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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INSTRUMENTATION

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

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

APPLICABILITY: At all times.

ACTION:

a. With the number of OPERABLE seismic monitoring channels less than required by Table 3.3-7, restore the inoperable channel(s) to OPERABLE status within 30 days.

b. With one or more seismic monitoring channels 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 system to OPERABLE status.

c. The provisions of Specification 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 and a CHANNEL CALIBRATION performed within 24 hours 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.

*The emergency power source may be inoperable in Modes 5 or 6.

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TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

INSTRUMENT CHANNEL	SENSOR LOCATION	MEASUREMENT RANGE	MINIMUM CHANNELS OPERABLE
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. SMR-42-1	R.B. Elev. 23.0′	0-1 g	1
b. SMR-42-2	R.B. Elev. 62.0′	0-1 g	1
c. SMR-42-3	R.A.B. Elev. -0.5′	0-1 g	1
d. SMR-42-4	R.A.B. Elev. 43.0′	0-1 g	1
e. SMR-42-5	R.A.B. Elev. 19.5′	0-1 g	1
2. PEAK RECORDING ACCELEROGRAPHS			
a. SMR-42-6	R.B. Piping from S.I.T.1A2-c Elev. 46′ 10 9/16"	0-2 g	1
b. SMR-42-7	R.B. Equipment on S.I.T.1A2	0-2 g	1
c. SMR-42-8	R.A.B.-Sh. Dn. Ht. XCHR Supports	0-2 g	1
3. PEAK SHOCK RECORDERS			
a. SMR-42-9	R.B. Elev. 23.0′	-	1
b. SMR-42-10	R.B. M.S. Pipe Restraints - S.G.1B1	-	1
4. EARTHQUAKE FORCE MONITOR			
a. SMI-42-11	Control Room	0-0.2 g	1
5. SEISMIC SWITCH			
a. SMS-42-12	R.B. Elev. 23.0′	-	1

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TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT CHANNEL	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. SMR-42-1	M	R	SA
b. SMR-42-2	M	R	SA
c. SMR-42-3	M	R	SA
d. SMR-42-4	M	R	SA
e. SMR-42-5	M	R	SA
2. PEAK RECORDING ACCELEROGRAPHS			
a. SMR-42-6	N.A.	R	N.A.
b. SMR-42-7	N.A.	R	N.A.
c. SMR-42-8	N.A.	R	N.A.
3. PEAK SHOCK RECORDERS			
a. SMR-42-9	N.A.	R	N.A.
b. SMR-42-10	N.A.	R	N.A.
4. EARTHQUAKE FORCE MONITOR			
a. SMI-42-11	M	R	SA
5. SEISMIC SWITCH			
a. SMS-42-12	N.A.	R	SA

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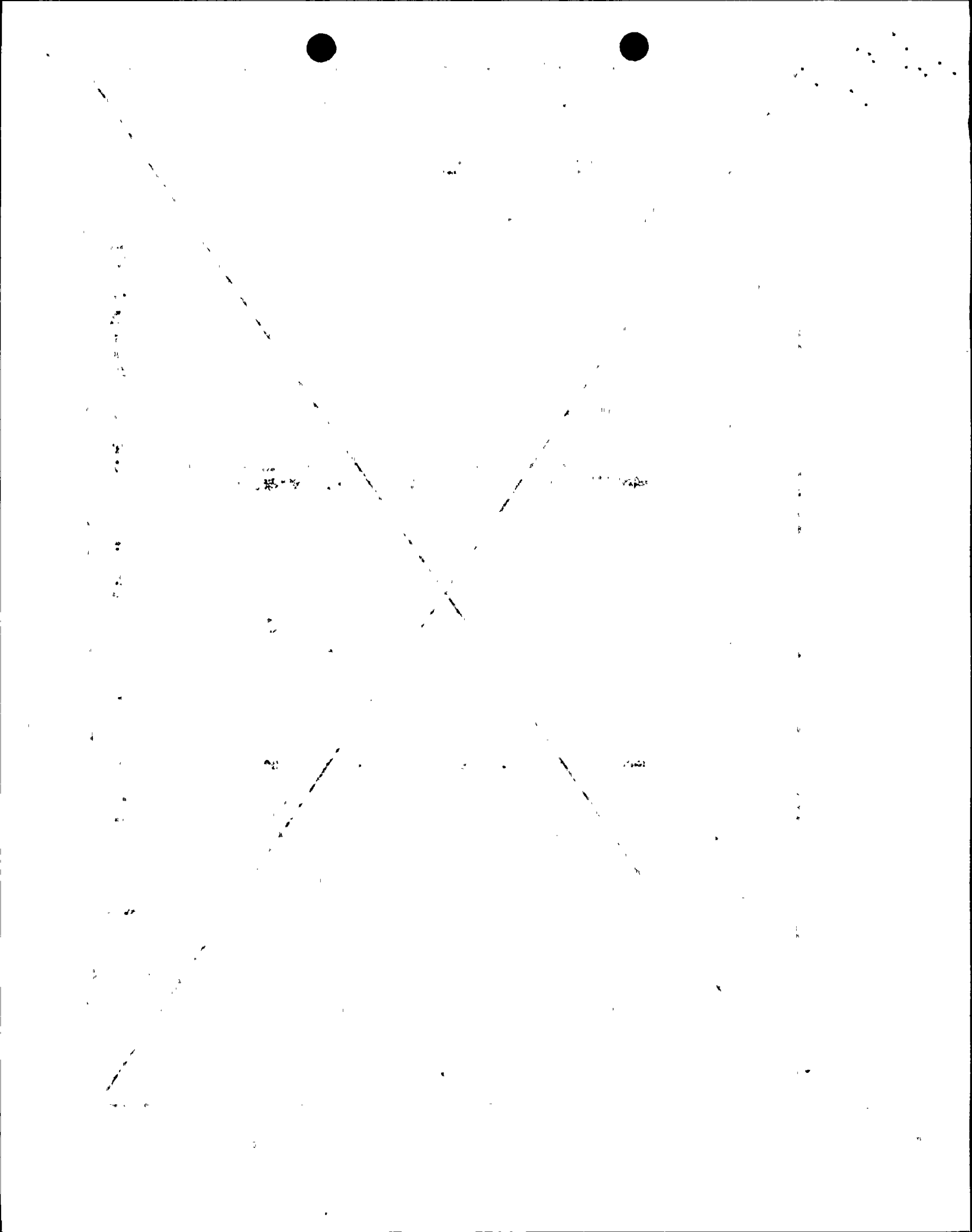

