

October 21, 1996

Mr. Lee Liu
Chairman of the Board, President,
and Chief Executive Officer
IES Utilities Inc.
200 First Street, SE
Cedar Rapids, IA 52406-0351

SUBJECT: DUANE ARNOLD ENERGY CENTER - REQUEST FOR ADDITIONAL INFORMATION
ON RESOLUTION OF USI A-46, DUANE ARNOLD ENERGY CENTER
(TAC NO. M69444)

Dear Mr. Liu:

On November 15, 1995, the IES Utilities Inc., (licensee) submitted a summary report for resolution of USI A-46. The staff has reviewed this summary and has developed additional questions, which are enclosed. Please provide your responses to these questions within 60 days of the date of this letter.

Sincerely,

Original signed by:

Glenn B. Kelly, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: Request for Additional Information

cc w/encl: See next page

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Mr. Lee Liu
IES Utilities Inc.

Duane Arnold Energy Center

cc:

Jack Newman, Esquire
Kathleen H. Shea, Esquire
Morgan, Lewis, & Bockius
1800 M Street, NW.
Washington, DC 20036-5869

Chairman, Linn County
Board of Supervisors
Cedar Rapids, Iowa 52406

IES Utilities Inc.
ATTN: Gary Van Middlesworth
Plant Superintendent, Nuclear
3277 DAEC Road
Palo, Iowa 52324

Mr. John F. Franz, Jr.
Vice President, Nuclear
Duane Arnold Energy Center
3277 DAEC Road
Palo, Iowa 52324

Mr. Ken Peveler
Manager, Nuclear Licensing
Duane Arnold Energy Center
3277 DAEC Road
Palo, Iowa 52324

U. S. Nuclear Regulatory Commission
Resident Inspector's Office
Rural Route #1
Palo, Iowa 52324

Regional Administrator, RIII
U. S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, Illinois 60532-4531

Ms. Parween Baig
Utilities Division
Iowa Department of Commerce
Lucas Office Building, 5th floor
Des Moines, Iowa 50319

REQUEST FOR ADDITIONAL INFORMATION
VERIFICATION OF SEISMIC ADEQUACY OF MECHANICAL
AND ELECTRICAL EQUIPMENT IN OPERATING REACTORS

DATED NOVEMBER 15, 1995

DUANE ARNOLD ENERGY CENTER

1. Section 4, "Safe Shutdown Equipment List (SSEL)," of the Seismic Evaluation Report, dated November 15, 1995, states in part the following:

"The formal Operations Department review of the SSEL was conducted by an Operations Shift Supervisor at DAEC. The method of this review was a "desk top" review, per Section 3.7 of the GIP [Reference 1], using normal and emergency procedures shown in table 4-1."

"This review indicated that the shutdown path selected for USI A-46 and included in the SSEL is a legitimate safe shutdown path consistent with DAEC procedures and operator training. The present level of operator training is sufficient to assure that the operators are proficient on the procedures to assure the selected success path will be used."

"In reviewing the procedures against the Safe Shutdown Equipment list, no major equipment (pumps, valves, fans) that was required by plant procedures to meet the safe shutdown path were missing. Support equipment such as relays, handswitches, instrumentation, and heat exchangers were not verified by this review."

Based on this review, (a) describe what, if any, reviews were performed to determine if any local operator actions required to safely shutdown the reactor could be affected by potentially harsh environmental conditions resulting from the design basis earthquake (DBE)? (b) Are there any other environmental conditions (such as loss of lighting, excessive heat or humidity, or in-plant barriers) as a result of the DBE and loss of off-site power which could negatively affect operator's ability to respond to the transient? If so, describe the reviews that were conducted to ensure operators had adequate time and resources to respond to such events? (c) Describe how you ensured that sufficient operator resources were available, including consideration of environmental factors, to carry out any required operator actions associated with the additional support equipment not specifically verified by this review .

2. Section 2.1, "Summary of Results," of the Relay Evaluation Report states that a total of five SSEL equipment items would require operator actions to reset the associated contacts or contact groups. Three of those were associated with the CRHVAC/Battery room exhaust fans and two others were associated with the CRHVAC/Control Building Chillers. In both cases it appears that ample indications of system abnormality would be available to the operators as well as procedural guidance necessary to reset the effected equipment. (a) Based your analysis, approximate how much time would the operators have to reset the affected equipment assuming contact chatter? (b) Describe the review conducted to ensure that no adverse environmental conditions postulated to exist following the DBE would prevent the local operator actions required to reset the Control Building Chillers.
3. Are the operator actions associated with resetting the SSEL equipment affected by the postulated contact chatter considered to be routine and consistent with the skill of the craft? If not, what operator training and operational aids were developed to ensure the operators will perform the actions required to reset the affected equipment?