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TRM2 - TECHNICAL REQUIREMENTS MANUAL UNIT 2

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A001

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3.4 Reactor Coolant System

3.4.1 Reactor Coolant System Chemistry

TRO 3.4.1 The chemistry of the reactor coolant system shall be maintained within the limits specified in Table 3.4.1-1 and the conductivity recorder shall be OPERABLE.

APPLICABILITY: At all times

ACTIONS

NOTE

1. The provisions of TRO 3.0.4 are not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Conductivity not within the limits specified in Table 3.4.1-1.	A.1 Perform TRS 3.4.1.1 and TRS 3.4.1.3. <u>AND</u> A.2 Perform TRS 3.4.1.4	Once per 8 hours Once per 24 hours
B. Conductivity or Chlorides not within the limits specified in Table 3.4.1-1 in MODE 1 but with conductivity less than 10 $\mu\text{mho/cm}$ at 25°C and chloride concentration less than 0.5 ppm.	B.1 Restore parameter within limits	72 hours <u>AND</u> ≤ 336 hours/year, cumulative time exceeding the limit
C. pH not within limits of Table 3.4.1-1 in MODE 1.	C.1 Restore pH within limits.	72 hours
D. Required Actions and associated Completion Times of Conditions B or C not met.	D.1 Be in MODE 2	6 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>-----NOTE----- Required Actions shall be completed if this Condition is entered.</p> <p>E. Conductivity greater than or equal to 10 μmho/cm at 25°C or chloride concentration greater than or equal to than 0.5 ppm.</p>	<p>E.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.2 Be in MODE 4.</p>	<p>12 hours</p> <p>-----NOTE----- Cooldown should be performed as rapidly as possible not to exceed the cooldown rate</p> <p>36 hours</p>
F. Reactor Coolant Chemistry not within limits specified in Table 3.4.1-1 for MODE 2 or 3	F.1 Restore parameter to within limits.	48 hours
G. Required Actions and Completion Time of Condition F not met.	<p>G.1 Be in MODE 3</p> <p><u>AND</u></p> <p>G.2 Be in MODE 4</p>	<p>12 hours</p> <p>36 hours</p>
<p>H. -----NOTE----- Only applicable when in a MODE other than MODES 1, 2, or 3.</p> <p>Reactor Coolant Chemistry not within limits specified in Table 3.4.1-1.</p>	H.1 Restore parameter to within limits	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>-----NOTE----- Required Actions shall be completed if this Condition is entered.</p> <p>-----I.----- Chloride concentration greater than 0.5 ppm for >24 hours</p>	I.1 Perform Engineering Evaluation of structural integrity	Prior to proceeding to MODE 3
J. Conductivity recorder inoperable.	J.1 Obtain in-line conductivity measurement or grab sample	<p>-----NOTE----- Applicable in MODES 1, 2, or 3.</p> <p>Once per 4 hours</p> <p>AND</p> <p>-----NOTE----- Applicable in other than MODES 1, 2, or 3.</p> <p>Once per 24 hours</p>

TECHNICAL REQUIREMENT SURVEILLANCE

SURVEILLANCE		FREQUENCY
TRS 3.4.1.1	Analyze a sample of reactor coolant for chlorides	72 hours
TRS 3.4.1.2	Analyze a sample of reactor coolant for conductivity	72 hours
TRS 3.4.1.3	Analyze a sample of reactor coolant for pH	<p>-----NOTE----- Only required to be performed if reactor conductivity is greater than 1.0 $\mu\text{mho/cm}$ at 25°C</p> 72 hours
TRS 3.4.1.4	Perform CHANNEL CHECK of the continuous conductivity monitor	7 days

TABLE 3.4.1-1
REACTOR COOLANT SYSTEM CHEMISTRY LIMITS

MODE	CONDUCTIVITY $\mu\text{mho/cm @ } 25^\circ\text{C}$	CHLORIDE CONCENTRATION ppm	pH
1	≤ 1.0	≤ 0.2	$5.6 \leq \text{pH} \leq 8.6$
2 and 3	≤ 2.0	≤ 0.1	$5.6 \leq \text{pH} \leq 8.6$
At all times other than MODE 1, 2, or 3	≤ 10.0	≤ 0.5	$5.3 \leq \text{pH} \leq 8.6$