



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
February 8, 1991

Docket No. 50-317

Mr. G. C. Creel
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
MD Rt. 2 & 4
P. O. Box 1535
Lusby, Maryland 20657

Dear Mr. Creel:

SUBJECT: TEMPORARY WAIVER OF COMPLIANCE FOR THE CALVERT CLIFFS
UNIT 1 NUCLEAR POWER PLANT (TAC NO. 79709)

By letter dated February 8, 1991, you requested a Temporary Waiver of Compliance from all operability and surveillance requirements for the center Control Element Assembly (CEA). These requirements are Technical Specifications 4.1.1.1.1, 4.1.1.2, 3.1.3.1, 4.1.3.1.1, 4.1.3.1.2, 4.1.3.1.3, 3.1.3.3, 4.1.3.3.1, 4.1.3.3.2, 3.1.3.4, 4.1.3.4, 4.1.3.5, 3.1.3.6, 4.1.3.6, 3.10.1, 4.10.1.1, 4.10.1.2, 3.2.2.1, 4.2.1.3, 4.2.2.1.3, 4.2.2.3, 3.2.3 and 4.2.3.3. The center CEA has been declared inoperable because you cannot determine that it will continue to satisfy the rod drop time surveillance requirements due to a binding problem when the control rod approaches the fully inserted position. This binding problem prevents energizing of the rod bottom light and the lower electric limit light which are used for the surveillance test.

During shutdown of Unit 1 on February 2, 1991, your staff discovered that the rod bottom light and the lower electric limit light had not energized for the center CEA after it had been driven into the core. Subsequent testing has led to the conclusion that the control rod is binding in the buffer region of the guide tube due to swelling in the zircaloy slugs of the control rod. The only way to avoid the problem would be to replace the CEA, which will occur during the next refueling outage. The problem could not have been discovered sooner because it occurred while the plant was operating and the control rod was fully withdrawn.

Specifically, the Temporary Waiver of Compliance would allow plant startup and operation for the remainder of the current operating cycle (Cycle Number 10) with the center CEA excluded from the operability and alignment requirements of the technical specifications (LCO 3.1.3.4). Prompt action is required to allow the plant to enter MODE 2, which is presently scheduled for February 9, 1991.

Evaluations have been performed to determine the effect of misalignment of the center CEA on the safety analysis. The evaluation considered power distribution effects, shutdown margin effects, and the CEA ejection accident. The evaluation concluded that the misalignment of the center CEA would not significantly affect the results of the analyses. All safety analyses remain valid for the remainder of Unit 1 Cycle 10 operation. The center CEA was

9102140108 910208
PDR ADDCK 05000317
P PDR

120145

DF01
1/0

February 8, 1991

designed for power distribution control early in core life and now provides very little reactivity control. In addition, only one of the five fingers (the center one) of the control rod serves any reactivity function. Therefore, the worth of the control rod is very low. Compensatory measures are not required while this waiver is in effect because any misalignment of the center CEA has been shown to have no impact on the safety analysis.

The waiver will not result in irreversible environmental consequences. Operation of the control rods will not be any different than in the past, with the possible exception of the center one becoming misaligned. Based on the evaluation of the safety analysis for this waiver, there is no increase in the consequences of any accident previously evaluated and no new accidents are created. This waiver will not result in any increases in routine or post accident radiological releases or occupational exposures. Therefore, the environment will not be adversely impacted.

This Temporary Waiver of Compliance is approved to be effective from 2200 on February 8, 1991, and shall expire upon issuance of the amendment addressing the same subject.

Sincerely,

Edward G. Greenman

Edward G. Greenman, Acting Assistant
Director for Region I Reactors
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

DISTRIBUTION
See attached page

OFC	:LA:PDI-1	:PM:PDI-1	:PDI-1	:SRXB	:RI
NAME	:CVogan	:DMcDonald:sw	:RCapra	:RJones	:WHeh1
DATE	: 2/8/91	: 2/8/91	: 2/8/91	: 2/8/91	: 2/8/91

OFC	:AD:RI	:	:	:	:
NAME	:EGreeman	:	:	:	:
DATE	:2/8/91	:	:	:	:

designed for power distribution control early in core life and now provides very little reactivity control. In addition, only one of the five fingers (the center one) of the control rod serves any reactivity function. Therefore, the worth of the control rod is very low. Compensatory measures are not required while this waiver is in effect because any misalignment of the center CEA has been shown to have no impact on the safety analysis.

The waiver will not result in irreversible environmental consequences. Operation of the control rods will not be any different than in the past, with the possible exception of the center one becoming misaligned. Based on the evaluation of the safety analysis for this waiver, there is no increase in the consequences of any accident previously evaluated and no new accidents are created. This waiver will not result in any increases in routine or post accident radiological releases or occupational exposures. Therefore, the environment will not be adversely impacted.

This Temporary Waiver of Compliance is approved to be effective from 2200 on February 8, 1991, and shall expire upon issuance of the amendment addressing the same subject.

Sincerely,

Edward G. Greenman

Edward G. Greenman, Acting Assistant
Director for Region I Reactors
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

Mr. G. C. Creel
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant

cc:

Mr. William T. Bowen, President
Calvert County Board of
Commissioners
Prince Frederick, Maryland 20678

Mr. Joseph H. Walter
Engineering Division
Public Service Commission of Maryland
American Building
231 E. Baltimore Street
Baltimore, Maryland 21202-3486

D. A. Brune, Esq.
General Counsel
Baltimore Gas and Electric Company
P. O. Box 1475
Baltimore, Maryland 21203

Ms. Kirsten A. Burger, Esq.
Maryland People's Counsel
American Building, 9th Floor
231 E. Baltimore Street
Baltimore, Maryland 21202

Mr. Jay E. Silberg, Esq.
Shaw, Pittman, Potts and Trowbridge
2300 N Street, NW
Washington, DC 20037

Ms. Patricia Birnie
Co-Director
Maryland Safe Energy Coalition
P. O. Box 902
Columbia, Maryland 21044

Ms. G. L. Adams, Licensing
Calvert Cliffs Nuclear Power Plant
MD Rts 2 & 4,
P. O. Box 1535
Lusby, Maryland 20657

Resident Inspector
c/o U.S. Nuclear Regulatory Commission
P. O. Box 437
Lusby, Maryland 20657

Mr. Richard McLean
Administrator - Radioecology
Department of Natural Resources
580 Taylor Avenue
Tawes State Office Building
PPER B3
Annapolis, Maryland 21401

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Distribution:

Docket File

NRC & Local PDRs

SVarga

EGreenman

CVogan

DMcDonald

OGC

DHagan

EJordan

GHill (4)

Wanda Jones

JCalvo

ACRS (10)

GPA/PA

OC/LFMB

Plant File

WHehl, RI

JLieberman, OE

TMurley, NRR

Technical Assitant, DRP