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August 31, 1982

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, DC 20555

ATTENTION: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Radiological Assessment Functions of Emergency Planning

REFERENCES: (a) NUREG-0737, Item II.A.2
(b) NUREG-0654, Appendix 2

Gentlemen:

Reference (a) contains the functional criteria and schedules for emergency response facilities and capabilities. Among these is a guideline to submit to the Nuclear Regulatory Commission by September 1, 1982, a description of the Radiological Assessment facilities. The technical guidelines for these facilities are included in reference (b). The following provides the requested description of the Radiological Assessment facilities and Baltimore Gas and Electric Company's position concerning the upgrading of these facilities.

The Baltimore Gas and Electric Company has addressed the criteria of reference (b), by installing a computer-based dose assessment system. The system, as currently configured, consists of purchased, leased, and rented components and has been operational since April 1981.

A new meteorological tower was installed in accordance with the requirements of Regulatory Guide 1.23 and NUREG-0654 and has been operational since April 1982. At that time, the new tower became the primary instrumentation system and the old tower, back-up. Unit 1 & 2 Main Vent Noble Gas measurements are also input directly into the system.

Analog data from the existing instrumentation are available in the Control Room and fed into an analog to digital converter system, manufactured by Computer Products, Incorporated (CPI). This is physically located in the Technical Support Center (TSC). Analog data from the new meterological tower is converted to digital data and transmitted to the TSC via a new CPI remote serial link, located in the field. The two analog to digital converters are owned by the Baltimore Gas and Electric Company.

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Digital data is temporarily stored in a Sperry Univac V77-200 minicomputer located in the Technical Support Center. The V77-200 is the property of the Baltimore Gas and Electric Company. The V77-200 minicomputer collects, performs quality control checks, averages, and stores the meteorological and radioeffluent data. The minicomputer is currently configured to support one (1) 300 baud dial-up phone line for remote interrogation of system parameters and one (1) 1200 baud dial-up phone line for data transfer to a host computer for processing and long-term data storage. (Note: The minicomputer can also be interrogated by a teletype console located in the TSC).

The Baltimore Gas and Electric Company is currently leasing additional software and hardware facilities through Pickard, Lowe, and Garrick, Incorporated (PLG). The system uses PLG's MIDAS Class A software model for transport and diffusion which has been made site-specific for the Calvert Cliffs Nuclear Power Plant. The host computer routinely calls the minicomputer and requests the transfer of all data (15 minutes average) from the last four hours. If the call is somehow missed after a number of tries, then the minicomputer automatically saves one 15 minute sample as representative of the entire hour. This makes storage space available in the minicomputer to ensure data is not lost over long periods of time due to communications problems. A maximum of four days of hourly averages can be stored.

Should an emergency situation ever develop at the Calvert Cliffs Nuclear Power Plant, emergency procedures would direct plant personnel to interrogate the system. When this is done, the sytem goes into an emergency mode and will request updated information approximately every 15 minutes.

Tectronix Model 4014-1 Graphic Display Terminals and Model 4631 Hard Copy Unit have been purchased by Baltimore Gas and Electric Company and are installed at the following locations:

A. Control Room
B. Emergency Control Center
C. Alternate Emergency Control Center
D. Baltimore Gas & Electric Electric Test Department (Baltimore, MD)
E. Division of Radiation Control- State of Maryland (Baltimore, MD)

In addition to previously installed dial-up channels, two dedicated (i.e., private) lines have been installed for exclusive use by Baltimore Gas & Electric Company personnel. PLG will presently support one (1) 300 baud dial-up and a total of four (4) 1200 baud full-duplex dial-up phone lines, including the two private Baltimore Gas & Electric Company lines.

Based on the current remote terminal locations and additional telephone and radio communications facilities, the Baltimore Gas & Electric Company and the State of Maryland are capable of adequately monitoring conditions and have available an adequate dose assessment modeling system. State and county governments will have

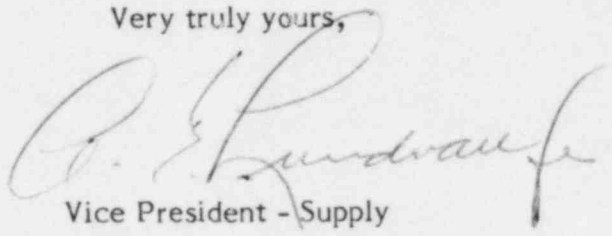
representatives at the Baltimore Gas & Electric Company's emergency facilities and will have access to the dose assessment capabilities provided by the Baltimore Gas & Electric Company.

The Baltimore Gas & Electric Company is leasing PLG's Class A-(MIDAS) software routines, excluding the broadcast and "Class B" model. The system employs a straight-line Gaussian Dispersion Model with a finite gamma routine for dose due to ground exposure. The Calvert Cliffs Nuclear Power Plant site specific factors include source characteristics such as local terrain, mixed release modes, and building wake. The output data provides for plume dimensions and position, and the location, magnitude of the peak relative concentrations, and relative concentrations for a 50-mile radius.

Currently, our position is that the Class A model is meeting the intent of reference (b). The Class A model is consistent with the state-of-the-art model for transport and dispersion. It is our understanding that the "Class B" model is in the research and development stage. Therefore, until the NRC better defines the requirement for the "Class B" model and provides guidance, the Baltimore Gas and Electric Company will not actively pursue the acquisition of a "Class B" model.

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

Very truly yours,



Vice President - Supply

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