(Examples based on as-submitted AP1000 DCD Rev 17)

1. Functional arrangement of as-built SSC is consistent with DCD

Example 2.2.03.01

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
The functional arrangement of the PXS is as described in the Design Description of this Section 2.2.3.	Inspection of the as-built system will be performed.	The as-built PXS conforms with the functional arrangement as described in the Design Description of this Section 2.2.3.

Sample finding:
Inspection identifies two valves in the injection path from the containment recirculation screen to the DVI are installed incorrectly. The squib valve (V120A) is upstream, rather than downstream of the check valve (V119A).

2. Pipe segments, welds, or components designed to a certain requirement meet that requirement. Examples include ASME requirements, LBB, etc…

Example 2.2.03.03b

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
Pressure boundary welds in piping identified in Table 2.2.3-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

Sample finding:
Several lines are determined to have welds that fail to meet code requirements or the licensee cannot produce the appropriate ASME reports to determine that lines do not meet code requirements.

3. Flow or leakage rate is tested. Includes forced flow and natural circulation.

Example 2.3.02.08a.i

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
The CVS provides makeup water to the RCS.	Testing will be performed by aligning a flow path from each CVS makeup pump, actuating makeup flow to the RCS at pressure greater than or equal to 2000 psia, and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank.	Each CVS makeup pump provides a flow rate of greater than or equal to 100 gpm.

Sample finding:
CVS passes test but it is later discovered that testing is performed with incorrectly calibrated gauge. Actual flow rate during test was 90 gpm.

4. Physical characteristics or dimensions (e.g. wall thicknesses, elevations) meet specifications and are verified by measurement or calculations. This ITAAC type also includes coating requirements and tank sizes.

Example 2.2.03.08c.iv.02

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
The PXS provides RCS makeup, boration, and safety injection during design basis events.	Inspections of the elevation of the following pipe lines will be conducted: Containment recirculation lines; containment to IRWST lines	The maximum elevation of the top inside surface of these lines is less than the elevation of IRWST bottom inside surface

Sample finding:
Field measurement is performed incorrectly due to drawing inaccuracy.

5. Component performs a function when demanded or de-energized.

Example 2.2.03.12a.iii

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
The motor-operated and check valves identified in Table 2.2.3-1 perform an active safety-related function to change position as indicated in the table.	Tests of the as-installed motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	Each motor-operated valve changes position as indicated in Table 2.2.3-1 under preoperational test conditions.

Testing is performed and the valves change state correctly but it is later discovered that the flow conditions were non-conservative because the differential pressure established during the test was too low.

6. SSCs can withstand an adverse condition (e.g. harsh environment or seismic condition)

Example 2.2.03.07a.ii

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	ii) Inspection will be performed of the as-installed Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-installed Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

A CMT level sensor is type tested and passes but it is later discovered that the type test was not representative of the environmental conditions described by the DCD.

7. Equipment that is required to withstand an adverse condition is installed in a manner bounded by test and/or analysis

Example 2.2.03.07a

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
7.a) The Class 1E equipment identified in Table 2.2.3-1 can withstand seismic design basis loads without loss of safety function.	Inspection will be performed for the existence of a report verifying that the as-installed equipment including anchorage is seismically bounded by the tested or analyzed conditions.	A report exists and concludes that the as-installed equipment including anchorage is seismically bounded by the tested or analyzed conditions.

A valve is installed in an orientation or with seismic anchorage that is not bounded by previously conducted type testing.

8. A control or parameter display exists in the Main Control Room

Example 2.2.03.10

Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
Safety-related displays of the parameters identified in Table 2.2.3-1 can be retrieved in the MCR.	Inspection will be performed for the retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.3-1 can be retrieved in the MCR.

The position of a valve (e.g. IRWST gutter isolation valve) is not available in the MCR.

9. A test or analysis verifies that an SSC has a certain capacity (e.g. voltage). Note that this is different from ITAAC type 3 in that the *rate* is not tested, just the net capacity.

Example 2.6.01.04d

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.d) Each ancillary diesel generator unit is sized to supply power to long-term safety-related post-accident monitoring loads and control room lighting and ventilation through a regulating transformer; and for one PCS recirculation pump.	Each ancillary diesel generator will be operated with fuel supplied from the ancillary diesel generator fuel tank and with a load of 35 kW or greater and a power factor between 0.9 and 1.0 for a time period required to reach engine temperature equilibrium plus 2.5 hours.	Each diesel generator provides power to the load with a generator terminal voltage of 480 ± 10% volts and a frequency of 60 ± 5% Hz.

Inspection determines that voltage indication was not inaccurate and licensee is unable to conclude that actual terminal voltage was within 10% of 480V.

10. Physical or electrical separation for trains is provided and components are powered from the correct electrical division

Example 2.5.02.06a.i

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6.a) The PMS initiates an automatic reactor trip, as identified in Table 2.5.2-2, when plant process signals reach specified limits.	An operational test of the as-built PMS will be performed using real or simulated test signals.	i) The reactor trip switchgear opens after the test signal reaches the specified limit. This only needs to be verified for one automatic reactor trip function.

The PMS fails to provide a trip signal during a test despite the fact that specified limit (e.g. OTΔT, PZR low pressure, etc) is reached.

11. Design diversity protects against common cause failures

Example 2.2.03.09b

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
The accumulator discharge check valves are of a different type than the CMT discharge check valves	An inspection of the accumulator and CMT discharge check valves is performed	The accumulator discharge check valves are of a different type than the CMT discharge check valves

Licensee's makes a design change and fails to recognize that ACC and CMT discharge check valves are now of the same type (e.g. swing check).

12. Security or EP-related ITAAC

Example 3.3.17

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
17. Vital areas are locked and alarmed with active intrusion detection systems that annunciate in the central and secondary alarm stations upon intrusion into a vital area.	An inspection of the as-built vital areas, and central and secondary alarm stations are performed.	Vital areas are locked and alarmed with active and intrusion is detected and annunciated in both the central and secondary alarm stations.

Traditional enforcement or other deterministic guidance should be used for these types of ITAAC.