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May 21, 1997  
NG-97-0836

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-37  
Washington, D.C. 20555-0001

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Op. License No: DPR-49  
Reply to a Notice of Violation Transmitted with Inspection Report 97004  
File: A-105, A-102

Dear Sir:

This letter and Attachment 1 are provided in response to the Notice of Violation transmitted with NRC Inspection Report 97004. Attachment 2 provides information requested in the cover letter of Inspection Report 97004 concerning actions we have taken to correct identified weaknesses in our 10 CFR 50.59 process. The Duane Arnold Energy Center (DAEC) staff fully understands the need for proper implementation of 10 CFR 50.59 and will continue to closely monitor and participate in industry and NRC initiatives concerning 10 CFR 50.59 and take appropriate actions as necessary.

This letter contains the following new commitments:

Revise Administrative Control Procedures to include a flow chart for procedure usage by July 15, 1997. Specifically, the flow chart will indicate when to stop using a procedure when technical inaccuracies are identified and which mechanisms to utilize for correcting technical inaccuracies.

Operations will review Operating Instructions and Annunciator Response Procedures to identify technical inaccuracies and take actions as necessary by September 15, 1997.

Operations personnel will conduct 'peer visits' to other licensees to assess procedure use, review, and revision processes and initiate further actions as necessary by September 15, 1997.

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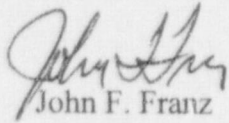


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If you have any questions regarding this matter, please contact my office.

Sincerely,



John F. Franz  
Vice President, Nuclear

Attachment 1: Reply to a Notice of Violation Transmitted with Inspection Report 97004

Attachment 2: Response to Request for Additional Information Concerning 10 CFR  
50.59 Process

cc: R. Murrell  
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**IES Utilities Inc.**  
**Reply to a Notice of Violation**  
**Transmitted with Inspection Report 97004**

**VIOLATION ONE**

Technical Specifications 6.8.1 requires that procedures covering areas such as "normal startup and operation of systems and components of the facility" and "responses to alarms" be implemented and maintained.

Operating Instruction (OI) 149, "Residual Heat Removal (RHR) System," requires pressurizing the RHR system with condensate service pressure prior to starting pumps unless otherwise directed by the Operations Shift Supervisor (OSS).

Contrary to the above, on February 19, 1997, the inspectors identified that an operator failed to follow OI 149 and did not pressurize the RHR system with condensate service pressure prior to starting an RHR pump.

This is a Severity Level IV violation (Supplement 1).

**RESPONSE TO VIOLATION ONE**

**1. REASON FOR THE VIOLATION**

Step 7.1.1 of Surveillance Test Procedure (STP) 45D001-Q "HPCI System Quarterly Operability Test," specifies to verify the RHR system is in Torus Cooling Mode per OI 149. Section 5.3(3) of OI 149, "Residual Heat Removal System," specifies "unless otherwise directed by the OSS, pressurize the RHR system with condensate service prior to starting pumps per Section 10.0."

On February 19, 1997, while performing STP 45D001-Q, it was determined that the licensed operator did not pressurize the system with condensate service and did not discuss it with the OSS prior to starting the RHR pump. Furthermore, it was determined that the operator relied on his knowledge that the system was properly pressurized already, and therefore, there was no need to use condensate service to pressurize the RHR system.

**2. CORRECTIVE ACTIONS TAKEN AND THE RESULTS ACHIEVED**

Operations management reviewed the requirement to pressurize RHR with condensate service and determined that, based on actual RHR system pressure at the time, there was no need to use the condensate service pressure. However, the licensed operator should have obtained approval from the OSS as required by the OI.

Therefore, the licensed operator was counseled on the need for procedural compliance.

OI 149 was revised to clarify the note to allow the licensed operator more latitude in making the decision to pressurize with condensate service.

On March 14, 1997, operations management issued a memo to all operations personnel stressing the need for procedural compliance and to emphasize that if a step in a procedure is identified as not being appropriate, then to revise the procedure as appropriate.

On March 12, 1997, Vice President-Nuclear issued a memo to all DAEC employees emphasizing procedural verbatim compliance and the need to use the proper mechanisms to change the "words" in procedures when they are improper for a given situation.

**3. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS**

All corrective actions to prevent further violations have been completed.