RADIATION MONITORING INSTRUMENTATION (Continued)

by the individual channels; and (2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded; and (3) 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 Power Plants to Assess Plant and Environs Conditions During and Following an Accident," December 1980 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

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~~ INSERT: DELETED

~~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.~~ DELETE

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.

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 SHUTDOWN 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 50.

St. Lucie Unit 1 and Unit 2
Docket Nos. 50-335 and 50-389
Proposed License Amendments
Seismic Instrumentation

ATTACHMENT 4

ST. LUCIE UNIT 2 MARKED-UP TECHNICAL SPECIFICATION PAGES

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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 the number of OPERABLE seismic monitoring channels less than required by Table 3.3-7, restore the inoperable channel(s) to OPERABLE status within 30 days.

b. 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.

c. 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 (greater than or equal to 0.01g) shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days. 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.

* The Seismic Instrumentation System is shared between St. Lucie - Unit 1 and St. Lucie - Unit 2.

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TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION
(Instrumentation located in St. Lucie Unit 1)

INSTRUMENT CHANNEL	SENSOR LOCATION	MEASUREMENT RANGE	MINIMUM CHANNELS OPERABLE
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. SMR-42-1	R.B. Elev. 23.0'	0-1 g	1*
b. SMR-42-2	R.B. Elev. 62.0'	0-1 g	1
c. SMR-42-3	R.A.B. Elev. -0.5'	0-1 g	1
d. SMR-42-4	R.A.B. Elev. 43.0'	0-1 g	1
2. PEAK RECORDING ACCELEROGRAPHS			
a. SMR-42-6	R.B. Piping from S.I.T.1A2-c Elev. 46' 10 9/16"	0-2 g	1
b. SMR-42-7	R.B. Equipment on S.I.T.1A2	0-2 g	1
c. SMR-42-8	R.A.B.-Sh. Bn. Ht. XCHR Supports	0-2 g	1
3. PEAK SHOCK RECORDERS			
a. SMR-42-9	R.B. Elev. 23.0'	-	1
b. SMR-42-10	R.B. M.S. Pipe Restraints - S.G.1B1	-	1
4. EARTHQUAKE FORCE MONITOR			
a. SMI-42-11	Control Room	0-0.2 g	1
5. SEISMIC SWITCH			
a. SMS-42-12	R.B. Elev. 23.0'	-	1*

*With St. Lucie Unit 2 reactor control room alarm

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TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS
(Instrumentation located in St. Lucie Unit 1)

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. SMR-42-1	M*	R	SA
b. SMR-42-2	M*	R	SA
c. SMR-42-3	M*	R	SA
d. SMR-42-4	M*	R	SA
e. SMR-42-5	M*	R	SA
2. PEAK RECORDING ACCELEROGRAPHS			
a. SMR-42-6	NA	R	NA
b. SMR-42-7	NA	R	NA
c. SMR-42-8	NA	R	NA
3. PEAK SHOCK RECORDERS			
a. SMR-42-9	NA	R	NA
b. SMR-42-10	NA	R	NA
4. EARTHQUAKE FORCE MONITOR			
a. SMI-42-11	M	R	SA
5. SEISMIC SWITCH			
a. SMS-42-12	NA	R	SA

* Except seismic trigger

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individual channels; and (2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded; and (3) 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 Power Plants to Assess Plant and Environs Conditions During and Following an Accident," December 1980 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

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~~ INSERT — DELETED

~~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 to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100. The instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.~~ — DELETE

3/4.3.3.4. METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data are 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.

3/4.3.3.5 REMOTE SHUTDOWN SYSTEM INSTRUMENTATION

The OPERABILITY of the remote shutdown system 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 Criterion 19 of 10 CFR Part 50.

The OPERABILITY of the remote shutdown system instrumentation ensures that a fire will not preclude achieving safe shutdown. The remote shutdown system instrumentation, control circuits, and transfer switches are independent of areas where a fire could damage systems normally used to shut down the reactor. This capability is consistent with General Design Criterion 3 and Appendix R to 10 CFR Part 50.