

## 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. <del>The essential SSCs that are located within the low-trajectory turbine missile strike zone are failsafe or protected by physical barriers.</del>	1.b Inspections of turbine orientation with respect to the essential SSCs will be conducted. <del>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.</del>	1.b An analysis exists to confirm that <del>any</del> essential SSCs (as defined in Regulatory Guide 1.115, Rev. 2, Appendix A) <del>that</del> are located inside the low trajectory turbine missile strike zone <del>are failsafe or are protected by physical barriers.</del>
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