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January 14, 1991

U. S. Nuclear Regulatory Commission
Washington DC 20555

ATTENTION: Document Control Desk
SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 2; Docket No. 50-318
Implementation Report on Inadequate Core Cooling Instrumentation for Unit 2, NUREG-0737, Item II.F.2

REFERENCE: a) Letter from Mr. J. A. Tiernan (BG&E) to NRC Document Control Desk, dated May 1, 1987, Reactor Vessel Level Monitoring System Implementation of Inadequate Core Cooling Instrumentation

Gentlemen:

Reference (a) provided the Implementation Report for the Unit 2 Reactor Vessel Level Monitoring System (RVLMS). It also contained a commitment to provide the Unit 2 Core Exit Thermocouple System (CETS) Implementation Report prior to start-up from the current (Spring 1989) refueling outage. This report is provided as Attachment A.

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

Very truly yours,

GCC/ERG/dlm:

Attachments (A) Implementation Report, Core Exit Thermocouple System, Unit 2
(B) Unit 2 Core Exit Thermocouple Location Map

Ltr No P91730777

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ATTACHMENT A

IMPLEMENTATION REPORT
CORE EXIT THERMOCOUPLES SYSTEM, UNIT 2

Status

The installation of qualified Incore Instrument (ICI) strings began in the spring of 1987 during the Cycle 8 reload. One ICI string comprises a single core exit thermocouple (CET) location. Twenty-six qualified strings were installed at that time. Functional testing and calibration results are available for inspection. During the Cycle 9 reload of Unit 2, currently being completed, 18 qualified strings were installed. However, four were installed to replace failed qualified strings. Also, attempts to install two additional qualified strings were unsuccessful. Therefore, Unit 2 currently contains 40 qualified strings, 3 non-qualified strings and has 2 locations with no detectors installed. Future replacement of ICI strings with fully qualified strings will ultimately result in the qualification of all 45 channels.

Functional Test Results

The system calibration test results indicated that performance was within design specifications.

Deviations of As-Built System from Design

None.

Procedures

The Emergency Operating Procedures (EOPs) have been revised to include the CETS. Operators have been trained on the system and the EOPs.

Technical Specifications

A request to add the CETS to the Unit 2 Technical Specifications was submitted on June 16, 1988,[1] and approved as Amendment No. 129 on October 12, 1990.[2] Additional information[3] provided to support the amendment indicated that four locations would not contain qualified detectors following the Cycle 9 refueling outage. These locations were 34, 38, 41 and 45. The final configuration has a qualified string in location 34, leaving only 38, 41 and 45 with unqualified strings. However, as indicated above, the qualified strings intended for locations 40 and 44 could not be installed and

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[1]Letter from Mr. J. A. Tiernan (BG&E) to NRC Document Control Desk, dated June 16, 1988, Request for Amendment

[2]Letter from Mr. D. G. McDonald (NRC) to Mr. G. C. Creel (BG&E), dated October 12, 1990 Issuance of Amendment

[3]Letter from Mr. G. C. Creel (BG&E) to NRC Document Control Desk, dated August 3, 1990, Supplemental Information on Core Exit Thermocouples

these locations are empty. These minor deviations from the expected configuration do not affect Calvert Cliffs' ability to meet the Limiting Condition for Operation in the Technical Specifications (two qualified detector locations per core quadrant), or the conclusions regarding the design acceptability as stated in the Safety Evaluation accompanying the Amendment (i.e., each quadrant* must have spatial distribution and independence of power supply within the quadrant).

