VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

September 30, 1992

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No.	92-583
NL&P/CGL	R2
Docket Nos.	50-338
	50-339
	50-280
	50-281
License Nos.	NPF-4
	NPF-7
	DPR-32
	DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2
RESPONSE TO NRC BULLETIN 92-01, SUPPLEMENT 1
FAILURE OF THERMO-LAG 330 FIRE BARRIER SYSTEM
TO PERFORM ITS SPECIFIED FIRE ENDURANCE FUNCTION

On August 28, 1992, the NRC issued Bulletin 92-01, Supplement 1, entitled "Failure of Thermo-Lag 330 Fire Barrier System to Perform Its Specified Fire Endurance Function." The supplement requests actions essentially the same as those identified in Bulletin 92-01, but expands the scope to include all sizes of conduits and trays and to include walls, ceilings, and equipment enclosures.

The response to NRC Bulletin 92-01, Supplement 1 for North Anna and Surry Power Stations is provided in Attachment 1. The locations and descriptions of Thermo-Lag 330 applications at North Anna and Surry are provided in Attachments 2 and 3, respectively.

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The actions being taken by Virginia Electric and Power Company to ensure or restore fire barrier operability have previously been described in Item 3 of Attachment 1 to our response to Bulletin 92-01 (Serial No. 92-436), dated July 29, 1992.

If you have questions or require additional information, please contact us.

Very truly yours,

W. L. Stewart
Senior Vice President - Nuclear

Attachments:
1. Response to NRC Bulletin 92-01, Supplement 1
2. Thermo-Lag 330 Fire Barrier Material - North Anna Power Station
3. Thermo-Lag 330 Fire Barrier Material - Surry Power Station

cc: U. S. Nuclear Regulatory Commission
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COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by W. L. Stewart who is Senior Vice President - Nuclear, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 30TH day of September, 1992.

My Commission Expires: May 31, 1994.

Vicki L. Huee
Notary Public

(SEAL)

ATTACHMENT 1

RESPONSE TO NRC BULLETIN 92-01, SUPPLEMENT 1

FAILURE OF THERMO-LAG 330 FIRE BARRIER SYSTEM TO PERFORM ITS SPECIFIED FIRE ENDURANCE FUNCTION

The requested actions in Bulletin 92-01, Supplement 1 and the responses for North Anna and Surry Power Stations are as follows:

1. **For those plants that use either 1- or 3-hour pre-formed Thermo-Lag 330 panels and conduit shapes, identify the areas of the plant which have Thermo-Lag 330 fire barrier material installed and determine the plant areas which use this material for the protection and separation of the safe shutdown capability.**

   Response

   The locations and descriptions of Thermo-Lag 330 applications at North Anna and Surry are provided in Attachments 2 and 3, respectively. Attachment 2, Items 1 through 4, and Attachment 3, Items 1 through 5, identify those areas in which North Anna and Surry use panels and conduit shapes for 1- and 3-hour fire barriers. Attachments 2 and 3 also identify whether the specific application is addressed by NRC Bulletin 92-01, Supplement 1.

2. **In those plant areas in which Thermo-Lag fire barriers are used in raceways, walls, ceilings, equipment enclosures, or other areas to protect cable trays, conduits, or separate redundant safe shutdown functions, the licensee should implement, in accordance with plant procedures, the appropriate compensatory measures, such as fire watches, consistent with those that would be implemented by either the plant technical specifications or the operating license for an inoperable fire barrier. These compensatory measures should remain in place until the licensee can declare the fire barriers operable on the basis of applicable tests which demonstrate successful 1- or 3-hour barrier performance.**

   Response

   In response to Information Notice (IN) 92-55, entitled "Current Fire Endurance Test Results for Thermo-Lag Fire Barrier Material" and dated July 27, 1992, North Anna and Surry implemented compensatory measures (fire watches) for areas in which Thermo-Lag panels are used for 1- or 3-hour fire barriers. For North Anna, these areas were included in the existing hourly fire watch provided for the Thermo-Lag installed on the charging and component cooling pumps. As indicated in our July 29, 1992 response to Bulletin 92-01 (Serial No. 92-436), the frequency (i.e., hourly versus continuous) of this fire watch at North Anna is based on the availability of the unaffected charging pumps and component cooling pumps. Based on an

ATTACHMENT 1 (continued)

Engineering Evaluation, Surry implemented a new hourly fire watch for Thermo-Lag on the HVAC ducts in the turbine building. The existing continuous fire watch in the Unit 1 emergency switchgear room and cable vault was expanded to include the Thermo-Lag installed in the mechanical equipment room #3.

No additional compensatory measures were required to be implemented as a result of the issuance of Bulletin 92-01, Supplement 1. Based on Bulletin 92-01 and IN 92-55, both stations had already implemented compensatory measures for 1- and 3-hour Thermo-Lag 330 panels and conduit shapes.

ATTACHMENT 2

THERMO-LAG 330 FIRE BARRIER MATERIAL

NORTH ANNA POWER STATION

Thermo-Lag installations addressed by NRC Bulletin 92-01 and Supplement 1 to Bulletin 92-01

ITEM	LOCATION	DESCRIPTION
1.	Auxiliary Building, Power feed (2.77" armored cable) for component cooling water pump 2-CC-P-1A, el. 244'-6".	Fire retardant coating, 1/2" thick preformed sections attached to armored cable.
2.	Auxiliary Building, Power feed (2.77" armored cable) for charging pump 1-CH-P-1C, el. 259'-6".	Fire retardant coating, 1/2" thick preformed sections attached to armored cable.
3.	Auxiliary Building, Appendix R flexible ventilation duct, elev. 259'-6".	Fire retardant coating, 1/2" thick Panels forming fire enclosure around locker containing duct.
4.	Auxiliary Building, Piping penetrations Charging Pump Cubicles, elev. 244'-6".	Fire barrier (note 2), 1" thick panels attached to steel plate.

