

PROPOSED TECHNICAL SPECIFICATIONS

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APPENDIX A

TECHNICAL SPECIFICATIONS

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APPENDIX A

As required by Section 3, Paragraph B, of Provisional Operating License DPR-13, any changes made to the San Onofre Nuclear Generating Station, Unit 1 Technical Specifications will be authorized by the Nuclear Regulatory Commission. All changes to these Technical Specifications are indicated by a vertical line in the right-hand margin. The length of the line shows the extent of the changed material.

The amendment numbers assigned by the NRC appear in the lower right-hand corner of the page. In general, the highest amendment number is associated with the change bars on each page.

3.5.11 CONTAINMENT SPRAY ACTUATION SYSTEM INSTRUMENTATION

APPLICABILITY: As shown in Table 3.5.11-1.

OBJECTIVE: To ensure reliability of the containment spray actuation system.

SPECIFICATION: The instrumentation channels shown in Table 3.5.11-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.5.11-2.

ACTION:

- A. With an instrumentation channel trip setpoint less conservative than the Allowable Values column of Table 3.5.11-2, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.5.11-1 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint Value.
- B. With an instrumentation channel inoperable, take the ACTION shown in Table 3.5.11-1.

BASIS: The operability of this instrumentation system ensures that 1) the associated action will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available from diverse parameters.

The operability of this instrumentation is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of this instrumentation is consistent with the assumptions used in the accident analyses.

Action 32 allows 8 hours for a channel of containment pressure (High-High) instrumentation to be placed into the tripped condition when one of the three channels is inoperable. This time period is required to allow a Technician to physically place the circuit into the tripped condition.

The generation of a CSAS actuation signal is assumed in the design basis accident analyses once containment pressure reaches 10 psig in order to prevent exceeding the design pressure of containment structure. A detailed calculation has evaluated the combined effects of instrument loop error in order to arrive at the Trip Setpoint and Allowable Values of 7.0 and 8.5 psig, respectively. These values assure that CSAS will actuate prior to exceeding the analyzed pressure of 10.0 psig.

TABLE 3.5.11-1

CONTAINMENT SPRAY ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
Manual Actuation					
1) Train A	2	2	2	1, 2, 3, 4	31
2) Train B	2	2	2	1, 2, 3, 4	31
Containment Pressure-(High-High)	3	2	2	1, 2, 3	32
Sequencer Subchannels	2/sequencer	2/sequencer	2/sequencer	1, 2, 3, 4	33
Actuation Logic	2	1	2	1, 2, 3, 4	34

TABLE 3.5.11-1 (Continued)

TABLE NOTATION

ACTION STATEMENTS

- ACTION 31 - With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 32 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 8 hours and the Minimum Channels OPERABLE is met. One channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.1.14.
- ACTION 33 - With the number of OPERABLE channels less than the Minimum Number of Channels, restore the inoperable channels to OPERABLE status within 72 hours, or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 hours, for surveillance testing per Specification 4.1.14.
- ACTION 34 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.1.14, provided the other channel is OPERABLE.

TABLE 3.5.11-2CONTAINMENT SPRAY ACTUATION SYSTEM INSTRUMENTATION TRIP SET POINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
Manual	Not Applicable	Not Applicable
Containment Pressure-(High-High)	7.0 psig	8.5 psig
Sequencer Subchannels	Not Applicable	Not Applicable
Actuation Logic	Not Applicable	Not Applicable

4.1.14 CONTAINMENT SPRAY ACTUATION SYSTEM INSTRUMENTATION

APPLICABILITY: Applies to instrumentation which actuates the containment spray system.

OBJECTIVE: To ensure reliability of the containment spray actuation instrumentation.

SPECIFICATION: Each instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION, CHANNEL TEST, TRIP ACTUATING DEVICE OPERATIONAL TEST, and ACTUATION LOGIC TEST operations for the MODES and at the frequencies shown in Table 4.1.14-1.

BASIS: The surveillance requirements specified for this instrumentation ensure that the overall system functional capability is maintained comparable to the original design standard. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability.

TABLE 4.1.14-1

CONTAINMENT SPRAY INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
Manual	N.A.	N.A.	N.A.	R	N.A.	1, 2, 3, 4
Containment Pressure- (High-High)	S	R	M(1)	N.A.	N.A.	1, 2, 3
Sequencer Subchannels	N.A.	N.A.	M(2)	N.A.	N.A.	1, 2, 3, 4
Actuation Logic	N.A.	N.A.	N.A.	N.A.	M	1, 2, 3, 4

TABLE 4.1.14-1 (Continued)

TABLE NOTATION

- (1) The CHANNEL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.
- (2) Each train shall be tested at least every 31 days on a STAGGERED TEST BASIS.