

50-331



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

November 19, 1999

Mr. Eliot Protsch  
President  
IES Utilities Inc.  
200 First Street, SE  
P.O. Box 351  
Cedar Rapids, IA 52406-0351

SUBJECT: ALTERNATIVE TO THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
BOILER AND PRESSURE VESSEL CODE REPAIR REQUIREMENTS FOR THE  
RECIRCULATION LINE FOR DUANE ARNOLD ENERGY CENTER  
(TAC NO. MA7125)

Dear Mr. Protsch:

By letter dated November 11, 1999, IES Utilities Inc. proposed an alternative to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, repair requirements pursuant to 10 CFR 50.55a(a)(3)(i). IES Utilities Inc. proposed the use of Code Case N-504-1, "Alternative Rules for Repair of Class 1, 2, 3 Austenitic Stainless Steel Piping," and N-606, "Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique," to perform weld overlay repairs of flawed nozzle to safe-end welds in recirculation system piping at Duane Arnold Energy Center (DAEC).

During the current refueling outage (RFO) 16 for DAEC, inspections of welds susceptible to intergranular stress-corrosion cracking (IGSCC) identified flaw indications on three recirculation riser nozzle to safe-end welds. The indications were identified while performing ultrasonic (UT) examinations using General Electric's SMART 2000 automated UT system with TOMOVIEW analysis software. Two indications were identified in weld RRB-F002. An indication was also identified in welds RRD-F002 and RRF-F002.

Based on a review of your submittal, the NRC staff concludes that IES Utilities Inc.'s proposed alternative will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes IES Utilities Inc.'s proposed use of Code Cases N-504-1 and N-606, with modifications as identified in your submittal, to perform weld overlay repair of the flawed recirculation nozzle to safe-end welds at DAEC.

The NRC staff's safety evaluation is enclosed.

The authorization of the alternative is based upon the fulfillment of any commitments made by IES Utilities Inc. in the basis for the proposed alternative.

**NRC FILE CENTER COPY**

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PDR ADOCK

E. Protsch

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If you have any questions regarding this issue, please contact your NRR Duane Arnold Project Manager, Brenda L. Mozafari, at 301-415-2020.

Sincerely

Handwritten signature of Claudia M. Craig in black ink.

Claudia M. Craig, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: Safety Evaluation

cc w/encl: See next page

If you have any questions regarding this issue, please contact your NRR Duane Arnold Project Manager, Brenda L. Mozafari, at 301-415-2020.

Sincerely

Original signed by:  
Claudia M. Craig, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: Safety Evaluation

cc w/encl: See next page

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Duane Arnold Energy Center

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