BALTIMORE GAS AND ELECTRIC COMPANY

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August 5, 1981

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

ATTENTION: Mr. Darrell G. Eisenhut, Director
Division of Licensing

SUBJECT: Generic Letter #81-01
"Qualification of Inspection, Examination, and Testing and Audit Personnel"
Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2, Docket Nos. 50-317 & 50-318

Gentlemen:

As requested by your letter of May 4, 1981, enclosed is Baltimore Gas and Electric Company's response to the referenced subject. The Baltimore Gas and Electric Company intends to commit to the regulatory positions presented in both ANSI Standards with the exceptions listed in the enclosures to this letter.

Should you have further questions regarding this matter, please do not hesitate to contact us.

Sincerely yours,

A. E. Lundvall Jr.

Vice President-Supply

AEL/DWL/gla

Enclosures (2)

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
Director, Office of Inspection & Enforcement
R. E. Architzel, Resident NRC Inspector

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ENCLOSURE (1)

COMMITMENT TO REGULATORY GUIDE 1.58, REVISION 1

The Baltimore Gas and Electric Company is committed to ANSI N45.2.6-1978, as modified by the exceptions listed below. As requested in your Generic Letter 81-01, our commitment to ANSI N45.2.6-1978 will be modified to include the provisions of regulatory positions C.5, 7, and 10 as described in Regulatory Guide 1.58, Revision 1. These positions will be implemented by April 1, 1982. Personnel who have qualified in accordance with the existing systems as Level I, II, and III Inspectors, Examiners, or performers of tests will not be required to requalify under the new guidelines.

The Baltimore Gas and Electric Company has agreed to qualify inspection, examination and test personnel in accordance with the provisions of ANSI N45.2.6-1978 or ANSI N18.1-1971. These two standards provide adequate guidance for education and experience of the before mentioned personnel. Therefore, Regulatory Position C.6 is unnecessary.

Regulatory Position C.8 apparently requires training of personnel, regardless of the magnitude of expected exposure. Therefore, even instances where expected exposure is very low, personnel performing inspections, examinations, and tests would be required to participate in training sessions concerning radiation protection and dose reduction. Such overtraining would reduce the effectiveness of training conducted when expected doses are high. Therefore, Baltimore Gas and Electric will not commit to Regulatory Position C.8. Instead, a formal program for keeping radiation exposure as low as reasonably achievable will be developed and implemented for all radiation workers at the Calvert Cliffs Nuclear Power Plant prior to April 1, 1982.

EXCEPTIONS TO ANSI N45.2.6-1978

ITEM 1

REQUIREMENT

Subsection 1.2 states in part, "The requirements of this standard apply to personnel who perform inspection, examination, and tests during fabrication prior to and during receipt of items at the construction site, during construction, during preoperational and start-up testing, and during operational phases of nuclear power plants".

RESPONSE-A

Personnel of Baltimore Gas and Electric's Quality Assurance Department who perform inspections, examinations, and tests at the plant site during operational phases of the nuclear power plant are required to be qualified in accordance with ANSI N45.2.6-1978. All other Baltimore Gas and Electric personnel who perform inspections, examinations, and testing functions associated with normal operations of the plant are to be qualified either to ANSI N45.2.6-1978 or to ANSI N18.1-1971.

ENCLOSURE (1)

EXCEPTIONS TO ANSI N45.2.6-1978 (CONTINUED)

Reason-A

1. The individuals who perform inspection, examination, and testing functions associated with normal operation of the plant, such as maintenance and certain technical reviews, are normally qualified to ANSI N18.1-1971.

2. Such testing activities conducted during normal operation of the plant, such as surveillance testing, do not require that test personnel meet the requirements specified in paragraph 4.5.3 of ANSI N18.1 for technicians. Personnel qualified to ANSI N45.2.6 are adequately qualified to conduct such testing.

Response-B

Baltimore Gas and Electric will not always require supplier personnel performing inspection or test activities to comply with the requirements of ANSI N45.2.6, but will evaluate the need for invoking ANSI N45.2.6 on the supplier during the review of procurement documents. The requirements will not be applied to Commercial Quality or Catalog methods of procurement.

Reason-B

Baltimore Gas and Electric's position is as follows:

1. For replacement items purchased by the Catalog, Commercial Quality, and Verification methods of procurement, the purchaser is unable to specify the qualification requirements for inspection, examination, and test personnel because the items are manufactured before placement of the Purchase Order.

2. For the Specification method of procurement, the qualification requirements for inspection, examination, and test personnel shall be determined by:

   a. Item status (new or replacement)
   b. Complexity and importance of item
   c. Manufacturer's QA program approval level (Appendix B, ANSI N45.2, etc.)

Response-C

Baltimore Gas and Electric will not require personnel who perform specific limited and repetitious inspection functions, such as inspection for removal or replacement of snubbers, to be trained as required by ANSI N45.2.6.

ENCLOSURE (1)

EXCEPTIONS TO ANSI N45.2.6-1978 (CONTINUED)

REASON-C

Inspections, examinations or tests of a limited or repetitious scope need not be performed by individuals qualified to the requirements of ANSI N45.2.6 provided that they receive instruction in the following:

1. Activities to be verified
2. Acceptance criteria
3. Method of documenting results
4. Method of reporting deficiencies

The person responsible for the inspection activity shall ensure that such inspection is given to inspectors before they perform the specific inspection functions, and that both this training and the acceptability of the results of the inspection are documented..

RESPONSE-D

When it is necessary to monitor the activities of a supplier, Baltimore Gas and Electric will use personnel qualified as auditors in accordance with ANSI N45.2.12 or inspectors in accordance with ANSI N45.2.6.

REASON-D

Both ANSI N45.2.6 and N45.2.12 establish training requirements suitable for monitoring supplier activities.

