



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
October 20, 1980

NRC PDR

Docket No. 50-317

MEMORANDUM FOR: Les Rubenstein, Assistant Director for
Core and Containment Systems, DSI
Paul Check, Assistant Director for
Plant Systems, DSI
FROM: Thomas Novak, Assistant Director for
Operating Reactors, DL
SUBJECT: CALVERT CLIFFS, UNIT NO. 1 - CYCLE 5 RELOAD REVIEW

At the conclusion of the October 1, 1980 meeting in R. A. Clark's office, the attendees (W. Johnson, D. Fieno, L. Phillips, V. Panciera, S. Dial, C. Li and E. Conner) agreed to notify Baltimore Gas & Electric Company (BG&E) that the staff (primarily CPB) could not complete the review of Statistical Combustion of Uncertainties (SCU), Parts 1, 3 and 3 and FIESTA in time to support the November 27, 1980 startup of Calvert Cliffs Unit No. 1. The call was made to BG&E's J. Lippold, Manager of Nuclear Fuels Department. The staff recommended that a revised reload application be submitted using staff approved methodologies as the basis for our approval to restart the unit. We committed to continue our review of the original reload submittal with a projected completion date of early spring (April 1981).

In a subsequent meeting with you and other CPB personnel, we decided to invite BG&E in to discuss our problem and how it relates to the Cycle 5 reload review. This meeting, attended by the Enclosure 1 personnel and held in my office on October 9, 1980, resulted in understandings that seemed to meet the requirements of the licensee and the review capabilities of the staff. The important understandings are:

1. BG&E believes they must have the staff approval of their Appendix C (Description of Model Used to Simulate NSSS Behavior during Steam Line Rupture Event) since the previous CE model does not include the effects of manually tripping the RCPs. This review, to be done by RSB, is proceeding although additional information is needed from the licensee.
2. In order to reduce the reanalysis time, BG&E requested that we complete the review of Appendix A (RPS Asymmetric Steam Generator Transient Protection Trip). Larry Phillips has indicated that CPB believes this review can be completed on schedule.
3. CPB requested that the PM ensure that a I&CSB reviewer be assigned to evaluate the proposed Appendix A RPS trip. A reviewer (R. Kendall) has been assigned.

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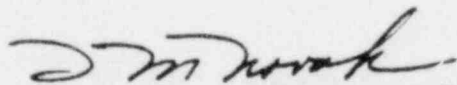
Les Rubenstein
Paul Check

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4. BG&E pointed out that the unit will be operating with less margin than ever before and that some loss of electrical production will result. We committed to speed up the review of SCU Parts 1, 2 and 3 and FIESTA in order to complete the review of BG&E's September 22, 1980 application that would allow more operating flexibility.
5. All parties involved (BG&E, CE and the staff) agreed to cooperate to:
 - a. make the reanalysis submittal available for staff review the first week of November (BG&E and CE);
 - b. review the material available, that will not change, on an expedited schedule (RSB and CPB); and
 - c. complete the reload evaluation in a timely manner in order to not affect plant startup (RSB, CPB and ORB#3).

In order to complete this difficult review on schedule, the OR PMs (C. Li and E. Conner) have devised a phase review approach as shown in Enclosure 2. The Phase A material is available and should be under review at this time. Enclosure 3 provides the action schedule necessary to issue Cycle 5 authorization by the currently scheduled restart date of November 27, 1980. BG&E has agreed to the indicated schedule for their commitments. The OR PM will revise the Enclosure 3 schedule if the outage forecast dates change.

Please notify me of any problems that come to your attention as this review proceeds.



Thomas Novak, Assistant Director
for Operating Reactors
Division of Licensing

Enclosures:

1. List of Attendees
2. Phase Review
3. Action Schedule

LIST OF ATTENDEES

October 10, 1980
Calvert Cliffs Reload

NRC

T. Novak
R. A. Clark
L. S. Rubenstein
W. V. Johnston
D. Fieno
M. Conner
C. Y. Li
S. Diab
T. Speis
V. Panciera
J. Guttman
L. Phillips

CE

P. W. Kruse
E. H. Kennedy
E. L. Tripp

BG&E

J. A. Tiernan
A. E. Lundvall
W. J. Lippold

PHASE REVIEW
CYCLE 5 RELOAD
CALVERT CLIFFS, UNIT NO. 1
DOCKET NO. 50-317

Phase A

Staff review of the following sections of the BG&E submittal of September 22, 1980.

- Section 1.0 Introduction and Summary
 - 2.0 Operating History of the Reference Cycle
 - 3.0 General Descriptions
 - 4.0 Fuel System Design
 - 5.0 Nuclear Design
 - 7.0 Transient Analysis
 - 7.1.2 Boron Dilution
 - 7.1.3 Startup of an Inactive RCP
 - 7.1.6 Loss of Feedwater Flow
 - 7.1.7 Excess Heat Removal
 - 7.1.8 RCS Depressurization
 - 7.2.2 Loss of Coolant Flow
 - 7.3.1 CEA Ejection (except Table 7.3.1-2)
 - 7.3.2 Steam Line Rupture
 - 7.3.3 Steam Generator Tube Rupture
 - 8.0 ECCS Analysis
 - 9.0 Modifications to TS (Keyed to Table 1 of Submittal), Change No. 2, 3, 4, 12, 13, 14 through 24, 26, and 31 through 47.
 - 10.0 Startup Testing
- Appendix A Asymmetric SG Transient Trip
 - Appendix C Steam Line Rupture Event Model
 - Appendix D SCOUT Prototype Test
 - Appendix E Guide Tube Wear Modification

Phase B

Staff review of the following sections of the September 22, 1980 submittal to be delayed until corrected submittal (due November 3, 1980) is received:

- Section 6.0 Thermal-Hydraulic Design
- 7.0 Transient Analysis
 - 7.1.1 CEA Withdrawal
 - 7.1.4 Excess Load
 - 7.1.5 Loss of Load
 - 7.2.1 Loss of Flow
 - 7.2.3 CEA Drop
 - 7.2.4 Asymmetric SG Transients
 - 7.3.4 Seized RCP Rotor Event

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9.0 Modifications to TS (Keyed to Table 1 of Submittal), change
No. 1, 5 through 11, 25 and 27 through 30

Appendix B Deleted

ACTION SCHEDULE

Review of Cycle 5 Reload
Calvert Cliffs, Unit No. 1
Docket No. 50-317
October 10, 1980

<u>ITEM</u>	<u>BG&E Commitment</u>	<u>NRC Action</u>
• Submittal of SCU 1, 2 and 3, FIESTA, CEAW and BASSS	06/26/80	
• Submittal of response to July 17, 1980 meeting questions	09/10/80	
• Submittal of Cycle 5 Reload Analysis	09/22/80	
• Questions from reviewers for licensee on Phase A		10/22/80
• Response to Phase A questions	10/31/80	
• Submittal of Phase B Analysis	11/04/80	
• Phase A SE input to PM		11/07/80
• Meeting with licensee to resolve <u>all</u> questions on Phase B analysis	11/10/80	11/10/80
• Response to Phase B oral questions	11/14/80	
• Phase B SE input to PM		11/19/80
• PM issue Cycle 5 Reload authorization		11/26/80