**4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

Full compliance was achieved on February 19, 1997, when operations supervision determined that the RHR system did not need to be pressurized with condensate service water.

**VIOLATION TWO**

Criterion XI of 10 CFR Part 50, Appendix B requires, in part, 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. Further, the criterion requires that test results shall be documented and evaluated to assure that test requirements have been satisfied.

Contrary to the above,

- a) The inspectors identified that from January 10, 1997 through February 7, 1997, the licensee failed to properly evaluate test results following completion of Surveillance Test Procedure (STP) 47L003, "Standby Gas Treatment System HEPA and Charcoal Filter Efficiency Tests."

- b) The inspectors identified that since April 5, 1996, STP 47L003 failed to incorporate the correct requirement for determining charcoal filter efficiency. Instead, the equation contained an error.

This is a Severity Level IV violation (Supplement 1).

## **RESPONSE TO VIOLATION TWO**

### **1. REASON FOR THE VIOLATION**

#### **VIOLATION 2a**

On January 10, 1997, during the performance of STP 47L003, step 7.16.8 calculated the carbon bed efficiency value to be 99.89%. The acceptance value (required by Technical Specifications) is 99.9%. The calculated value was reviewed by the vendor assisting in the performance of the testing, the system engineer, and operations personnel and a decision was made to round the value up to 99.9% since the TS value only contained three significant digits. Further review of this decision determined that the rounding was non-conservative with respect to compliance. Therefore, the test was re-evaluated and determined to be a failed test.

#### **VIOLATION 2b**

A review of STP 47L003, performed in January 1997, determined that the formulas in steps 7.8.14 and 7.17.14 were not written correctly. The calculation was performed to the correct methodology, but not per procedure. The procedure was incorrectly revised on April 5, 1996. This was the first performance of the STP following that revision.

### **2. CORRECTIVE ACTIONS TAKEN AND THE RESULTS ACHIEVED**

#### **VIOLATION 2a**

An Action Request (AR) was initiated on February 14, 1997 to document the test failure.

STP 47L003 has been revised to require the TS acceptance value be calculated to four significant digits.

License Event Report (LER) 97-02 was submitted on March 7, 1997. This LER documents the changes being made to improve carbon bed efficiency.

A solutions team reviewed the need for guidance on determining proper values when performing STP Technical Specification (TS) steps involving acceptance criteria. As a result of this review, it was determined that proper steps had been taken by the Vice President-Nuclear. Specifically, a memo (which included this issue as an example) was issued to all DAEC personnel on March 12, 1997. The memo emphasized the expectation that technical justification that the intent of a regulation, procedure, or other similar document is met, is not acceptable in place of verbatim compliance. The expectation is that the regulation, procedure, or other similar document is being complied with verbatim. Legal compliance with the word, as written, is the expectation.

### **VIOLATION 2b**

The procedure was reviewed by Engineering and Chemistry and determined that no operability concern existed.

STP 47L003 has been revised to reflect the correct calculation.

A memo was issued to all DAEC personnel on March 12, 1997 (as discussed above) to emphasize expectations for procedure usage and the need to identify and correct procedure deficiencies.

### **3. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS**

All corrective actions to prevent further violations have been completed.

### **4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

#### **VIOLATION 2a**

Full compliance was achieved on February 14, 1997, when STP 47L003 was declared a failed test.

#### **VIOLATION 2b**

Full compliance was achieved on January 22, 1997, when it was determined that the calculation had been performed correctly and that no operability concern existed.

### **VIOLATION THREE**

Criterion XVI of 10 CFR Part 50, Appendix B requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected and that measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition.

Contrary to the above,

- a) On March 7, 1997, the inspectors identified that corrective actions taken in response to a violation on July 23, 1996, were not adequate to preclude repetition. The inspectors identified a repeat occurrence of standby diesel generator cooling water drain valve V-32-170 being out of the required position.
- b) The inspectors identified that from February 25, 1997, until March 10, 1997, an incorrect step in Annunciator Response Procedure (ARP) 1C03B, B-4, Revision 2, was not promptly corrected. The inspectors identified the error to operations management on February 25, 1997.

This is a Severity Level IV violation (Supplement 1).

