

APR1400 DCD TIER 1

and control steam flow to the LP turbines. The non-return check valves are installed in the extraction lines to the feedwater heaters.

- 1.a The arrangement of the T/G system is as described in the Design Description of Subsection 2.7.1.1.1.
- 1.b The T/G has a favorable orientation to minimize the potential effects of turbine missiles on essential (as defined in Regulatory Guide 1.115, Rev. 2, Appendix A) SSCs. ~~The essential SSCs that are located within the low-trajectory turbine missile strike zone are failsafe or protected by physical barriers.~~
- 2.a The mechanical overspeed trip system initiates the T/G trip upon reaching the overspeed setpoint.
- 2.b The electrical overspeed trip system, which is independent of the normal speed control system and mechanical overspeed trip system, initiates a T/G trip by an electrical signal at a speed slightly higher than for the mechanical overspeed trip.
3. The control system generates the electrical signals in the main control room (MCR) for T/G trip.
4. The MSVs, CVs, ISVs, and IVs close reacting to a T/G trip signal.
5. The non-return check valves on extraction lines close reacting to T/G trip signal.
6. The reactor trip signal from the plant control system initiates a T/G trip.
7. The turbine and turbine valve in-service test and inspection program includes scope, frequency, methods, acceptance, disposition of reportable indications, corrective actions, and technical basis for inspection frequency.
8. The probability of a strike by a turbine missile is sufficiently low to prevent equipment damage to essential SSCs.
9. The as-built turbine material properties, turbine rotor and blade designs, pre-service inspection and testing results and in-service testing and inspection

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Table 2.7.1.1-1 (1 of 3)

Turbine Generator ITAAC

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The arrangement of the T/G system is as described in the Design Description of Subsection 2.7.1.1.1	1.a Inspection of the as-built T/G system configuration will be conducted.	1.a The as-built T/G conforms with the functional arrangement as described in the Design Description of Subsection 2.7.1.1.1.
1.b The T/G has a favorable orientation to minimize the potential effects of turbine missiles on essential (as defined in Regulatory Guide 1.115, Rev. 2, Appendix A) SSCs. The essential SSCs that are located within the low-trajectory turbine missile strike zone are failsafe or protected by physical barriers.	1.b Inspections of turbine orientation with respect to the essential SSCs will be conducted. The consequences of turbine missile impact on those SSCs that are located within the low-trajectory turbine missile strike zone defined by Figure 1 of Regulatory Guide 1.115, Rev. 2, will be analyzed.	1.b An analysis exists to confirm that any essential SSCs (as defined in Regulatory Guide 1.115, Rev. 2, Appendix A) that are located inside the low trajectory turbine missile strike zone are failsafe or are protected by physical barriers.
2.a The mechanical overspeed trip system initiates the T/G trip upon reaching the overspeed setpoint.	2.a A trip test will be conducted on the as-built main turbine system to ensure the T/G trips on reaching an overspeed setpoint.	2.a A report of testing exists documenting that as-built MSVs, CVs, ISVs, and IVs close when the mechanical overspeed trip system reaching a setpoint for overspeed protection initiates the T/G trip.
2.b The electrical overspeed trip system, which is independent of the normal speed control system and mechanical overspeed trip system, initiates a T/G trip by an electrical signal at a speed slightly higher than for the mechanical overspeed trip.	2.b A trip test will be conducted on the as-built main turbine system by an actual or simulated trip signal.	2.b A report of testing exists documenting that as-built MSVs, CVs, ISVs, and IVs close when the system initiates the T/G trip by an actual or simulated signal.
3. The control system generates the electrical signals in the main control room (MCR) for T/G trip.	3. Tests will be conducted on the as-built T/G system by controls in the MCR.	3. A report of testing exists documenting that Controls in the as-built MCR close the MSVs, CVs, ISVs, and IVs.

no