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November 30, 1999
NG-99-1661

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Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
NRC Bulletin 96-03, "Potential Plugging of Emergency Core Cooling
Suction Strainers by Debris in Boiling-Water Reactors," dated May 6, 1996
Reference: NG-98-1052 dated June 15, 1998, K. Peveler (IES) to NRC
File: A-101a, E-11

The subject bulletin addresses the concern that debris could be transported to the suppression pool following a loss of coolant accident (LOCA) and deposited on the emergency core cooling system (ECCS) suction strainers. This could potentially result in a decrease in the net positive suction head (NPSH) available to ECCS pumps.

In response to the bulletin, the Duane Arnold Energy Center (DAEC) installed passive, large-capacity suction strainers on the core spray (CS) and residual heat removal (RHR) suction lines during refueling outage 15 in the Spring of 1998. As discussed in the referenced letter, the installed strainers are a stacked disc design provided by General Electric (GE). The analytical methodologies for strainer sizing discussed in GE Licensing Topical Report (LTR) NEDC-32721P were used, as well as the analytical methodologies developed by the Boiling Water Reactor Owners' Group (BWROG) contained in NEDO-32686, Utility Resolution Guidance (URG) for ECCS Suction Strainer Blockage.

As stated in the referenced letter, finalization of the NPSH calculations and revision of the licensing basis could not be completed until issues pertaining to the LTR and URG were resolved between the NRC Staff, GE and BWROG. Since that time, the NRC has issued a safety evaluation (SE) for the URG, as well as Part 1 of a SE for the LTR. It is IES Utilities' understanding that some issues concerning the GE LTR remain unresolved, in particular those dealing with the acceleration drag factor, and that Part 2 of the SE will be issued at a later time.

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Since the issuance of these SEs, IES Utilities has finalized the revision of the DAEC CS and RHR pump NPSH calculations, and other supporting analyses such as debris generation calculations. A revision to the DAEC Updated Final Safety Analysis Report (UFSAR) reflecting the strainer modifications has been prepared for inclusion in the next cyclic submittal of the UFSAR. IES Utilities considers the actions necessary for the resolution of Bulletin 96-03 to be complete.

Required Response (2) of Bulletin 96-03 requires the submittal of a report confirming completion and summarizing actions taken. This letter is intended to fulfill this requirement. Should new issues arise from the completion of the SE for the GE LTR and acceleration drag factors, those issues will be addressed, as appropriate, at that time.

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

IES UTILITIES INC

By David L. Wilson
David L. Wilson
Vice President, Nuclear

State of Iowa
(County) of Linn

Signed and sworn to before me on this 30 day of November, 1999,

by David L. Wilson.

Kathryn Dunlap
Notary Public in and for the State of Iowa

July 24, 2000
Commission Expires

cc: C. Rushworth
E. Protsch
B. Mozafari (NRC-NRR)
J. Dyer (Region III)
NRC Resident Office
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