaft ductwork and prevented detection of the deterioration of secondary containment seals and penetrations.

3. The Corrective Steps That Have Been Taken and the Results Achieved

The secondary containment operability test procedure has been revised. It now requires that the main plant exhaust and turbine building and radwaste building ventilation systems be secured during the test, thus precluding the existence of negative pressure regions adjacent to the secondary containment boundary.



All other surveillance test procedures applicable to safety-related HVAC systems were reviewed to determine whether other previously unknown interactions could affect the accuracy of test results. This review verified that the procedures are adequate to determine whether Technical Specification surveillance requirements are satisfied and that no mechanical system interactions with other HVAC systems could mask inadequate or degraded system performance. No deficiencies were identified in the test procedures.

The breach in the reactor building ventilation shaft ductwork initially identified by the system engineer has been repaired and the ductwork housing has been reinforced to ensure seismic adequacy. The degraded seals and penetrations identified after the secondary containment surveillance test procedure had been revised were repaired or replaced. The DAEC Preventative Maintenance Program now includes periodic inspection and replacement of boot and airlock door seals. The SGTS is currently able to maintain the RB at greater than 0.3 inches of water vacuum.

Operating procedures and alarm response procedures have been revised to require that the main plant exhaust fans be secured upon receipt of a RB vent stack radiation alarm during secondary containment isolation conditions. The changes assure that any bypass of the SGTS which can result from operation of the main plant exhaust fans will be terminated during actual accident conditions.

4. Corrective Steps That Will Be Taken to Avoid Further Violations.

As described above, this deficiency has been completely corrected. However, to preclude recurrence of ductwork failures of this type, we will be inspecting all Class 1 ductwork to verify that the as-built configuration meets the applicable design specifications. Most of these inspections will be completed during the next refueling outage; all inspections will be complete before December 31, 1990.

In addition, the inclusion of boot and airlock door seals in the Preventative Maintenance Program will ensure that any deterioration of these seals will be detected.

5. Date When Full Compliance Will Be Achieved

IFLP was in full compliance as of October 22, 1989, the date the DAEC was returned to operation following the Fall 1989 maintenance outage.

IOWA ELECTRIC LIGHT AND POWER COMPANY  
Answer to Proposed Imposition  
of Civil Penalty

Introduction

On January 10, 1990, the NRC advised Iowa Electric that it proposes to assess a civil penalty in the amount of \$25,000 for violation of 10 C.F.R. Part 50, Appendix B, and DAEC Technical Specifications 3.7.C.1. and 4.7.C.1.c. In brief, a surveillance test procedure intended to demonstrate that the Standby Gas Treatment System meets the Technical Specification requirement was not adequate to do so. Iowa Electric's response to the Notice of Violation pursuant to 10 C.F.R. § 2.201 is separately stated. This document is Iowa Electric's Answer to the proposed civil penalty.

Iowa Electric's Position

Iowa Electric respectfully requests that NRC reconsider its decision to impose a penalty in this case. We submit that proper application of the NRC Enforcement Policy (set out at 10 C.F.R. Part 2, Appendix C) leads to a determination that no enforcement action beyond the Notice of Violation is appropriate.

Iowa Electric admits that the violation charged occurred and that its Severity Level (III) has correctly been assessed. However, we believe that, in the circumstances of this case viewed as a whole, exercise of agency discretion will lead to the decision not to impose a civil penalty.

Pertinent Provisions of NRC Enforcement Policy - The Exercise of Discretion

Under NRC's Enforcement Policy, "(a) notice of violation is normally the only enforcement action taken, except in cases where the criteria for civil penalties and orders, as set forth in Sections V.B and V.C respectively, are met." (10 C.F.R. Part 2, Appendix C, Section V.A.) In the case of a Severity Level III violation, Section V.B states that a civil penalty is to be "considered" (as distinguished from Level I and II violations where penalties "are proposed absent mitigating circumstances"). The Policy makes clear that, for Severity Level III violations, imposition of civil penalties may "warrant the exercise of discretion under Section V.G." This exercise of discretion is separate and apart from the consideration of mitigating and escalating factors once a decision is made that assessment of a civil penalty is the appropriate course. (10 C.F.R. Part 2, Appendix C, Section V.B.)

The stated purpose of providing explicitly in the policy for this exercise of discretion (and in certain cases the discretion not even to issue notices of violation) is that

. . . the NRC wants to encourage and support licensee initiative for self-identification and correction of problems. . . .

(10 C.F.R. Part 2, Appendix C, Section V.G.)



One category of discretion is precisely applicable to the situation which gave rise to the Notice of Violation forwarded by the NRC's letter of January 10, 1990, to Iowa Electric:

The NRC may refrain from proposing a civil penalty for a Severity Level III violation not involving an overexposure or release of radioactive material that meets all of the following criteria.

- a. It was identified by the licensee and reported;
- b. Comprehensive corrective action has been taken or is well underway within a reasonable time following identification;
- c. It was not a violation that either (i) was reasonably preventable by the licensee's action in response to a previous regulatory concern identified within the past two years of the inspection or since the last two inspections whichever is longer or (ii) reasonably should have been corrected prior to the violation because the licensee had prior notice of the problem involved; and
- d. It was not a willful violation or indicative of a breakdown in management controls.

(10 C.F.R. Part 2, Appendix C, Section V.G.3.)

