

IES
UTILITIES INC.

November 22, 1994

NG-94-4314

Mr. William T. Russell, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-27
Washington, D.C. 20555

Subject: Duane Arnold Energy Center

Docket No: 50-331

Op. License No: DPR-49

Fire Endurance Testing of Thermo-Lag 330-1 Fire Barrier Material

- References:
- 1) Letter from R. Zimmerman (NRC) to L. Liu (IES), Follow-up to the Request for Additional Information Regarding Generic Letter 92-08 Issued Pursuant to 10CFR50.54(f) on December 21, 1993 - Duane Arnold Energy Center, dated September 19, 1994.
 - 2) Letter from J. Franz (IES) to L. J. Callan (NRC), Response to Request for Additional Information Regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers", dated February 14, 1994, NG-94-0563.
 - 3) Letter from L. J. Callan (NRC) to L. Liu (IES), Request for Additional Information Regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers", Pursuant to 10CFR50.54(f) - Duane Arnold Energy Center, dated December 21, 1993.

File: A-101b, P-72a

Dear Mr. Russell:

This letter provides information regarding IES Utilities Inc.'s (IES) intent to perform site specific fire endurance testing of Thermo-Lag fire barrier material assemblies as previously communicated with members of your staff. In Reference 2, IES committed to providing a status of the DAEC Thermo-Lag resolution plans within 90 days of receipt of the NEI Application Guide. Under Reference 1, the NRC stated that this information could be provided in the IES response to Reference 1. It is our intent to provide this detailed information in that response. However, we have initiated a test program to validate the design basis for some of the Thermo-Lag structural steel fireproofing installations at the DAEC and this program will be complete prior to our response to Reference 1. This letter provides information on the scope of the test program and projected schedule. This information has been verbally discussed with Mr. Pat Madden of your staff. Although it is not required, we plan to informally provide your staff with a copy of the approved test plan.

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We will perform fire endurance testing of trowel grade Thermo-Lag 330-1 fireproofing applied to a representative sample of structural members with the intent to validate the design basis of these installations. The design basis of these installations is to provide 1 hour protection of these beams in accordance with ASTM E-119. These beams support fire barriers within the scope of Appendix R and may be subjected to significant localized heating upon burning of adjacent combustibles. The installation of localized 1 hour fireproofing in such cases is supported by an NRC approved exemption from Appendix R.

We will perform fire endurance testing of two beam sizes under three different fire tests. The thickness of Thermo-Lag applied to these beams will be consistent with the minimum design thickness of the DAEC installations.

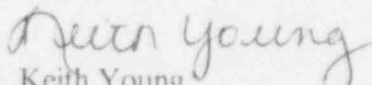
Based on the availability of additional furnace space and to provide an economical test program, we will also include two site specific Thermo-Lag ceiling assemblies in the second fire test. These ceiling assemblies represent 3 hour Thermo-Lag installations at American Electric Power (AEP) D.C. Cook Units 1 and 2 and Carolina Power and Light (CP&L) Harris plant. These assemblies will be tested as a fire area barrier in accordance with ASTM E-119.

We have contracted VECTRA Technologies Inc. for overall test program management. VECTRA has subcontracted Peak Seals, Inc. to install Thermo-Lag materials and provide Quality Control services and Omega Point Laboratories (OPL) to perform the fire testing. The projected schedule for this test program is as follows:

November 21, 1994	Start Thermo-Lag installation for CP&L ceiling assembly.
November 28, 1994	Start Thermo-Lag installation for AEP ceiling assembly.
December 13, 1994	Start Thermo-Lag installation for IES beam assemblies.
Week of January 16, 1995	Begin Fire Tests

If you have any questions regarding our test plans, or would like to review fabrication of the assemblies or testing, please contact Mr. Jim Kinsey at (319) 851-7177 or Mr. Tom Lenaghan at (319) 851-7358.

Sincerely,


Keith Young
Manager, Nuclear Licensing

KDY/SRC:so

cc: T. Lenaghan, S. Catron, D. Wilson, J. Franz, L. Root, L. Liu, G. Kelly (NRC-NRR),
J. Martin (NRC Region III), NRC Resident Office, DCRC