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ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

June 8, 1982

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2; Dockets Nos. 50-317 & 50-318
Fire Protection

References: (a) Letter from A. E. Lundvall, Jr. to R. A. Clark dated February 18, 1982.
(b) Letter from A. E. Lundvall, Jr. to R. A. Clark dated April 6, 1982.
(c) Letter from R. C. L. Olson to R. A. Clark dated April 29, 1982.

Gentlemen:

Enclosed is a listing of additional doorways and openings in Fire Barriers which are to be protected by water curtains (i.e. dedicated sprinklers). The requirements for protection of these doorways is derived from the Unit 2 Interactive Cable Analysis for Calvert Cliffs and this list in conjunction with the list furnished with Reference (a) represents all doors where protection by water curtains is proposed.

General comments on the applicability of water curtains in lieu of fire doors were included in Reference (a). Operability of the Unit 1 systems was confirmed in calculations submitted April 29, 1982 (see reference (c)). These calculations were based on highly conservative assumptions (see Reference (b)); piping runs to the sprinkler systems on the attached list are not significantly greater (hydraulically) than those previously encountered. Calculations will be performed by July 30, 1982 to confirm the operability of systems for these additional doors.

This submission provides the additional information requested by the NRC to complete our committment relative to SER Item 3.1.20 and Appendix "R", Section III G, separation criteria for alternate safe shutdown.

Very truly yours,

Arthur E. Lundvall

AEL/MDP/klb

Hood

CALVERT CLIFFS NUCLEAR POWER PLANT - UNIT 2

USE OF WATER CURTAINS TO MEET APPENDIX "R", SECTION III G SEPARATION CRITERIA FOR ALTERNATE SAFE SHUTDOWN

Aux. Bldg. Elevation	Fire Barrier Room # - Description Safe Shdn.	Exposure	*Conservative Fire Load (BTUs/sq ft) S.S. Side	Exp. Side	Fire Suppression Sprklr. System # S.S. Side	Exp. Side	III G Sep. Criteria	Water Curtain Sprklr. System # S.S. Side	Exp. Side		Remarks
(-)10'-0" to 5'-0"	101/121 CCCS Pump Room/ Recirc. Piping Tunnel	203 Piping Area	16,350	25,770	101	203	1 hr.	203 See (1)	203	(1)	1-9'x9' and 1-4'x6' steel access plate over Containment recirculating piping tunnel - 121, which is continuous to Room 101 and does not contain shutdown systems. Normally closed.
(-)10'-0" to 5'-0"	101 CCCS Pump Room	201 Component Cooling Pump Room	16,350	20,983	101	201	1 hr.	101 See (2)	201	(2)	1-4'x4' steel plate emergency access hatch. Normally closed.
(-)10'-0" to 5'-0"	102/120 CCCS Pump Room/ Recirc. Piping Tunnel	203 Piping Area	14,044	29,920	None	203	3 hr.	203 See (3)	203	(3)	1-9'x9' and 1-4'x6' steel access plate over Containment recirculat. Piping tunnel - 120, which is contiguous to Room 102 and does not contain shutdown systems. Normally closed.
(-)10'-0" to 5'-0"	102 CCCS Pump Room	203 Piping Area	14,044	29,920	None	203	3 hr.	203 See (4)	203	(4)	1-4'x4' steel plate - emergency access hatch. Normally closed.

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5'-6"	204 Fan Room	203 Piping Area	40,676	29,928	204	203	1 hr.	204 See (5)	203	(5) Non-rated Kalwein doors equipped with ventilation louvers are installed.
5'-6"	204 Fan Room	205 Service Water Pump Room	40,676	14,361	204	205	1 hr.	204 See (5)	205	
5'-6"	201 Component Cooling Pump Room	200 Corridor	20,583	24,323	201	200	1 hr.	201	200	Two open doors are required to assure ventilation.
45'-6"	420 Liquid Waste Evapo-rator Room	419 Cask Loading Area	33,527	8,207	Part	419	3 hr.	419	419	Two open doors are required to assure ventilation.

TABLE NOTES:

* - Fire Load (BTUs/sq ft): The BTUs/sq ft listed in the table were derived from an inventory performed during preparation of BG&E's "Fire Protection Program Evaluation" for Calvert Cliffs Nuclear Power Plant submitted to the Nuclear Regulatory Commission by letter dated March 15, 1977 from A. E. Lundvall, Jr. to V. Stello, Jr. Included in the fire load computation are: (1) In situ fire loads (i.e., combustible cable insulation and jackets, flammable and combustible lubricants, flammable liquids and gases, etc.); (2) Inventoried transient fire loads (i.e., wooden ladders, anti C's, rope, etc.); and (3) In addition, an arbitrary transient exposure fire load consisting of 32,000,000 BTUs (i.e., the equivalent of 4,000 lbs. of ordinary combustibles, 4 - 55 gallon drums (i.e., 220 gallons) of lube oil, etc.).

For comparative purposes, these listed fire loads are equivalent to ASTM standard time-temperature curve fire loads equal to:

40,000 BTUs/sq ft = 30 minutes
80,000 BTUs/sq ft = 1 hour
160,000 BTUs/sq ft = 2 hours
240,000 BTUs/sq ft = 3 hours

Enclosure

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
Messrs. D. H. Jaffe - NRC
R. E. Architzel - NRC