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ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

March 10, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. R. A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2; Dockets Nos. 50-317 and 50-318
Inadequate Core Cooling Instrumentation

Reference: NRC Generic Letter 82-28 from D. G. Eisenhut to All Licensees of Operating Westinghouse and C-E PWR's, same subject, dated December 10, 1982.

Gentlemen:

In the referenced letter, the Nuclear Regulatory Commission has requested, under 10 CFR 50.54f, information concerning our plans with regard to designing, purchasing and installing a reactor coolant inventory tracking system and with regard to upgrading our existing core-exit thermocouple and subcooled margin monitoring systems to the criteria contained in NUREG-0737, Item II.F.2.

We are proceeding with an engineering program to install an appropriate reactor coolant inventory tracking system at Calvert Cliffs. In addition, we have initiated the necessary engineering programs to evaluate our existing subcooled margin monitor and core-exit thermocouple monitoring system against the physical arrangement, performance, and qualification criteria contained in NUREG-0737, Item II.F.2.

In proceeding with the work described above, however, we have determined that this effort must be carefully integrated with our other efforts to upgrade control room design in accordance with the recently-issued Supplement 1 to NUREG-0737. In addition, we find that our current engineering and planning commitments with regard to continued safe operations at Calvert Cliffs are severely restricting our ability to proceed rapidly with an evaluation of our subcooled margin monitor and core-exit thermocouple monitoring system. Presently, our remaining available engineering staff has been dedicated to procurement of a reactor coolant inventory tracking system. As a result, we are unable to provide the full level of detail requested in Generic Letter 82-28 at this time. On the other hand, we are able to provide you with a description of the current status of each of the three ICC instrumentation systems and, in addition, we can provide you with a schedule for submitting the remainder of the requested information. The following paragraphs provide this information.

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Reactor Coolant Inventory Tracking System

The NRC identified reactor vessel level monitoring in pressurized water reactor facilities as a desired capability in NUREG-0737 (issued in October of 1980). Since then we, along with other licensees with Combustion Engineering PWR's, have paid for the development of the Heated Junction Thermocouple (HJTC) system design. However, in recognition of certain operational advantages that are inherent to a system which is based on differential-pressure measurement techniques, we have maintained a keen interest in reactor vessel level monitoring systems such as the Westinghouse-designed Reactor Vessel Instrumentation System (RVLIS). We have discussed conceptual designs for adapting a differential-pressure level monitoring system to Calvert Cliffs with potential vendors. Our initial evaluation of these conceptual differential-pressure designs indicate that they could compete favorably with the HJTC in terms of cost and performance. Consequently, we have developed a schedule for evaluation of the candidate systems and for making a final selection. This schedule includes a time period to: (1) identify the additional work that would be required to support adaptation of a differential-pressure based measurement system for Calvert Cliffs; (2) complete a technical evaluation of the merits of each candidate system; (3) perform cost estimates and obtain approval for expenditures; and (4) to prepare our specification and then issue a purchase authorization. We plan to inform you of the system selected for Calvert Cliffs upon issuing the purchase authorization; i.e., by September 1, 1983. Based on this schedule we plan to provide you with the requested system design information and installation schedules by November 1, 1983.

Subcooled Margin Monitor

A description of the subcooled margin monitor (SMM) that was installed at Calvert Cliffs in accordance with NUREG-0578, Item 2.1.3.b, was provided to the NRC in our letter of January 4, 1980. For the reasons described above, we are currently unable to provide you with a detailed comparison of the system design against the criteria contained in NUREG-0737, Item II.F.2. However, we will provide this information to you by May 31, 1983. The intervening time period will be used primarily to evaluate the qualification of the SMM cabling, displays, and microprocessing units.

Core-Exit Thermocouples

We have initiated an engineering program to evaluate our existing incore thermocouples and associated cabling, connectors, and display instrumentation against the criteria contained in NUREG-0737. Any new display instrumentation that we deem necessary as the result of this review will be engineered to the intent of the NRC requirements in that any deviations will be justified. According to our schedule, we will be able to provide you with the results of our environmental qualification assessment and evaluation of cabling and connectors inside containment by May 1, 1983. However, we will not be able to provide the detailed description and performance evaluation of the core-exit thermocouples and associated display instrumentation until we have identified and initiated procurement of any additional equipment that may be required. We will keep you informed of the progress of this evaluation. Our first progress report will be submitted with the environmental qualification results discussed above.

We regret that we are not able to respond to these matters in greater detail at this time. If you should have any questions concerning the above information, do not hesitate to contact us.

BALTIMORE GAS & ELECTRIC COMPANY

By: A. E. Lundvall, Jr.
Vice President - Supply

STATE OF MARYLAND :
TO WIT:
CITY OF BALTIMORE :

Arthur E. Lundvall, Jr., being duly sworn, states that he is Vice President of the Baltimore Gas and Electric Company, a Corporation of the State of Maryland; that he executed the foregoing for the purposes therein set forth; that the statements made therein are true and correct to the best of his knowledge, information, and belief; and that he was authorized to execute the same on behalf of said Corporation.

WITNESS My Hand and Notarial Seal: Diane Kullmann
Notary Public

My Commission Expires: 7/1/86
Date

AEL/BSM/gvg

cc: J. A. Biddison, Jr., Esq.
G. F. Trowbridge, Esq.
Mr. D. H. Jaffe, NRC
Mr. R. E. Architzel, NRC