

September 9, 1988

Docket Nos. 50-317
and 50-318

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Mr. J. A. Tiernan
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
MD Routes 2 & 4
P. O. Box 1535
Lusby, Maryland 20657

Dear Mr. Tiernan:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - PROPOSED INCREASE IN U-235
ENRICHMENT LIMITS FOR THE NEW AND SPENT FUEL POOLS (TACS 68416
AND 68417)

The NRC staff, in evaluating your submittal dated June 9, 1988, has determined that additional information is needed to facilitate the completion of our review. The request for additional information is enclosed.

As you are relying upon a December 1988 review completion date, it is requested that you respond to this request within 45 days of its date of issuance.

This request for information affects fewer than 10 respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

original signed by

Scot Alexander McNeil, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosure:
Request for Additional Information

cc: w/enclosure
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Mr. J. A. Tiernan
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant

cc:

Mr. John M. Gott, President
Calvert County Board of
Commissioners
Prince Frederick, Maryland 20768

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

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1800 M Street, NW
Washington, DC 20036

Mr. W. J. Lippold, General Supervisor
Technical Services Engineering
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

Department of Natural Resources
Energy Administration, Power Plant
Siting Program
ATTN: Mr. T. Magette
Tawes State Office Building
Annapolis, Maryland 21204

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

REQUEST FOR ADDITIONAL INFORMATION
PROPOSED NEW AND SPENT FUEL POOL ENRICHMENT INCREASE
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-317 AND 50-318

1. The staff's position on the criticality of unirradiated fuel stored in the new fuel storage racks is that k_{eff} will not exceed 0.98 if accidentally moderated by the extreme low-density water or other hydrogenous material such as may occur for fog, mist, and firefighting foam. The new fuel storage facility must also be designed so that k_{eff} will not exceed 0.95 if accidentally fully flooded with pure water. Both of these conditions have been analyzed and stated to have been met. However, Technical Specification (TS), "Criticality-New Fuel," only refers to the 0.98 criterion. Since this TS is being modified to increase the enrichment limit, we recommend that it also be modified to include the 0.95 criterion as well.
2. The reactivity effect of a possible 4-inch gap at the centerline of every Boraflex sheet was analyzed and found to meet the staff's limiting criterion. Justify that gap formation larger than this, in size and extent, would not occur and describe any monitoring program at Calvert Cliffs which would detect degraded Boraflex sheets including possible gap formation.
3. How were the uncertainties in the manufacturing tolerances of U-235 enrichment and fuel pellet density considered in the determination of the 95/95 confidence level uncertainty?
4. TS 5.3.1, "Reactor Core-Fuel Assemblies," places a maximum enrichment limit of 4.1 weight percent U-235 on reload fuel located in the reactor core. When do you intend to request that this limit be raised? To what value will you propose to raise it? What accident analyses do you intend to perform to justify an increase in this limit?

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Calvert Cliffs Nuclear Power Plant

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