ITEM 2

REQUIREMENT

Table 1 specifies that Level III personnel shall be capable of qualifying Level III personnel.

RESPONSE

Where there is only one Level III position or when a new Level III position is created, Baltimore Gas and Electric personnel with the title General Supervisor or higher shall qualify Level III personnel.

REASON

Baltimore Gas and Electric personnel in these grades are capable of certifying Level III personnel without being trained as Level III inspectors.

ENCLOSURE (2)

COMMITMENT TO REGULATORY GUIDE 1.146 (AUGUST 1980)

The Baltimore Gas and Electric Company intends to commit to the regulatory position on ANSI N45.2.23 (1978) that is described in Regulatory Guide 1.146, with the following alternatives to Sections 2.3 and 3.3 of the referenced standard.

REQUIREMENT

2.3 QUALIFICATION OF LEAD AUDITORS

Section 2.3.1 requires prospective Lead Auditors to obtain a minimum of ten credits under the scoring system defined in paragraphs 2.3.1.1-2.3.1.4.

RESPONSE

Baltimore Gas and Electric intends to revise the scoring system to the following:

Education and Experience

The prospective Lead Auditor shall have accumulated a minimum of ten credits under the following scoring system:

1. Education (4 credits maximum)

   1.1 For the Associate's degree from an accredited institution score one credit; if the degree is in engineering, physical sciences, mathematics, or quality assurance, score two credits. For the Bachelor's degree from an accredited institution, score two credits; if the degree is in engineering, physical sciences, mathematics, or quality assurance, score three credits.

   1.2 For the Master's degree in engineering, physical sciences, business management, or quality assurance from an accredited institution, score one credit.

   1.3 For the successful completion of part of the required curriculum for an Associate's, Bachelor's, or Master's degree, score a corresponding percentage of the credits specified above for the degree.

   1.4 For the successful completion of Navy Nuclear Training, its equivalent in another armed service, or the training required for becoming a licensed operator at a commercial nuclear power plant, score two credits.

ENCLOSURE (2)

COMMITMENT TO REGULATORY GUIDE 1.146 (AUGUST 1980)

2. Experience (9 credits maximum)

2.1 Technical Experience

For experience in engineering, manufacturing, construction, operation, or maintenance, score one credit for each full year.

2.2 Nuclear Experience

If two years of the technical experience have been in the nuclear field, score one additional credit.

2.3 Quality Assurance Experience

If two or more years of the technical experience have been in quality assurance or quality control, score two additional credits.

Persons whose work activities are controlled by the Quality Assurance Program, but who are not full-time members of the QA organization may be awarded half the credits that would be given to a person with specific quality assurance experience.

2.4 Audit Experience

If two or more years of the technical experience have been in auditing, score one additional credit.

2.5 Supplemental Experience

Persons who have a proportion of the experience specified in 2.1-2.4 may be awarded a corresponding percentage of the credits specified.

3. Training (2 credits maximum)

Persons who have successfully completed the training requirements of ANSI N45.2.23 may be given two credits.

4. Rights of Management (2 credits maximum)

The Quality Assurance Manager may grant additional credits for other performance factors applicable to auditing as follows:

4.1 For certification of competence in engineering or science related to nuclear power plants, or in quality assurance specialties, issued and approved by a State Agency or National Professional or Technical Society, score two credits.

ENCLOSURE (2)

COMMITMENT TO REGULATORY GUIDE 1.146 (AUGUST 1980)

4.2 For nuclear experience in excess of two years, score one credit for each two years of experience.

4.3 For practical experience that can be related to power plants, in excess of five years, score one credit for each two years of experience.

REASON

Baltimore Gas and Electric is in agreement with the basic purpose of ANSI N45.2.23, that is, to establish minimum educational or experience requirements for Lead Auditors. We think, however, that the system of credits outlined in ANSI N45.2.23 tends to reduce the size of the pool of potential replacement auditors without making redeeming improvement in the capabilities of the persons selected.

We consider the flaw in the current system to be the emphasis on educational requirements that will allow a person with a Master's degree and no nuclear or power plant experience to become a Lead Auditor, but will exclude a person who has no degree, even though he may have 20 years' experience in operating or maintaining nuclear or power plant systems.

The practical balance between education and experience will vary with individuals and particular work assignments. Any attempt to establish rigid requirements is likely to allow some unsuitable candidates to meet the qualification requirements while excluding some acceptable candidates.

REQUIREMENT

3.3 REQUALIFICATION

Lead Auditors who fail to maintain their proficiency for a period of two years or more shall be required to requalify. Requalification shall include retraining in accordance with the requirements of paragraph 2.3.3, reexamination in accordance with paragraph 2.3.5, and participation as an Auditor in at least one nuclear quality assurance audit.

RESPONSE

Baltimore Gas and Electric intends to requalify Lead Auditors on the basis of the satisfactory performance of one audit as observed by a qualified Lead Auditor.

REASON

The purpose of the training specified in paragraph 2.3.3 of the Standard is to ensure that candidates understand the fundamentals of auditing and the requirements for the activities to be audited. The fact that persons have not maintained their proficiency does not mean that they need complete retraining; it means only that they have not been able to review and study the applicable Codes, Standards, Procedures, Instructions, and other documents related to Quality Assurance programs and program auditing.

ENCLOSURE (2)

COMMITMENT TO REGULATORY GUIDE 1.146 (AUGUST 1980)

Baltimore Gas and Electric considers that the satisfactory performance of an audit under the observation and guidance of a qualified Lead Auditor should ensure that persons with lapsed certification will review and understand the pertinent documents.

IMPLEMENTATION

The Baltimore Gas and Electric program for the qualification of audit personnel that is described above will be fully implemented by October 1, 1981.