Entergy
Operations

Entergy Operations, Inc.

July 24, 1992

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U. S. Nuclear Regulatory Commission
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Subject: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313 & 50-368
License Nos. DPR-51 & NPF-6
Response to NRC Bulletin 92-01:
"Failure of Thermo-Lag 330 Fire Barrier
System to Maintain Cabling in Wide Cable
Trays and Small Conduits Free From Fire Damage"

Gentlemen:

The NRC Staff issued NRC Bulletin 92-01 to notify the licensees of failures in fire endurance testing associated with the Thermo-Lag 330 fire barrier system that is installed to protect safe shutdown capability. As stated in the bulletin, the NRC determined that the 1- and 3-hour pre-formed assemblies installed on small conduit and wide cable trays do not provide the level of safety as required by NRC requirements.

The bulletin, immediately upon receipt, requested that licensees take the following actions:

1) Identify the areas of the plants which have Thermo-Lag 330 fire barrier material installed and determine the plant areas which use this material for protecting either small diameter conduit or wide trays that provide safe shutdown capability.

2) In those plant areas in which Thermo-Lag fire barriers are used to protect wide cable trays, small conduits, or both, licensees should implement the appropriate compensatory measures for an inoperable fire barrier.

3) Within 30 days of receiving this bulletin, each licensee is required to provide written notification stating whether it has or does not have Thermo-Lag 330 fire barrier systems installed in its facilities. Each licensee who has installed Thermo-Lag 330 fire barriers is required to inform the NRC whether it has taken the [illegible] actions and is required to describe the measures being taken [illegible]sure or restore fire barrier operability.

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The purpose of this submittal is to provide the response to Action 3 of the bulletin for Arkansas Nuclear One, Units 1 and 2 (ANO-1&2).

ANO-1

Thermo-Lag 330 fire barrier systems have not been installed in ANO-1.

ANO-2

During the Appendix R upgrade project, three hour Thermo-Lag 330 fire barriers were installed in the ANO-2 service water pump pits ("A", "B", and "C") below elevation 354'. These pits are located in the Intake Structure. The barriers are pre-formed conduit shapes and panels on two 4-inch conduits. These conduits are routed along the top of the pits to the "A" and "C" service water pumps. The conduits contain power cables for the pumps. Only the "A" pit contains both conduits.

Based on the testing conducted as identified in Bulletin 92-01, it is unclear whether the fire barrier integrity concerns are applicable to the installed configuration at ANO-2. However, upon receipt of the bulletin, a continuous fire watch was posted to monitor the service water bay pits. Upon the receipt of additional information from the July 7, 1992, NRC/NUMARC meeting, the continuous fire watch was replaced with a roving fire watch. If it is further determined in the future that the installed Thermo-Lag is not a concern, the roving fire watch will be removed. NOTE: The condition of having Thermo-Lag 330 fire barrier material in the ANO installed application was evaluated per 10CFR50.72 and 10CFR50.73 criteria and was determined not to be reportable.

If the ANO installed Thermo-Lag is ultimately determined to be a concern for ANO-2, the Thermo-Lag barrier configuration will be either qualified by third-party testing, engineering evaluations, or replaced with appropriate qualified material. Until the barriers are qualified or replaced, the roving fire watch will remain posted to monitor the service water pits.

It should be noted that the ANO intake structure has three different levels: elevation 366' which contains ventilation equipment for the intake structure, the three service water pump motors, several service water cross connect valves and the service water pump disconnect switches; elevation 354' contains service water piping, various valves, cabling associated with the service water pump motors and valves, and the sluice gate motors; and below elevation 354' are the three service water pump pits that contain service water piping and some cabling and conduit.

Elevation 354' consists of a room that is 27 feet by 29 feet with a 10 foot ceiling. The service water pits below 354' are approximately 7 feet by 28 feet with a ceiling that is 19 feet above the normal water level. The walls, floors, and roof of the intake structure are all reinforced masonry construction. The service water pumps are separated by partial height concrete barriers which serve as radiant heat shields.

The only in-situ combustibles in the intake structure are located at elevation 366'. At this elevation, the service water pump motor reservoirs contain approximately 13½ gallons of lube oil for each motor. To contain a service water pump motor lube oil spill, floor drains and dikes are provided around each motor.

Ionization type smoke detectors are located at elevations 354' and 366'. Flame detectors are also installed at elevation 366' in the vicinity of the service water pumps. These detectors alarm in the control room. A preaction sprinkler system has been provided to protect the three service water pumps. Several portable extinguishers are located in the area, in addition to a yard hydrant with 300 feet of hose and a combination nozzle.

Because of the normal water level in the pits, the accumulation of transient combustibles is precluded. Therefore, the possibility of a fire in the pit is virtually nonexistent. The only feasible source of a fire would be when the pit is drained (a task normally performed during a refueling outage) and welding is performed. During that time, per procedure, a continuous fire watch is required to be present.

In accordance with the requirements of 10CFR50.54(f), this letter is being provided under oath. Should you have any questions regarding our response to this issue, please contact me.

Very truly yours,

For James J. Fisicaro
Director, Licensing

JJF/RWC/sjf

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STATE OF ARKANSAS)
) SS
COUNTY OF LOGAN)

Affidavit

I, D. E. James, being duly sworn, subscribe to and say that I am Supervisor, Licensing at ANO for Entergy Operations, that I have full authority to execute this affidavit; that I have read the document numbered 0CAN079203 and know the contents thereof; and that to the best of my knowledge, information and belief the statements in it are true.

D. E. James

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named, this 24th day of July, 1992.

Sandy Liebenmorgen
Notary Public

My Commission Expires:
May 11, 2000