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ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

June 29, 1984

U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Docket Nos. 50-317
50-318
License Nos. DPR-53
DPR-69

ATTENTION: Mr. T. T. Martin, Director
Division of Engineering & Technical Programs

SUBJECT: Calvert Cliffs Nuclear Power Plant
Radiological Dose Assessment Capability during Emergencies

REFERENCES: (a) I&E Inspection Report 50-317/83-35; 50-318/83-35, Inspector Open Items 83-35-04, 83-35-05, 83-35-06, and 83-35-07

(b) I&E Inspection Report 50-317/81-19; 50-318/81-18, Emergency Preparedness Appraisal Team Report

(c) Letter from A. E. Lundvall, Jr., to R. A. Clark dated August 31, 1982, Radiological Assessment Functions of Emergency Planning

Gentlemen:

Reference (a) requested information regarding the radiological dose assessment capability during emergencies at the Calvert Cliffs facility. Enclosure (1) provides a response to certain items listed in the referenced report.

Should you have further questions regarding this reply, we will be pleased to discuss them with you.

Very truly yours,

Arthur E. Lundvall

AEL/LOW/sjb

Enclosure

cc: D. A. Brune, Esquire
G. F. Trowbridge, Esquire
D. H. Jaffe, NRC
T. Foley, NRC

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ENCLOSURE (1)

REPLY TO OPEN ITEMS OF I&E INSPECTION
REPORT 50-317/83-35 AND 50-318/83-35

OPEN ITEM 83-35-07

NRC REQUEST

State in a letter to Region I, whether the primary and back-up monitoring systems used in the meteorological monitoring conform to the guidelines established in Regulatory Guide 1.23-Rev. 1, or justify any exceptions.

BG&E RESPONSE

We have reviewed the design requirements contained in Regulatory Guide 1.23-Rev. 1, against the design of our primary meteorological tower. Consistent with our previous response provided in reference (c) we have determined that the primary meteorological tower design substantially conforms and meets the intent of the regulatory guidance. Our determination is based, in part, on the results of Regional evaluation activities of our emergency response capability. Reference (b) evaluated our meteorological capability against NUREGs 0654 and 0737 and determined that the meteorological capabilities addressed the requirements of NUREG-0737, Task Action Plan Item III.A.2, in adopting the interim compensating measures to milestone 3. This milestone included a meteorological measurements program which is consistent with the Element 2 System in NUREG 0654, Appendix 2. There were, however, several minor findings regarding exposure problems with the 10 meter level temperature sensor and potential concerns for terrain induced effects. These findings are specifically addressed by other open items. A comparison of the Calvert Cliffs design to Regulatory Guide 1.23-Rev. 1, produced two areas where deviations from the literal statements in the Regulatory Guide are noted. However, in both cases, the intent of the Regulatory Guide was met and the implementation was approved by reference (b).

The Regulatory Guide states, whenever possible, the base of the tower or mast should be sited at approximately the same elevation as the finished plant grade and implies that if the upper sensor set is located at the 60 meter elevation the upper level sensing set will generally coincide with the routine release level for LWRs. The release point (top of plant vent) at Calvert Cliffs is located at an elevation of approximately 204' above sea level (159' above plant grade). The upper and lower sensing points for the primary meteorological tower are located at approximately 320' and 155', above sea level, (275' and 110' above plant grade) respectively. The primary meteorological tower does not have a separate sensing point that corresponds exactly to the radioactive materials release height. The MIDAS program incorporates site specific modeling, (e.g., plume rise effect due to exhaust fans), however, the measured wind speed conditions at the upper sensor location are assumed to be coincident with conditions at the plant vent release elevation. Based on previous inspection results, it is our understanding that this deviation is acceptable.

The Regulatory Guide requires that recorders be located in the Control Room for displaying current meteorological conditions during plant operation. The primary meteorological tower does not incorporate continuous direct display recorders in the Control Room. However, the capability to access primary meteorological data through

the dose assessment computer terminal located in the Control Room does exist. The Control Room Operator may call up either 10 second data in real time or 15 minute averaged data to the CRT screen with hard copy capability through a series of simple commands. This capability meets the intent of the regulatory guidance and is recognized in Regulatory Guide 1.97-Rev. 3.

This response does not incorporate an assessment of the back-up (old) meteorological tower's conformance with Regulatory Guide 1.23-Rev. 1. This information will be provided at a later date as agreed upon during recent telephone conferences between members of our licensing staff and region based personnel. We would like to point out that the primary (new) meteorological tower was procured and installed in response to NUREGs 0654 and 0737 requirements. The design and installation of the tower was intended to upgrade existing meteorological measuring capability by adding redundancy and improving the quality of measured parameters. We do not anticipate that a critical review of the back-up tower will produce an entirely favorable assessment of conformance with the current regulatory guidance.

OPEN ITEM 83-35-06

NRC REQUEST

Revise Technical Specification 3.3.3.4 on meteorological instrumentation to be consistent with ERP Section 5.III.A where the meteorological parameters from the new primary tower are identified as the essential parameters used in support of dose assessment calculations for emergency preparedness.

BG&E RESPONSE

By no later than September 30, 1984, a license amendment will be submitted to revise Technical Specification 3.3.3.4 reflecting the primary meteorological tower operability requirements for emergency preparedness and routine operations. As a part of this license amendment request we plan to delete the Technical Specification operability requirements for the back-up meteorological tower. However, the back-up tower will be administratively maintained as a reliable back-up for meteorological monitoring capability.

Data required by 10 CFR 50, Appendix I will be reported using the primary meteorological tower recorded data on the date concurrent with or before the approval of the license amendment. All appropriate changes to the Emergency Response Plan and its Implementing Procedures (ERPIP) to incorporate the access and use of the primary meteorological tower data for emergency response will be completed on the date concurrent with or before the approval of the license amendment.

ENCLOSURE (1)

REPLY TO OPEN ITEMS OF I&E INSPECTION
REPORT 50-317/83-35 AND 50-318/83-35

OPEN ITEM 83-35-05

NRC REQUEST

Meteorological parameters from the primary tower identified in Emergency Plan Section 5.III.A are not available on strip charts in the control room and are not used in the initial dose assessment calculation (ERPIP 4.4.1) as recommended in NUREG-0654. Revise the initial dose assessment procedure to consider actual meteorological measurements from the primary tower; identify in the ERP and ERPIP where the primary meteorological parameters will be available (control room, TSC and ECC/EOF) for dose assessment calculations. State in the ERP how the NRC, state, and local agencies will access this information.

BG&E RESPONSE

Our response to item 83-35-06 provides our position on the availability of primary meteorological data recorders in the Control Room. Our response to this item also provides a commitment date for revisions to the ERP & ERPIP to incorporate the primary meteorological data for emergency response access and dose assessment calculations. Reference (c) provided details regarding the availability of primary meteorological parameters for dose assessment calculations. Reference (c) also indicated the methods available to ensure that NRC, state, and local agencies are provided with access to the primary meteorological data.

OPEN ITEM 83-35-04

This open item requests specific details on the technical bases and justification used for selection of the MIDAS dose assessment system. The principal area of concern involves terrain induced (sea breeze) effects. This concern has been investigated and resolved in previous Inspection Reports. (See closed items 317/81-19-37 and 318/81-18-37 in I&E Inspection Report 50-317/83-04 and 50-318/83-04).

We are not prepared at this time to respond in detail to this item. We are, however, prepared to initiate discussions with the Region and our vendor, Pickard, Lowe and Garrick, Incorporated, to explore in detail any additional concerns expressed by the Region. Members of our licensing staff and region personnel have agreed upon this approach.