

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION

Marked-up Technical Specifications Pages.

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Note:

Values which have changed as a result of this review are shown as "ballooned" changes. The other changes shown were submitted previously under letter L-90-417.

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PDR



TABLE 2.2-1. (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWANCE (TA)	Z	S	TRIP SETPOINT	ALLOWABLE VALUE
12. Steam/Feedwater Flow Mismatch Coincident With Steam Generator Water Level-Low	[] 20.0 [] 5.0 []	[] 3.67 2.33 []	[] 7.3## 1.9 []	Feed Flow $\leq 20\%$ $< 0.64 \times 10^6$ lb/hr below steam flow $\geq 15\%$ of narrow range instrument span 70% bus voltage > 2496 volts each bus	Feed Flow $\leq 23.9\%$ $< [] \times 10^6$ lb/hr below steam flow 13.2 $\geq []\%$ of narrow range instrument span 69% bus voltage $> []$ volts each bus 55.9 $> []$ Hz
13. Undervoltage - 4.16 kV Busses A and B	20.0 6.5 16.4 []	1.12 0.03 0.50 []	0.0 [] 0.0 []	> 2496 volts each bus	$> []$ volts each bus
14. Underfrequency - Trip of Reactor Coolant Pump Breaker(s) Open	[]	[]	[]	≥ 56.1 Hz	$> []$ Hz
15. Turbine Trip	2.6 3.6 []	1.0 []	0.0 []	≥ 45 psig	42 43 $\geq []$ psig
a. Auto Stop Oil Pressure	[]	[]	[]	≥ 45 psig	$\geq []$ psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	Fully Closed ***	Fully Closed ***
16. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N. A.	N.A.
17. Reactor Trip System Interlocks	N.A.	N.A.	N.A.	Nominally	6.0×10^{-11}
a. Intermediate Range Neutron Flux, P-6	[]	[]	[]	1×10^{-10} amp	$\geq []$ amps

***Limit switch is set when Turbine Stop Valves are fully closed.

1.7% SPAN for Steam Line Flow, 2.9% SPAN for feedwater flow and 2.8% SPAN for Steam Line Pressure



1

2

3

4

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWANCE (TA)	Z	S	TRIP SETPOINT	ALLOWABLE VALUE#
1. Safety Injection (Reactor Trip, Turbine Trip, Feedwater Isolation, Control Room Ventilation Isolation, Start Diesel Generators, Containment Phase A Isolation (except Manual SI), Containment Cooling Fans, Containment Filter Fans, Start Sequencer, Component Cooling Water, Start Auxiliary Feedwater and Intake Cooling Water)					
a. Manual Initiation	N.A.			N.A.	
b. Automatic Actuation Logic	N.A.	N.A.	N.A.	N.A.	
c. Containment Pressure--High	13.3 N.A. 2.0 13.0	10.3 N.A. 0.2 8.4	N.A. N.A. 0.0 1.4	N.A. 4.0 ≤ 8 psig 1730	N.A. 4.5 N.A. 5.5 1712 ≤ 1712 psig
d. Pressurizer Pressure--Low	4.6	1.57	4.60*	≥ 1715 psig 100	≥ 114 psig
e. High Differential Pressure Between the Steam Line Header and any Steam Line.	16.7	2.86	3.9	≤ 150 psi	≤ 114 psi
f. Steam Line Flow--High				< A function defined as follows: A Δp corresponding to 40 % steam flow at 0% load increasing linearly to a value corresponding to 120 % steam flow at full load.	(INSERT)

* 2.3 % Span for each sensor.

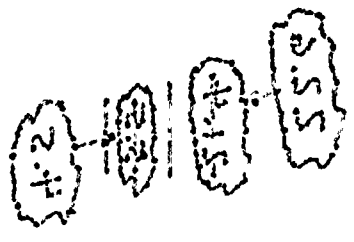
≤ A function defined as follows: A Delta-P corresponding to 42.6 % steam flow at 0% load increasing linearly from 20 % load to a value corresponding to 122.6 % steam flow at full load.

TABLE 3.3-3 (Continued)

**ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS**

FUNCTIONAL UNIT	ALLOWANCE (TA)	Z	S	TRIP SETPOINT	ALLOWABLE VALUE#
Coincident with: Steam Generator Pressure--Low or T _{avg} --Low	13.0 []	1.16 []	2.3 []	614 ≥600 psig	588 ≥[] psig
2. Containment Spray	4.0	2.0	1.0	≥543°F	≥542.5°F
a. Automatic Actuation Logic and Actuation Relays	N.A. 21.3	N.A. 2.7	N.A.	N.A.	N.A. 22.6
b. Containment Pressure--High- High Coincident with: Containment Pressure--High	10.0 [] 2.0 [] 13.3	1.6 [] 0.2 [] 10.3	0.0 [] 0.0 []	20.0 ≤30.0 psig 4.0 ≤6.0 psig	21.4 [] psig 5.5 [] psig 4.5
3. Containment Isolation					
a. Phase "A" Isolation					
1) Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
3) Safety Injection	see item 1			See Item 1 above for all Safety Injection Trip Setpoints and Allowable Values.	
b. Phase "B" Isolation					
1) Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.

