ANO-1 TECHNICAL SPECIFICATION

PROPOSED CHANGE PAGES

The Degraded Voltage Monitoring relay settings are based on the short term starting voltage protection as well as long term running voltage protection. The 4.16 KV undervoltage relay setpoints are based on the allowable starting voltage plus maximum system voltage drops to the motor terminals, which allows approximately 78% of motor rated voltage at the motor terminals. The 460V undervoltage relay setpoint is based on long term motor voltage requirements plus the maximum feeder voltage drop allowance resulting in a 92% setting of motor rated voltage.

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables during and following an accident. This capability is consistent with the recommendation of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power 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."

The OPERABILITY of the chlorine detection system ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release," February 1975.

The subcooled margin monitors (SMM), core-exit thermocouples (CET), Reactor Vessel Level Monitoring System (RVLMS), and Hot Leg Level Measurement System (HLLMS) are a result of the Inadequate Core Cooling (ICC) instrumentation required by Item II.F.2 NUREG-0737. The function of the ICC instrumentation is to increase the ability of the plant operators to diagnose the approach to and recovery from ICC. Additionally, they aid in tracking reactor coolant inventory. These instruments are included in the Technical Specifications at the request of NRC Generic Letter 83-37 and are not required by the accident analysis, nor to bring the plant to cold shutdown conditions.

REFERENCE

FSAR, Section 7.1

Table 3.5.1-1 (cont'd)

OTHER SAFETY RELATED SYSTEMS (cont'd) Functional Unit	1 No. of channels	2 No. of channels for system trip	3 Min. operable channels	4 Min. degree of redundancy	5 Operator action if conditions of column 3 or 4 cannot be met
13. In core Thermocouples (core-exit thermocouples)	6/core quadrant	N/A	2/core quadrant	0	Note 22
14. Reactor Vessel Level Monitoring System (RVLMS)	2	N/A	1	0	Note 27
15. Hot Leg Level Measurement System (HLLMS)	2	N/A	1	0	Note 27

Table 3.5.1-1 (cont'd)

23. With the number of operable Electronic (SCR) Trip relays one less than the total number of Electronic (SCR) Trip relays in a channel, restore the inoperable Electronic (SCR) Trip relay to operable status in 48 hours or place the SCRs associated with the inoperable Electronic (SCR) Trip relay in trip in the next hour. With two or more Electronic (SCR) Trip relays inoperable, place all Electronic (SCR) Trip relays associated with that channel in trip in the next hour. This requirement does not apply to the Electronic Trip channels associated with Group 8 Regulating Power Supply.

24. With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

    a. Within 1 hour:

        1. Place the inoperable channel in the tripped condition, or

        2. Remove power supplied to the control rod trip device associated with the inoperable channel.

    b. One additional channel may be bypassed for up to 4 hours for surveillance testing and the inoperable channel above may be bypassed for up to 30 minutes in any 24-hour period when necessary to test the trip breaker associated with the logic of the channel being tested. The inoperable channel above shall not be bypassed to test the logic of a channel of the trip system associated with the inoperable channel.

25. With one of the Control Rod Drive Trip Breaker diverse trip features (undervoltage or shunt trip attachment) inoperable, restore it to OPERABLE status in 48 hours or place the breaker in trip in the next hour.

26. Interrupts motor power to the Safety Groups of control rods only.

27. The channel operability of the RVLMS is defined as a minimum of three sensors in the upper plenum region and two sensors in the dome region operable. The channel operability of the HLLMS is defined as a minimum of one wide range and any two of the narrow range transmitters in the same channel operable.

    With the number of OPERABLE channels one less than the Minimum Operable Channels, operation may continue. A Special Report must be prepared and submitted to the NRC, pursuant to Specification 6.12.5, within 30 days describing the cause of the inoperability and plan and schedule for restoring both channels to OPERABLE status during the next scheduled refueling outage.

Table 4.1-1 (Cont.)

Channel Description	Check	Test	Calibrate	Remarks
d. SG A High Range Level High-high	S	M	R	
e. SG B High Range Level High-high	S	M	R	
57. Containment High Range Radiation Monitors	D	M	R	
58. Containment Pressure-High	M	NA	R	
59. Containment Water Level-Wide Range	M	NA	R	
60. Low Temperature Overpressure Protection Alarm Logic	NA	R	R	
61. Core-exit Thermocouples	M	NA	R	
62. Electronic (SCR) Trip Relays	NA	M	NA	
63. RVLMS	M	NA	R	
64. HLLMS	M	NA	R	

NOTE:

S - Each Shift
W - Weekly
M - Monthly
D - Daily

T/W - Twice per Week
Q - Quarterly
P - Prior to each startup if not done previous week
B/M - Every 2 months

R - Once every 18 months
PC - Prior to going Critical if not done within previous 31 days
NA - Not Applicable

h. Inoperable Fire Detection Instrumentation, Specification 3.5.5.2.

i. Inoperable Fire Suppression Systems, Specifications 3.17.2, 3.18.2, and 3.19.2.

j. Degraded Auxiliary Electrical Systems, Specification 3.7.2.H.

k. Inoperable Inadequate Core Cooling (ICC) Instrumentation, Specification Table 3.5.1-1, Items 14 and 15.

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PROPOSED CHANGE PAGES

TABLE 3.3-10 (Con't)

POST-ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE
13. In Core Thermcouples (Core-Exit Thermocouples)	2/core quadrant
14. Reactor Vessel Level Monitoring System (RVLMS)	1*

* The channel operability of the RVLMS is defined as a minimum of two sensors in the upper plenum region and one sensor in the dome region operable. If both channels are inoperable, operation may continue. A Special Report must be prepared and submitted to the NRC, pursuant to Specification 6.9.2, within 30 days describing the cause of the inoperability and plan and schedule for restoring both channels to OPERABLE status during the next scheduled refueling outage.

TABLE 4.3-10 (Con't)

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
13. In Core Thermocouples (Core-Exit Thermocouples)	M	R
14. Reactor Vessel Level Monitoring System (RVLMS)	M	R

1. Radiological Environmental Monitoring Sample Analysis, Specification 3.12.1.

m. Unplanned Offsite Release during one hour period of 1) more than 1 curie of radioactive material in liquid effluents, 2) more than 150 curies of noble gas in gaseous effluents, or 3) more than 0.05 curies of radioiodine in gaseous effluents. This report shall be submitted within 30 days of the occurrence of the event and shall include the following information:

1. Description of the occurrence.

2. Identify the cause(s) of exceeding the limit(s).

3 Explain corrective action(s) taken to mitigate occurrence.

4. Define action(s) taken to prevent recurrence.

5. Summary of the consequence(s) of occurrence.

n. Inoperable Reactor Vessel Level Monitoring System (RVLMS), Specification 3.3, Table 3.3-10 Item 14.

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT*

6.9.3 Routine radioactive effluent release reports covering the operating of the unit during the previous 6 months of operations shall be submitted within 60 days after January 1 and July 1 of each year.

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*A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste system, the submittal shall specify the releases of radioactive material from each unit.