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VICE PRESIDENT
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May 12, 1988

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Response to Request for Additional Information - Generic Letter 86-06
(TACS 49674 and 49675)

REFERENCES: (a) Letter from Mr. S. A. McNeil (NRC) to Mr. J. A. Tiernan (BG&E), dated February 24, 1988, Request for Additional Information - Generic Letter 86-06, "Implementation of TMI Action Item II.K.3.5, Automatic Trip of Reactor Coolant Pumps"

Gentlemen:

As requested in Reference (a), we are providing the non-proprietary information used from the CE report, NPSD-151, "CE Safety Analysis Method for Calvert Cliffs Units 1 and 2." There is no non-proprietary version of the complete report available, therefore, we have extracted the non-proprietary portion of the trending tables that were used in our evaluation.

Should you have any questions on this matter, we will be pleased to discuss them with you.

Very truly yours,

JAT/PSF/WPM/dlm

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
R. A. Capra, NRC
S. A. McNeil, NRC
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TABLE 8-1

KEY INPUT PARAMETERS AND THEIR IMPACT ON THE LOSS OF LOAD EVENT

| Parameter | Sense of Change | Physical Impact | Impact on Analytical Results |
|---|---|---|---|
| Power Level | Higher | 1. A higher initial power level will initiate the event from conditions closer to SAFDLs.<br>2. A higher power will maximize the power to pressurizer steam space ratio. | 1. No impact on transient results except that higher powers lower the initial DNBR and thus result in a lower transient minimum DNBR.<br>2. A higher power to steam space ratio will maximize the peak pressure during the event. |
| $T_{in}$ | Higher | A higher Tinlet will initiate the event from conditions closer to SAFDLs. | No impact on transient results except that a higher Tinlet lowers the initial DNBR and thus results in a lower transient minimum DNBR. |
| RCS Pressure | Lower | 1. A lower initial pressure will initiate the event from conditions closer to SAFDLs.<br>2. A lower initial pressure delays the time of high pressurizer pressure trip and thus maximizes the rate of pressure change at time of trip. | 1. No impact on minimum DNBR during the event since no credit is taken for the pressure increase.<br>2. Lower initial pressure delays time of trip. This maximizes the rate of change of pressure at time of trip and thus results in higher peak RCS pressures. |

TABLE 8-1
(continued)

| Parameter | Sense of Change | Physical Impact | Impact on Analytical Results |
|---|---|---|---|
| MTC | More Positive (i.e., BOC) | A more positive MTC in combination with increasing coolant temperatures will add greater positive reactivity. This increases the core power, heat flux, coolant system pressure and temperatures. | 1. Increasing core average heat flux and coolant temperature result in lower transient DNBR values.<br>2. Maximizes the peak RCS pressure during the event. |
| Doppler Coefficient | Less Negative (i.e., BOC) | A less negative Doppler coefficient in combination with increasing fuel temperatures, adds less negative reactivity. This maximizes the increase in power, heat flux, coolant temperature and pressure. | 1. Results in higher core heat flux and coolant temperatures and thus minimizes the transient DNBR.<br>2. Maximizes the peak RCS pressure. |
| $H_{gap}$ | Higher | Allows the heat flux to follow the power more closely. Also, increases the rate at which the heat generated within the fuel gets into the coolant and thereby increases the coolant temperatures and RCS pressure. | 1. Results in higher core average heat flux and coolant temperatures and thus minimizes the transient DNBR.<br>2. Maximizes the peak RCS pressure. |

TABLE 8-1
(continued)

| Parameter | Sense of Change | Physical Impact | Impact on Analytical Results |
|---|---|---|---|
| Initial Steam Generator Pressure | Lower | A lower initial steam generator pressure delays the time when main steam safety valves open. The delay in opening the MSSVs increases the heatup of both the primary and secondary systems. | Maximizes the peak RCS pressure. |
| Axial Power Distribution | Top Peaked | A top peaked shape results in higher enthalpy rise in the hot channel. | Minimizes transient DNBR. |
| Scram Reactivity Insertion Curve (i.e., ASI) | Positive | Scram reactivity insertion associated with a positive ASI, minimizes the scram reactivity inserted after a reactor trip. This maximizes the power, heat flux, coolant temperature and pressure overshoot. | 1. Maximizes core average heat flux, and coolant temperatures. Minimizes the transient DNBR.<br>2. Maximizes RCS pressure. |
| Pressurizer Pressure Control System | Inoperable (i.e., no sprays or PROVs) | More pronounced transient variations in primary pressure. | Maximizes peak RCS pressure. |