

November 18, 1997

Mr. Lee Liu
Chairman of the Board
and Chief Executive Officer
IES Utilities Inc.
200 First Street, SE.
P.O. Box 351
Cedar Rapids, IA 52406-0351

SUBJECT: DUANE ARNOLD ENERGY CENTER - REVISED REQUEST FOR
ADDITIONAL INFORMATION FOR RESOLUTION OF USI A-46 (M69444)

Dear Mr. Liu:

On October 29, 1997, the NRC issued a Request for Additional Information (RAI) seeking information needed to resolve USI A-46 for the Duane Arnold Energy Center (DAEC). Subsequently, the NRC staff determined that it needed to revise these questions and verbally notified DAEC that new questions would be forthcoming. The revised questions are enclosed. Please provide your response within 60 days so that the NRC can complete its review promptly. If you have any questions about our review, please contact me at (301) 415-3028.

This request for information affects fewer than 10 respondents; therefore, OMB clearance is not required under Pub. L. 96-511.

Sincerely,
original signed by
Glenn B. Kelly, Senior 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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NAME	GKelly		CBoyle	
DATE	11/18/97		11/18/97	

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in black ink, appearing to read "Glenn B. Kelly", is written over the word "For".

Glenn B. Kelly, Senior 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

Lee Liu
IES Utilities Inc.

Duane Arnold Energy Center

cc:

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Kathleen H. Shea, Esquire
Morgan, Lewis, & Bockius
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Chairman, Linn County
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Cedar Rapids, IA 52406

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Iowa Department of Commerce
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Des Moines, IA 50319

REQUEST FOR ADDITIONAL INFORMATION

DWANE ARNOLD ENERGY CENTER

USI A-46

- References:
1. Letter from John Franz (DAEC) to NRC, "Response to NRC Request for Additional Information - Resolution of USI A-46," dated August 30, 1996.
 2. Letter from John Franz (DAEC) to NRC, "Response to NRC Request for Additional Information - Resolution of USI A-46," dated July 2, 1996.

1. On pages 46 and 47 of Addendum 7 of Reference 1, you have provided a Table showing the elevations (in safety-related structures) where the in-structure response spectra (IRS) exceeds the corresponding (at the same damping value) reference spectra (1.5 times the bounding spectrum). Referring to your response to Question 6 in Reference 2, we believe that you have evaluated the equipment and their anchorages using the IRS when the equipment frequencies are less than 8 Hz. (a) For the equipment (within 40 feet above the effective grade) with fundamental frequencies above 8 Hz, provide the method(s) used for their evaluation where the IRSs exceed the corresponding reference spectra at frequencies above 8 Hz. (b) If Method A in Table 4-1 of the GIP-2 was used, provide your technical justification for not following the GIP limitation on the use of Method A in Section 4.2.3 when the ground spectrum times 1.5 is less than the IRSs for elevations within 40 feet above the grade level.
2. In evaluating the raceway supports, a recent audit of a GIP-2 plant indicated that some licensees may be misusing the "ductile support" definition of Figure 8-7 of GIP-2 to avoid the check for lateral seismic loads. In this context, please provide the following information: (a) the number of supports (percentage of the total number of supports evaluated in the limited analytical review) considered as ductile, (b) the specific criteria used in determining that the supports are ductile, and (c) the extent to which the supports (that do not meet the vertical capacity check) and their anchorages will deform under the two horizontal components of the design basis earthquake.

Enclosure