

#7  
4/11

LR-  
docket  
E opp action

**IES**  
**UTILITIES INC.**

April 4, 1994  
NG-94-1147

Mr. William T. Russell  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, D.C. 20555

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Op. License No: DPR-49  
Reply to Notice of Violation Transmitted with  
Inspection Report 94002  
File: A-102

Dear Mr. Russell:

This letter and its attachment are provided in response to the recent Routine Resident Inspection of the Duane Arnold Energy Center (DAEC).

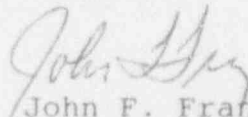
The Attachment replies to the items identified in the Notice of Violation.

This letter contains the following new commitment:

Conduct a self-assessment of DAEC's Vendor Manual Program during April 1994.

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

Sincerely,



John F. Franz  
Vice President, Nuclear

Attachment: Reply To A Notice Of Violation Transmitted with  
Inspection Report 94002

JFF/RJM:so

cc: R. Murrell  
L. Liu  
L. Root  
R. Pulsifer (NRC-NRR)  
J. Martin (Region III)  
NRC Resident Office  
DCRC

9404140191 940404  
PDR ADOCK 05000331  
PDR

TEO  
11

140005

IES UTILITIES INC.  
REPLY TO A NOTICE OF VIOLATION  
TRANSMITTED WITH INSPECTION REPORT 94002

VIOLATION

1. Technical Specification (TS) 2.1.A.1 required, in part, that with the mode switch in Run, the average power range monitor (APRM) scram trip setpoint shall be a maximum of 120 percent rated power at 100 percent rated recirculation flow or greater. Technical specification 4.1.A.1 required that the APRM flow referenced scram trip setpoint be functionally tested quarterly.

Contrary to the above, from approximately February 22, 1974, (the date the operating license was issued) until January 7, 1994, with the mode switch in Run, the licensee failed to functionally test, on a quarterly basis that the APRM scram trip setpoint was a maximum of 120 percent rated power when recirculation flow exceeded 100 percent.

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

RESPONSE TO VIOLATION

1. Reason For The Violation.

On January 7, 1994, at approximately 12:30 p.m., it was determined that a TS required surveillance for the APRM scram trip setpoint was not being performed in accordance with TS requirements. The requirement was identified as part of an engineering review of TS limiting safety system settings (LSSS), analytical limits, and STP acceptance criteria being performed in accordance with the DAEC's Setpoint Control Program. Specifically, the APRM flow biased trip signal setpoint, which is an input to the Reactor Protection System, had been tested routinely with a flow signal input up to 100 percent reactor recirculation flow. However, the trip signal setpoint had not been tested with a flow signal input above 100 percent rated reactor recirculation flow to assure that the scram setpoint does not exceed 120 percent rated power, as described in TS section 2.1.A.1.

The root cause of this event was a lack of awareness of the requirement to test the flow biased APRM scram trip above 100 percent rated reactor recirculation flow. A factor that contributed to the lack of awareness was that the applicable TS section was poorly written in that two sections of the TS, 1.1 Fuel Cladding Integrity and 3.1 Reactor Protection System Instrumentation, must be used together to fully understand the test requirements. The GE Technical manual, GEK 34701, "Power Range Monitor System," included steps for

performing the APRM initial calibration with a flow signal input above 100 percent recirculation flow. These steps were not incorporated into the STP. Recently, a review of GEK 34701 was performed as part of the DAEC Vendor Manual Program. As part of that review, a copy of the calibration section of the technical manual was informally transmitted to the Plant Procedures Group for a review against current maintenance and surveillance requirements but no issues requiring resolution were identified.

2. Corrective Actions That Have Been Taken And The Results Achieved.

Immediately upon discovery of the missed TS surveillance, the APRMs were declared inoperable and the plant entered a Limiting Condition for Operation (LCO) and was required to be in at least the Startup mode within 6 hours, in accordance with TS 3.1.A.

During the time that the APRMs were considered to be inoperable, the reactor recirculation flow control system was locked in position to prevent a recirculation flow rate increase, and subsequent power increase, due to an electrical malfunction or manual initiation.

A revision to STP 42C001-Q, "Quarterly Functional Test And Calibration of APRMs," was initiated to add a test of the APRM scram trip setpoint at a simulated 125 percent rated recirculation flow. Following approval of the procedure, the revised test of all six APRMs was begun. By 6:10 p.m., two APRMs in each of the two trip systems had been tested with satisfactory as-found results and the LCO was exited. By 7:00 p.m., the remaining two of the total of six APRMs had also been satisfactorily tested. This verified that the "clamping" function on the flow biased scram trip setpoint is set properly.

All TS tables related to instrumentation were reviewed to identify references, notes, or other requirements that may not have been included in surveillance tests. No other discrepancies were identified.

3. Corrective Actions That Will Be Taken To Avoid Further Violations.

As a result of a Vendor Manual Program overview presented to DAEC management on March 10, 1994, the Manager of Engineering has requested a self-assessment of the Vendor Manual Program. This assessment, to be conducted during the month of April 1994 through interviews and document review, will review programmatic and managerial aspects of the Vendor Manual Program including:

- Review of commitments related to the Vendor Manual Program.
- Responsibilities for administering the Vendor Manual Program.
- Management expectations for the Vendor Manual Program.
- Effectiveness of the Vendor Manual Program procedures.
- Use of resources.
- Guidance and process used for documenting and implementing recommendations and deviations identified in manual reviews.

Recommendations made by this assessment will be thoroughly reviewed by management and implemented as necessary.

4. Date When Full Compliance Was Achieved.

Full compliance was achieved on January 7, 1994, when two APRMs in each of two trip systems had been tested with satisfactory as-found results.