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UNIT 1
MARKED-UP TECHNICAL SPECIFICATION
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3/4.3 INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

Seismic Instrumentation

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be **OPERABLE**.

APPLICABILITY: At all times.

ACTION:

- a. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to **OPERABLE** status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated **OPERABLE** by the performance of the **CHANNEL CHECK**, **CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above seismic monitoring instruments actuated during a seismic event shall be restored to **OPERABLE** status within 24 hours and a **CHANNEL CALIBRATION** performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

3/4.3 INSTRUMENTATION

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENT OPERABLE</u>
1. Triaxial Time-History Strong Motion Accelerographs		
a. O-YE-001 Unit 1 Containment Base	0-1g	1
b. O-YE-002 Unit 1 Containment 69'	0-1g	1
c. O-YE-003 Auxiliary Bldg. Base	0-1g	1
d. O-YE-004 Intake Structure	0-1g	1
e. O-YE-005 Free Field	0-1g	1
2. Triaxial Seismic Switches		
a. O-YS-001 Unit 1 Containment Base	NA	1
b. O-YS-002 Unit 1 Containment 69'	NA	1
3. Seismic Acceleration Recorder		
a. O-YRC-001 Control Room	NA	1
b. O-YR-001 Control Room	NA	1

3/4.3 INSTRUMENTATION

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK**</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Triaxial Time-History Strong Motion Accelerographs			
a. O-YE-001 Unit 1 Containment Base	M*	R	SA
b. O-YE-002 Unit 1 Containment 69'	M*	R	SA
c. O-YE-003 Auxiliary Bldg. Base	M*	R	S
d. O-YE-004 Intake Structure	M*	R	SA
e. O-YE-005 Free Field	M*	R	SA
2. Triaxial Seismic Switches			
a. O-YS-001 Unit 1 Containment Base	M	R	SA
b. O-YS-002 Unit 1 Containment 69'	M	R	SA
3. Seismic Acceleration Recorder			
a. O-YRC-001 Control Room	M	R	SA
b. U-YR-001 Control Room	M	R	SA

** Verify instrument energized.

* Except seismic trigger.

3/4.3 INSTRUMENTATION

BASES

3/4.3.3.2 Incore Detectors

The **OPERABILITY** of the incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core.

3/4.3.3.3 Seismic Instrumentation

The **OPERABILITY** of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.

3/4.3.3.4 Meteorological Instrumentation

The **OPERABILITY** of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23 "Onsite Meteorological Programs," February 1972, as supplemented by Supplement 1 to NUREG-0737.

3/4.3.3.5 Remote Shutdown Instrumentation

The **OPERABILITY** of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of **HOT STANDBY** of the facility from locations outside of the Control Room. This capability is required in the event Control Room habitability is lost and is consistent with General Design Criteria 19 of 10 CFR Part 50.

3/4.3.3.6 Post-Accident Instrumentation

The **OPERABILITY** of the post-accident instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Plants to Assess Plant Conditions During and Following an Accident," December 1975, and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."

6.0 ADMINISTRATIVE CONTROLS

- (c) Letter from Mr. G. C. Creel (BG&E) to NRC Document Control Desk, dated February 7, 1989, "Calvert Cliffs Nuclear Power Plant Unit No. 2; Docket 50-318, Request for Amendment, Unit 2 Ninth Cycle License Application"
- (d) Letter from Mr. S. A. McNeil, Jr. (NRC) to Mr. G. C. Creel (BG&E), dated January 10, 1990, "Safety Evaluation Report Approving Unit 2 Cycle 9 License Application"
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the NRC Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. ECCS Actuation, Specifications 3.5.2 and 3.5.3.
- ~~b. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.~~
- c. Inoperable Meteorological Instrumentation, Specification 3.3.3.4.
- ~~d. Seismic Event Analysis, Specification 4.3.3.3.2.~~
- e. Core Barrel Movement, Specification 3.4.11.
- f. Fire Detection Instrumentation, Specification 3.3.3.7.
- g. Fire Suppression Systems, Specifications 3.7.11.1, 3.7.11.2, 3.7.11.3, 3.7.11.4, and 3.7.11.5.
- h. Penetration Fire Barriers, Specification 3.7.12.
- i. Steam Generator Tube Inspection Results, Specification 4.4.5.5.a and c.
- j. Specific Activity of Primary Coolant, Specification 3.4.8.

ATTACHMENT (2)

UNIT 2
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3. Seismic Acceleration Recorder		
a. O-YRC-001 Control Room	NA	1
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3/4.3 INSTRUMENTATION

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- j. Specific Activity of Primary Coolant, Specification 3.4.8.
- k. Containment Structural Integrity, Specification 4.6.1.6.