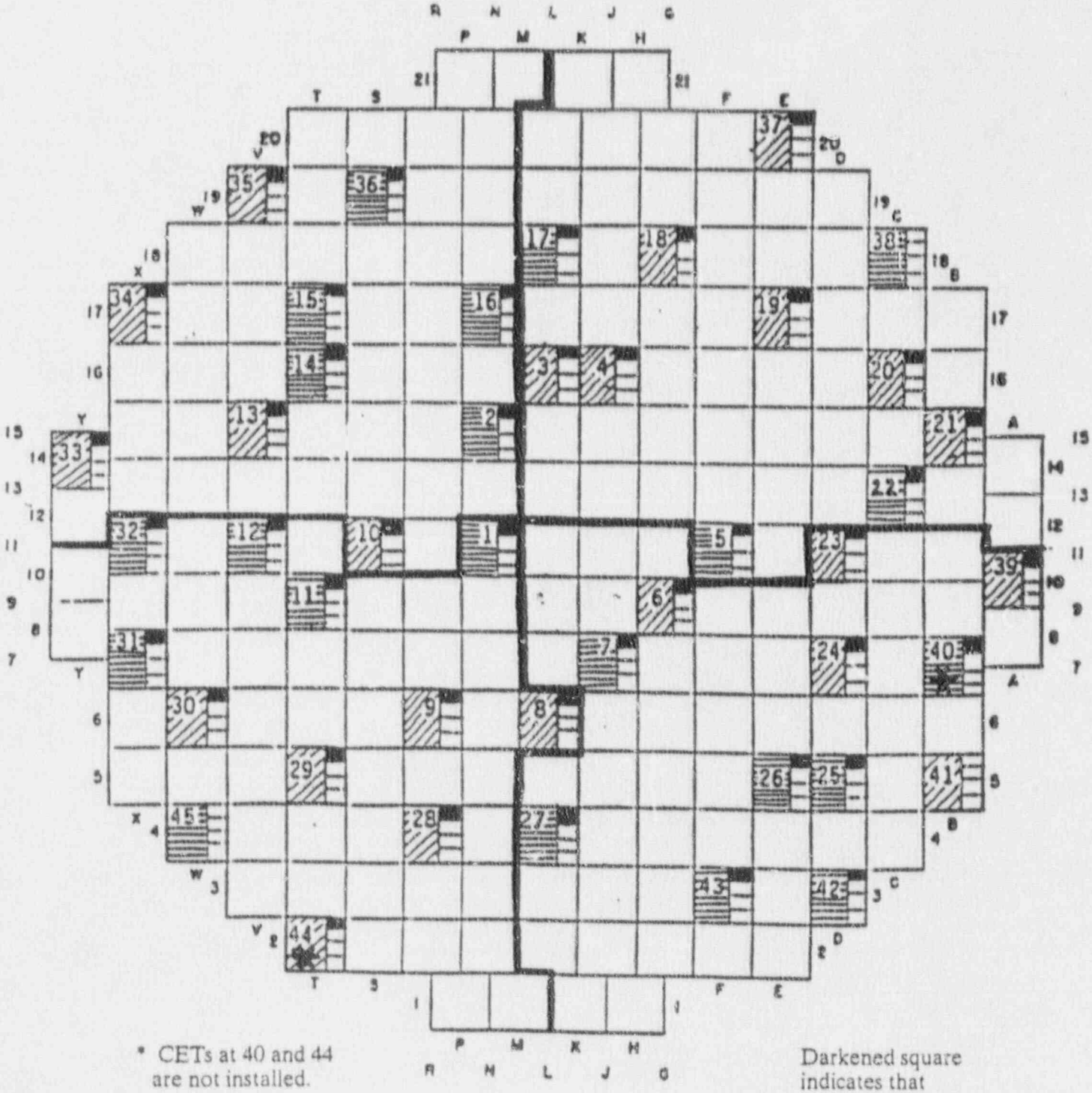
*Does not apply to Unit 1 quadrant containing CET No. 14 until the cycle following RFO-10

ATTACHMENT B

UNIT 2 CORE EXIT THERMOCOUPLES
LOCATION MAP

CHANNEL "ZA" NO

CHANNEL "ZB" NO



* CETs at 40 and 44 are not installed.

Darkened square indicates that CET is qualified.