### **RESPONSE TO VIOLATION THREE**

#### **1. REASON FOR THE VIOLATION**

##### **VIOLATION 3a**

On March 7, 1997, it was identified that valve V-32-170 (Standby Diesel Generator (SBDG) cooling water pump suction drain) was mispositioned. The valve was found in the partially "open" position. Operating Instruction 324, "Standby Diesel Generator System," requires the valve to be closed. This valve had previously been identified as being mispositioned on July 23, 1996. At the time, the corrective actions were to bend the valve handle such that the vulnerability to bumping would be minimized and to brief the helper group (personnel most likely to bump this valve handle) on this incident. These actions were ineffective to prevent reoccurrence.

##### **VIOLATION 3b**

On February 25, 1997, it was determined that ARP 1C03B, B-4 Revision 2, "RHR Shutdown Cooling Header Hi Pressure," contained a step that operations management would not want to be performed. Specifically, the ARP directed operators to manually close a motor operated valve. A Procedure Work Request (PWR) was initiated to correct the procedure. A decision was made that if the ARP was needed

during the time the PWR was being processed, a temporary Document Change Form would be initiated.

2. **CORRECTIVE ACTIONS TAKEN AND THE RESULTS ACHIEVED**

**VIOLATION 3a**

The second valve downstream of V-32-170 was verified to be closed, therefore, the mispositioning of V-32-170 had no impact on system operability.

An AR was initiated. The valve was closed and a valve line-up was performed on similar valves for both SBDGs. No other valves were found mispositioned.

A fact finding meeting was held to determine how the valve may have been opened. The exact cause of the mispositioning could not be conclusively determined, however, the most likely reason was that the valve was bumped during routine oil cleanup by the plant helper crew.

The handle for V-32-170 and other similar valves were removed with the valves in the correct position.

Additionally, other areas in the plant that could be vulnerable to similar instances of bumping were reviewed for potential enhancements. No other areas with similar valves were identified as needing enhancements.

**VIOLATION 3b**

The ARP was revised to contain the correct operator actions on March 10, 1997.

Management memos were issued on March 14 and 12, 1997, as discussed previously in this response.

3. **CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS**

As a result of this issue and other procedure issues, the following will be completed to improve procedure content and usage:

Administrative Control Procedures will be revised to include a flow chart which will provide direction for those types of changes for which work is expected to stop and a temporary change initiated immediately, and those types of situations where the changes can be annotated during the conduct of the activity and a procedure change



request initiated at the end of the job. Specifically, the flow chart will indicate when to stop using a procedure when technical inaccuracies are identified and which mechanisms to utilize for correcting technical inaccuracies. This procedure enhancement will be completed by July 15, 1997.

Operations will review their OIs and ARPs to identify technical inaccuracies and take actions as necessary. These reviews will be completed by September 15, 1997.

Operations personnel will conduct 'peer visits' to other licensees to assess procedure use, review, and revision processes and implement actions as necessary. These assessments will be completed by September 15, 1997.

#### **4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

##### **VIOLATION 3a**

Full compliance was achieved on March 7, 1997, when V-32-170 was closed.

##### **VIOLATION 3b**

Full compliance was achieved on March 10, 1997, with the issuance of the revised ARP.

#### **VIOLATION FOUR**

Part 50.59 of 10 CFR provides that the licensee may not make changes in the facility as described in the Safety Analysis Report without prior Commission approval, unless a documented safety evaluation has been performed to ensure the change does not constitute an unreviewed safety question.

Contrary to the above, the inspectors identified that on January 31, 1997, the licensee approved UFSAR Change Request No. 96-119, which changed (lowered) the minimum room temperature for the standby liquid control equipment, without performing a safety evaluation.

This is a Severity Level IV violation (Supplement 1).

#### **RESPONSE TO VIOLATION FOUR**

##### **1. REASON FOR THE VIOLATION**

During a review of DAEC's UFSAR, it was determined that section 9.3.4 for the Standby Liquid Control System contained an inaccuracy in that the statement "...air temperature is to be maintained within the range of 70-100° F," was incorrect in that design documents allow an air temperature range of 68-105° F. As a result, UFSAR

Change Request 96-119 was completed and approved to lower the minimum room temperature to 68° F. Although this did not eliminate the margin or involve an Unreviewed Safety Question, the DAEC 10 CFR 50.59 screening process did not recognize the need to complete a 10 CFR 50.59 evaluation. Specifically, the Safety Evaluation Applicability Review (SEAR) performed in conjunction with UFSAR Change Request 96-119 specified that there were no actual alterations to the plant and that the purpose was to correct statements in the UFSAR, and, therefore, concluded that it was not a change to the facility.