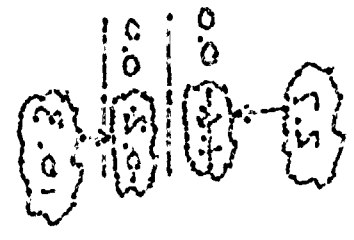
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413

50.0
4.0

2.5 21.1



12.0

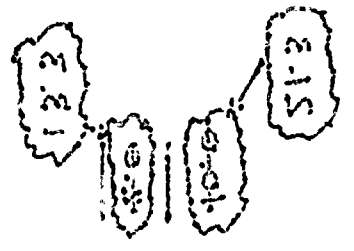


TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWANCE (TA)	Z	S	TRIP SETPOINT	ALLOWABLE VALUE#
3. Containment Isolation (Continued)					
2) Automatic Actuation Logic and Actuation Relays	N.A. 21.3 10.0	2.7 N.A. N.A. 1.6 0.0		N.A. 20.0	N.A. 22.6 21.4
3) Containment Pressure--High-High Coincident with: Containment Pressure--High	[] 2.0 13.3	[] [] 0.2 0.0 10.3		≤ 30.0 psig 4.0 ≤ 6.0 psig	≤ [] psig 5.5 4.5
c. Containment Ventilation Isolation					
1) Containment Isolation Manual Phase A or Manual Phase B	N.A.	N.A. N.A.		N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A. N.A.		N.A.	N.A.
3) Safety Injection	see item 1			See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.	
4) Containment Radioactivity--High (1)	N.A. []	N.A. N.A. [] []		Particulate (R-11) < 6.1 x 10 ⁵ CPM Gaseous (R-12) See (2)	[] (INSERT)
4. Steam Line Isolation					
a. Manual Initiation	N.A.	N.A. N.A.		N.A.	N.A.

Particulate (R-11) ≤ 6.8 x 10⁵ CPM
Gaseous (R-12) See (2)

0-0-0-0

100

155

AA-1

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TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

≤ A function defined as follows: A ΔP corresponding to 42.6% Steam Flow at 0% load increasing linearly from 20% load to a value corresponding to 122.6% steam flow at full load.

FUNCTIONAL UNIT

4. Steam Line Isolation (Continued)

- b. Automatic Actuation Logic and Actuation Relays
- c. Containment Pressure--High
High Coincident with:
Containment Pressure--High
- f. Steam Line Flow--High

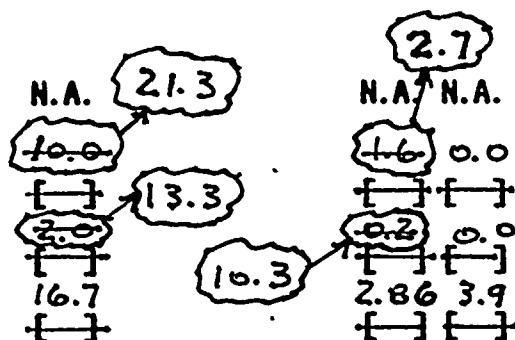
ALLOWANCE (TA)

Z

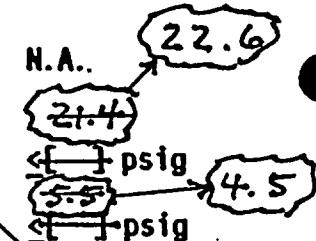
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TRIP SETPOINT

ALLOWABLE VALUE#



N.A.
20.0
≤30.0 psig
4.0
≤6.0 psig



<A function defined []

as follows: A Δp corresponding to 0.64×10^6 lbs/hr at 0% load increasing linearly to a Δp corresponding to 3.84×10^6 lbs/hr at full load.

40% steam flow

from 20% load to a value

120% steam flow

13.0
[] 1.16 2.3
[] [] []

614
≥600 psig

588
≥[] psig

Coincident with:
Steam Line
Pressure--Low
or
T_{avg}--Low

4.0 2.0 1.0

≥543°F

≥542.5°F

5. Feedwater Isolation

- a. Automatic Actuation Logic and Actuation Relays
- b. Safety Injection

N.A.

N.A. N.A.

N.A.

N.A.

see item 1

See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.

