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January 18, 1996
NG-95-3621

Mr. William T. Russell, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-37
Washington, DC 20555-0001

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Request for Technical Specification Change RTS-288, Reactor Water
Cleanup Vessel Level Isolation Setpoint Change
File: A-117, G-31

Dear Mr. Russell:

In accordance with the Code of Federal Regulations, Title 10, Sections 50.59 and 50.90, IES Utilities Inc. hereby requests revision to the Technical Specifications (TS) for the Duane Arnold Energy Center (DAEC). The proposed amendment would revise the vessel level setpoint at which the Reactor Water Cleanup (RWCU) system isolates.

This application has been reviewed by the DAEC Operations Committee and the Safety Committee. A copy of this submittal, along with the evaluation of No Significant Hazards Consideration, is being forwarded to our appointed state official pursuant to 10 CFR Section 50.91.

The DAEC plans to implement this change during Refuel Outage (RFO) 14, scheduled to begin in October 1996. We therefore request approval of this amendment effective August 31, 1996, with implementation prior to startup from RFO 14.

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

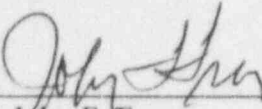
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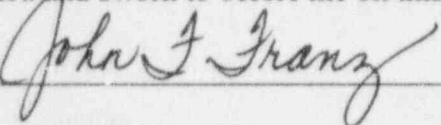
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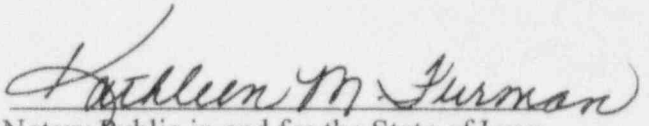
This letter is true and accurate to the best of my knowledge and belief.

IES UTILITIES INC.

By 
John F. Franz
Vice President, Nuclear

State of Iowa
(County) of Linn

Signed and sworn to before me on this 17th day of January, 1996,
by 


Notary Public in and for the State of Iowa
September 28, 1998
Commission Expires

- Attachments: 1) Evaluation of Change Pursuant to 10 CFR Section 50.92
2) Proposed Change (RTS-288) to the Duane Arnold Energy Center
Technical Specifications
3) Environmental Consideration
4) Safety Assessment

JFF/LBS

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cc: L. B. Swenzinski
L. Liu
B. Fisher
G. Kelly (NRC-NRR)
H. Miller (Region III)
S. Brown (State of Iowa)
NRC Resident Office
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EVALUATION OF CHANGE PURSUANT TO 10 CFR SECTION 50.92

Background:

The purpose of the Reactor Water Cleanup (RWCU) level isolation is to establish primary containment and limit fluid loss in the event of a Loss of Coolant Accident (LOCA). This isolation occurs at reactor low level. The reactor low level setpoint was selected to initiate isolation at the earliest indication of a possible breach, yet far enough below normal operation levels to avoid spurious isolations.

General Electric Service Information Letter (GE SIL) 131 presented several opportunities to improve plant performance, specifically by reducing the potential for unnecessary RWCU system isolations. The GE SIL recommended lowering the isolation setpoint from reactor low level [170" above top of active fuel (TAF)] to reactor low-low level (119.5" above TAF). This was recommended because the void collapse that occurs following a reactor scram from greater than 50% power is sufficient to result in an indicated water level below reactor low level, causing the RWCU system isolation.

NRC Information Notice 93-62 addressed the possibility of thermal stratification in Boiling Water Reactors caused by the loss of forced circulation coupled with isolation from the main condenser. Lowering the RWCU isolation setpoint from reactor vessel level 170" to 119.5" above TAF will maintain the integrity of drainline temperature indication thereby alerting the operator to the potential for thermal stratification.

This change will utilize four existing reactor level sensors and existing spare and new relays to accomplish the setpoint logic change. The reactor level sensors to be used are safety related and located in the same physical area and in the same configuration as the four existing sensors. Remote manual isolation capability from the control room is not affected by this change. Similarly, all system indications available to the operators remain unchanged.

IES Utilities Inc., Docket No. 50-331,
Duane Arnold Energy Center, Linn County, Iowa
Date of Amendment Request: January 18, 1996

Description of Amendment Request:

This amendment request proposes to lower the RWCU isolation setpoint from reactor low level to reactor low-low level. This amendment affects the DAEC Technical Specification (TS) Tables 3.2-A and 4.2-A and Bases Sections 2.1 and 3.2.

Basis for Proposed No Significant Hazards Consideration:

The Commission has provided standards (10 CFR Section 50.92(c)) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a

facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

After reviewing this proposed amendment, we have concluded:

1) The proposed TS amendment will not significantly increase the probability or consequences of any previously evaluated accidents. The RWCU vessel level isolation occurs as a result of a LOCA and therefore does not affect the probability of occurrence of a LOCA or any other previously evaluated accident.

An IES calculation demonstrates that for all RWCU breaks or cracks considered, high ambient temperature, high differential temperature and/or high differential flow will provide the RWCU isolation signal prior to reaching reactor low level. Therefore, the level setpoint acts as a backup isolation signal for a break in RWCU piping outside primary containment.

As discussed, this change will utilize four existing reactor level sensors. These reactor level sensors are safety related and located in the same physical area and in the same configuration as the four existing sensors. Therefore, the reliability of the RWCU vessel level isolation capability is not reduced.

2) The proposed changes will not create the possibility of a new or different kind of accident. The configuration of the RWCU isolation valves is unchanged. As before, the failure of any single active component in the new logic results in, at worst, failure of one containment isolation valve to close. Because the closure of one of the two valves is sufficient to achieve the containment isolation, the possibility of an accident of a different type is not increased.

The modification to the RWCU vessel level isolation logic has been designed to the same standards as the original logic. This change will require the same surveillance requirements for the reactor low-low level trip point circuitry that are currently required for the reactor low level trip point circuitry. All other RWCU isolation functions remain unchanged. Consequently, no new accidents are postulated as a result of this proposed change.

3) The proposed change will not result in a significant reduction in any margin of safety. No margin of safety is affected by this change. The RWCU vessel level isolation occurs to establish primary containment and limit fluid loss. The proposed change will preserve these functions.

It can be noted, however, that for a RWCU piping break outside primary containment, high ambient temperature, high differential temperature and/or high differential flow will provide the RWCU isolation signal. In the unlikely event that these temperature and flow sensing devices fail, isolation will be initiated upon reactor level reaching 119.5" above TAF. Using blowdown rates and valve closure times, analysis shows reactor level will not drop below 105" above TAF.

This is well above the TAF. Additionally, lowering the RWCU isolation setpoint does not increase the consequences of a LOCA.

Based upon the above, we have determined that the proposed amendment will not involve a significant hazards consideration.

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