Application of Discretion to the Violation in Question

The NRC letter of January 10, 1990, and its enclosure do not give explicit indication of the factors which the NRC Staff considered in deciding whether to assess a civil penalty for this violation. The letter describes the circumstances of the violation, its discovery, and certain related judgments by the Staff. The letter then states that a civil penalty is proposed in order "(t)o emphasize the importance of having and using proper surveillance test procedures and engineering controls ...." It then discusses possible escalation and mitigation of the base penalty.

The January 10, 1990, letter does not explicitly address application of the criteria set out in Section V.G.3 of Appendix C to the facts which gave rise to this violation. Iowa Electric submits that those criteria have been met in this case. Iowa Electric identified the problem and reported it promptly. Iowa Electric undertook comprehensive corrective action as described in Attachment 1 and completed it before the plant resumed operation. Certain additional inspections (to further assure that installation of ventilation system ductwork satisfies design requirements) will be completed by the end of 1990. No regulatory concern had been raised previously which was in any way related to the violation or could have put Iowa Electric on notice of the problem. Finally, the violation was not willful and does not suggest a breakdown in management controls.

We have carefully examined the January 10, 1990, letter and the NRC report on "the special safety inspection . . . of containment integrity issues . . ." (Report 89-26, transmitted by NRC letter dated November 7, 1989.) We respectively suggest that these documents may reflect a misperception regarding Iowa Electric's investigation of the basic problem and its timeliness in developing a comprehensive corrective action. In view of the possibility that this perception

led the Staff to propose a civil penalty before it had considered exercise of its discretion, we wish to clarify several points.

The DAEC had been shut down on September 15 for a scheduled maintenance outage and remained shut down on September 20, 1989. An Iowa Electric employee identified the hole in ductwork associated with the Standby Gas Treatment System (SGTS) at approximately 09:55 on September 20, 1989. The SGTS surveillance test was performed within minutes (at approximately 10:13) with the hole open and the main plant exhaust fans off; the test failed. It was evident to DAEC personnel that the main plant exhaust fans had been "helping" the SGTS to draw the required vacuum on the Reactor Building. Plant documentation indicates that the NRC was notified at approximately 12:54 of the hole in the ductwork and the failed test.

Shortly thereafter (probably on September 20 or 21, 1989), an NRC inspector at DAEC asked the engineer who had discovered the hole in the ductwork whether the procedure (STP) governing the secondary containment surveillance test would be changed to require securing the main plant exhaust fans during the test. The engineer responded appropriately that such a decision should be made following repair of the hole and appropriate testing. We believe that this reaction may not have been regarded by the NRC as wholly responsive.

It was clear to the Iowa Electric personnel, however, that definition of the underlying problem and development of a comprehensive resolution, one aspect of which was the correction of the STP, were not simple tasks and that all proper corrective actions were not immediately apparent. They recognized that it was essential to explore and evaluate all design and safety aspects and ramifications of securing the main plant exhaust fans before making any commitment to secure them. They also recognized that other surveillance test procedures applicable to safety-related HVAC systems had to be reviewed to determine whether there were other previously-unknown interactions. The process of investigation and evaluation was started immediately after the hole in the ductwork was discovered. The factors which influenced their judgment to proceed promptly but with deliberation include the following:

1. If the main plant exhaust fans are secured while the plant is in operation, temperatures in the vicinity of the steam lines increase. The Primary Containment Isolation System instrumentation may then incorrectly sense a steam leak, signal a Group 1 isolation, and a reactor scram is likely to occur.
2. In the course of continued testing during the period from September 20 until October 11, 1989, when the SGTS test was completed successfully, IE was able to develop much valuable information about the various DAEC ventilation systems (e.g., Turbine Building, Radwaste Building, Reactor Building) and interactions between and among them. This information helped us develop a comprehensive resolution including an appropriate, effective secondary containment STP while verifying that other test procedures were valid.
3. Sound consideration and implementation of procedural changes requires formality and attention to detail. At DAEC, permanent STP changes are approved by the Operations Supervisor, Plant Performance Supervisor, and Quality Control Supervisor, and reviewed by the ALARA Coordinator. A permanent change must be reviewed by the Operations Committee before it is submitted for final approval by the Plant Superintendent-Nuclear.



This process was not identified nor was the corrective process initiated by anyone other than IE's own staff. The company did not require a regulatory stimulus to undertake this action. Nor was the company recalcitrant in implementing corrective action suggested by the NRC Staff. Our judgment, expressed in a telephone conversation with Region III staff on October 12, that it would be premature to commit to manual isolation or a design change was based solely on the fact that, although our evaluation was proceeding in a timely fashion, it was not yet complete at that time. In our view, any suggestion of inappropriate delay in completing our evaluation is not supported. The plant was shut down (until October 22) in a maintenance outage extended to address environmental qualification matters. The Plant Safety Analysis and Technical Specifications did not require this system to be operable during this period. Under those conditions evaluation of the SGTS problem was being conducted at an appropriate pace. In due course, changes were made in our alarm response and operating procedures but only after a safety evaluation had been prepared and a design change made to the Turbine Building ventilation system.

#### Conclusion

We respectfully request that the NRC reexamine the circumstances which surround the violation and Iowa Electric's response and consider or reconsider the violation in accordance with Section V.G.3. of the Enforcement Policy. We believe that a careful consideration of the facts will lead to the conclusion that it is appropriate to refrain from proposing a civil penalty. We therefore request that the penalty be remitted.