

3.5.1.7 The Decay Heat Removal System isolation valve closure setpoints shall be equal to or less than 340 psig for one valve and equal to or less than 400 psig for the second valve in the suction line. The relief valve setting for the DHR system shall be equal to or less than 450 psig.

3.5.1.8 The degraded voltage monitoring relay settings shall be as follows:

- a. The 4.16 KV emergency bus undervoltage relay setpoints shall be  $> 3115 \text{ VAC}$  but  $< 3177 \text{ VAC}$ .
- b. The 460 V emergency bus undervoltage relay setpoints shall be  $> 423 \text{ VAC}$  but  $< 431 \text{ VAC}$  with a time delay setpoint of 8 seconds  $\pm 1$  second.

Table 3.5.1-1 (Cont'd)

REACTOR PROTECTION SYSTEM (Cont'd)

	1	2	3	4	5
<u>Functional Unit</u>	<u>No. of channels</u>	<u>No. of channels for system trip</u>	<u>Min. operable channels</u>	<u>Min. degree of redundancy</u>	<u>Operator action if conditions of column 3 or 4 cannot be met</u>
11. Reactor trip upon loss of Main Feedwater	4	2	2	1	Notes 1, 15
12. Reactor trip upon turbine trip	4	2	2	1	Notes 1, 16

Table 3.5.1-1 (Cont'd)

OTHER SAFETY RELATED SYSTEMS

	1	2	3	4	5
<u>Functional Unit</u>	<u>No. of channels</u>	<u>No. of channels for system trip</u>	<u>Min. operable channels</u>	<u>Min. degree of redundancy</u>	<u>Operator action if conditions of column 3 or 4 cannot be met</u>
2. Steam line break instrumentation control system (SLBIC). (a) SLBIC Control & Logic Channels	2	1	2	1	Notes 9, 5
3. Pressurizer level channels	3	N/A	2	1	Note 10
4. Emergency Feedwater flow channels	2/S.G.	N/A	1	0	Note 10
5. RCS subcooling margin monitors	2	N/A	1	0	Note 10
6. Electromatic relief valve flow monitor	2	N/A	1	0	Note 11
7. Electromatic relief block valve position indicator	1	N/A	1	0	Note 12
8. Pressurizer code safety valve flow monitors	2/valve	N/A	1/valve	0	Note 10
9. Degraded Voltage Monitoring					
a. 4.16 KV Emergency Bus Undervoltage	2/Bus	1/Bus	2/Bus	0	Note 14
b. 480 V Emergency Bus Undervoltage	*1/Bus	1/Bus	1/Bus	0	Notes 13, 14

\* Two undervoltage relays per bus are used with a coincident trip logic (2-out-of-2)

Table 3.5.1-1 (Cont'd)

- Notes:
1. Initiate a shutdown using normal operating instructions and place the reactor in the hot shutdown condition if the requirements of columns 3 and 4 are not met within 12 hours.
  2. When 2 of 4 power range instrument channels are greater than 10% rated power, hot shutdown is not required.
  3. When 1 of 2 intermediate range instrument channels is greater than  $10^{-10}$  amps, hot shutdown is not required.
  4. For channel testing, calibration, or maintenance, the minimum number of operable channels may be two and a degree of redundancy of one for a maximum of four hours, after which Note 1 applies.
  5. If the requirements of Columns 3 or 4 cannot be met within an additional 48 hours, place the reactor in the cold shutdown condition within 24 hours.
  6. The minimum number of operable channels may be reduced to 2, provided that the system is reduced to 1 out of 2 coincidence by tripping the remaining channel. Otherwise, Specification 3.3 shall apply.
  7. These channels initiate control rod withdrawal inhibits not reactor trips at 10% rated power. Above 10% rated power, those inhibits are bypassed.
  8. If any one component of a digital subsystem is inoperable, the entire digital subsystem is considered inoperable. Hence, the associated safety features are inoperable and Specification 3.3 applies.
  9. The minimum number of operable channels may be reduced to one and the minimum degree of redundancy to zero for a maximum of 24 hours, after which Note 1 applies.
  10. With the number of operable channels less than required, either restore the inoperable channel to operable status within 30 days, or be in hot shutdown within 12 hours.
  11. With the number of operable channels less than required, isolate the electromechanical relief valve within 4 hours, otherwise Note 9 applies.
  12. With the number of operable channels less than required, either return the indicator to operable status within 24 hours, or verify the block valve closed and power removed within an additional 24 hours. If the block valve cannot be verified closed within the additional 24 hours, de-energize the electromechanical relief valve power supply within the following 12 hours.

Table 3.5.1-1 (Cont'd)

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Notes Cont'd.

13. Channels may be bypassed for not greater than 30 seconds during reactor coolant pump starts. If the automatic bypass circuit or its alarm circuit is inoperable, the undervoltage protection shall be restored within 1 hour, otherwise, Note 14 applies.
14. With the number of channels less than required, restore the inoperable channels to operable status within 72 hours or be in hot shutdown within the next 6 hours and in cold shutdown within the following 30 hours.
15. This trip function may be bypassed at up to 10% reactor power.
16. This trip function may be bypassed at up to 20% reactor power.