Thermo-Lag installations not addressed by Bulletin 92-01 or Supplement 1

5.	Containment Units 1 and 2, RHR pump motors 1-RH-P-1A & 1B and 2-RH-P-1A & 1B, elev. 231'-6".	Radiant energy shield, 1/2" thick panels mounted to steel frame to form shield between pump motors.
6.	Containment Units 1 and 2, the cable penetration to the Fuel Building, elev. 291'-0", column 5 (Unit 1) and column 13 (Unit 2).	Radiant energy shield, 1/2" thick panels mounted to a steel frame to form a 4 sided box around penetration.
7.	Containment Unit 1, transmitters PT-RC-1000 & LT-RC-1000, elev. 262'-10", column 9.	Radiant energy shield, 1/2" thick panels mounted to a steel frame to form box around transmitters.
8.	Containment Unit 2, transmitters LT-RC-2000 & LT-2461, elev. 262'-10", column 6.	Radiant energy shield, 1/2" thick panels mounted to a steel frame to form box around transmitters.

ATTACHMENT 2 (continued)

ITEM	LOCATION	DESCRIPTION
9.	Containment Unit 1, conduit 1CX933NB (1.5") from PT-RC-1000 & LT-RC-1000 to penetration in item 6 above.	Radiant energy shield, 1/2" thick preformed sections attached to conduit.
10.	Containment Unit 2, conduit 2CX906NV (1.5") from LT-RC-2000 for 20' to column 5 and from column 17 to penetration in item 6 above.	Radiant energy shield, 1/2" thick preformed sections attached to conduit.
11.	Containment Unit 1, conduit (4") (wide and source range neutron flux indication) elev. 241'-6" between columns 4 & 6.	Radiant energy shield, 1/2" thick preformed sections attached to conduit.

Notes:

1. Radiant energy shields are credited as having 1/2-hour fire rating.

2. Fire barriers are credited as having 3-hour fire rating.

3. Fire retardant coatings are credited as having 1-hour fire rating.

ATTACHMENT 3

THERMO-LAG 330 FIRE BARRIER MATERIAL

SURRY POWER STATION

Thermo-Lag installations addressed by NRC Bulletin 92-01 and Supplement 1 to Bulletin 92-01

ITEM	LOCATION	DESCRIPTION
1.	Unit 1 Cable Vault, communication system conduit 1M912 (1") & 1COM3 (3/4") from elev. 27'-6" of Auxiliary Building to Unit 1 Emergency Switchgear Room.	Fire barrier, 1" thick preformed sections attached to conduits for entire routing through Cable Vault.
2.	Unit 1 Emergency Switchgear Room, communication system conduits 1SVB151, 1SVB151A, & 1M912 all (1"); 1COM12 & 1COM3 both (3/4"); 1COM11 (2").	Fire barrier, 1" thick preformed sections attached to conduits.
3.	Turbine Building Basement Units 1 & 2, HVAC duct between fire dampers 9 & 10 and the Emergency Switchgear Room.	Fire barrier, 1" thick panels attached to 4 sides of the ducts.
4.	Turbine Building Mezzanine Units 1 & 2, HVAC duct between fire dampers 19 & 20 and the Control Room.	Fire barrier, 1" thick panels attached to 4 sides of the ducts.
5.	Mechanical Equipment Room #3, Charging Pump Service Water Pump supply piping.	Fire barrier, 1" thick panel sections protecting piping that enters MER 3 and runs to the CPSW pump room.

Thermo-lag installations not addressed by Bulletin 92-01 or Supplement 1

6.	Containment Units 1 & 2, RHR pump motors 1-RH-P-1A & 1B AND 2-RH-P-1A & 1B, elev. (-)13'-0".	Radiant energy shield, 1/2" thick panels mounted to steel frame to form shield between pump motors.
7.	Containment Unit 1, transmitters LT-1459A & LT-1461, elev. 18'-4", column 10.	Radiant energy shield, 1/2" thick panels mounted to steel frame to form shield between transmitters.

ATTACHMENT 3 (continued)

ITEM	LOCATION	DESCRIPTION
8.	Containment Unit 1, transmitter PT-1449, elev. (-)3'-6", column 9.	Radiant energy shield, 1/2" thick panels mounted to steel frame to form enclosure around transmitter.
9.	Containment Unit 2, transmitter LT-2459A, elev. 18'-4", column 5.	Radiant energy shield, 1/2" thick panels mounted to steel frame to form enclosure around transmitter.
10.	Containment Unit 2, transmitter LT-2487A, elev. (-)22'-6", column 9.	Radiant energy shield, 1/2" thick panels mounted to steel frame to form enclosure around transmitter.
11.	Containments Unit 1 & 2, Appendix R cable penetration to Cable Vault.	Radiant energy shield, 1/2" thick panels mounted to steel frame to form 4 sided box around penetration.
12.	Containment Unit 1, conduit (3/4") from transmitters LT-1459A & PT-1449.	Radiant energy shield, 1/2" thick preformed sections attached to conduit.
13.	Containment Unit 2, conduit (3/4") from transmitters LT-2459A & LT-2487A.	Radiant energy shield, 1/2" thick preformed sections attached to conduit.
14.	Cable Vault Units 1 & 2, Appendix R communication cable containment penetration 4C & 3D.	Radiant energy shield, 1" thick panels mounted to steel frame to form 4 sided box around penetration.

Notes:

1. Radiant Energy Shields are credited as having 1/2-hour fire rating.

2. Fire Barriers are credited as having 3-hour fire rating.