2. **CORRECTIVE ACTIONS TAKEN AND THE RESULTS ACHIEVED**

An action request was written to document the issue concerning SBLC area room temperature and to request a safety evaluation be performed. The safety evaluation concluded that no Unreviewed Safety Question existed.

An additional Action Request was generated to evaluate and revise DAEC's safety evaluation process. The actions taken are summarized in Attachment 2.

3. **CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS**

All corrective actions to prevent further violations have been completed.

4. **DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

Full compliance was achieved on April 8, 1997, with the completion of the safety evaluation for the SBLC area room temperature.

**IES Utilities Inc.**  
**Response to Request for Additional**  
**Information Concerning 10 CFR 50.59 Process**

As a result of identified industry and DAEC weaknesses in the 10 CFR 50.59 applicability process, the following actions have or will be undertaken at the DAEC to improve our usage of 10 CFR 50.59:

The DAEC Management Team expanded the scope of the Operations Committee Procedures Subcommittee review authority to include 10 CFR 50.59 safety evaluation applicability reviews (SEARs). (The SEAR process determines if a safety evaluation is required when evaluating changes to procedures or to the facility.) Initially, the SEAR/Procedures Subcommittee was tasked with reviewing SECY-97-035, related industry experience, and identifying any enhancements that were necessary to the DAEC SEAR or safety evaluation processes. The SEAR/Procedure Subcommittee generated Action Request 97-0871 to address two (2) specific areas of enhancement. The first involved eliminating the "exemption" that had been established in the SEAR process for changes to drawings which are included in the Updated Final Safety Analysis Report (UFSAR). Administrative Control Procedure (ACP) 103.2 "Safety Evaluation Applicability Review Process," will be revised to eliminate this exemption. The second involved statements being included in the SEARs for design document changes (DDCs) that used the phrase "no physical changes are being made to the plant." Feedback was provided to Engineering to clarify understanding of the "de facto" change to the facility issue and to develop a better understanding of how to treat changes to UFSAR drawings that are being made as part of an "as-built" review effort. Additionally, the SEAR process will be revised to eliminate the allowance for determining "minor" changes to the UFSAR.

The SEAR/Procedures Subcommittee was also tasked with identifying longer term changes that were needed in the SEAR and SE processes to proactively deal with changing industry and regulatory expectations. ACP 103.2 will be revised to more closely match the applicability criteria of 10 CFR 50.59 and guidelines will be developed to assist the preparers of SEARs.

A member of the SEAR/Procedures Subcommittee provided training to the Engineering Support Continuing Training participants on the revised NRC Enforcement Policy (NUREG 1600) dealing with violations in the area of 10 CFR 50.59 and 50.71(e), SECY-97-035, planned SEAR process changes, the DAEC UFSAR Improvement Plan, and industry experience relative to implementation of 10 CFR 50.59. This training was intended to increase the DAEC technical staff's awareness of the importance to continuously stay focused on the need for thorough reviews against the 10 CFR 50.59 process.

Licensing reviewed the UFSAR Change Requests (UCRs) being proposed for the May 1997 submittal to the NRC under 10 CFR 50.71(e). The primary focus of the review was to confirm that SEARs and SEs were being performed where appropriate. As a result of the review, several situations were identified where SEs were needed to support the change. These safety evaluations have been completed and concluded that no Unreviewed Safety Questions were involved. Related to UCRs, the Quality Assurance Assessment process had generated a recommendation that Licensing review the use of "minor" impacts on the UFSAR as a category of change. After review, the "minor" category will be eliminated and changes will be categorized as "editorial" or not "editorial". The editorial category will allow truly editorial changes (e.g., typos, format problems, etc.) to be resolved without unnecessary administrative burden yet still satisfy the requirements of 10 CFR 50.71(e).

ACP 114.5 "Action Request System," will be revised to provide enhanced guidance on when to perform SEARs and SEs for degraded and nonconforming conditions. This guidance will help users identify the need to apply 10 CFR 50.59 to these conditions in a timely manner.

Additionally, as a result of our experience in the review of SECY-97-035 and the use of the SEAR/Procedures Subcommittee to review all SEARs generated at DAEC, we plan to provide comments to the NRC Staff on NUREG-1606.