

Enclosure 1

List of Additional Uncompleted ITAAC Items Included in the Pilot Project

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Enclosure 2

Completion Plans for Uncompleted ITAAC Items Listed in Enclosure 1

Subject: Uncompleted ITAAC 2.1.02.08a.i [Index No. 28]

ITAAC Statement

Design Commitment

8.a) *The pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.*

Inspections/Tests/Analyses

i) *Inspections will be conducted to confirm that the value of the vendor code plate rating is greater than or equal to system relief requirements.*

Acceptance Criteria

i) *The sum of the rated capacities recorded on the valve ASME Code plates of the safety valves exceeds 1,500,000 lb/hr.*

ITAAC Completion Description

Multiple ITAAC are performed to demonstrate that the pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code (Reference 1). This ITAAC requires that the sum of the pressurizer safety valve ASME Code plate rated capacities are greater than or equal to system relief requirements and thus provides overpressure protection.

An inspection of the pressurizer safety valves, (RCS-PL-V005A and RCS-PL-V005B) is performed. The sum of the rated capacities recorded on the valve ASME Code plates of the safety valves exceeds 1,500,000 lb/hr. The Pressurizer Safety Valve flow capacity recorded on the valve ASME Code plate is certified by ASME through the National Board of Boiler and Pressure Vessel Inspectors (NBBPVI). Article NB-7700 of the ASME Boiler and Pressure Vessel Code, Section III (Reference 1) describes the methods required to certify the relief device capacity and determine a coefficient used in determining capacity in subsequently manufactured valves. The safety valve flow capacity for the Pressurizer Safety Valves is calculated by a set of equations using the coefficient found in NB-7700 and also in NB-18, Pressure Relief Device Certification from the NBBPVI. This capacity value is recorded on the ASME Code plate.

The ASME code data plate for each Pressurizer Safety Valve indicates each valve has a rated capacity of XXX,XXX lb/hr. Therefore, the sum of the rated Pressurizer Safety Valve capacities is X,XXX,XXX lb/hr.

The “Quality Release and Certificate of Conformance for PV62 Valves” document (Reference 2) exists and concludes that the sum of the rated capacities recorded on the valve ASME Code plates of the safety valves exceeds 1,500,000 lb/hr and confirms the acceptance criteria are met. Reference 2 is available for NRC inspection as part of the ITAAC Completion Package (Reference 3).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, the Licensee performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

References (available for NRC inspection)

1. ASME Boiler & Pressure Vessel Code, Section III, NB-7700 and NB-18
2. XXX-PV62-VQQ-001, “Quality Release and Certificate of Conformance for PV62 Valves”
3. ITAAC 2.1.02.08a.i Completion Package
4. NEI 08-01, “Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52”

Subject: Uncompleted ITAAC 2.1 02.08a.ii [Index No. 29]

ITAAC Statement

Design Commitment

8.a) *The pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.*

Inspections/Tests/Analyses

ii) *Testing and analysis in accordance with ASME Code Section III will be performed to determine set pressure.*

Acceptance Criteria

ii) *A report exists and concludes that the safety valves set pressure is 2485 psig \pm 25 psi.*

ITAAC Completion Description

Multiple ITAAC are performed to demonstrate that the pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code (Reference 1). This ITAAC performs testing and analysis to determine the set pressure is 2485 psig \pm 25 psi.

Testing of the pressurizer safety valves (RCS-PL-V005A and RCS-PL-V005B) is performed. ASME Boiler and Pressure Vessel Code, Section III, NB-7400, "Set Pressures of Pressure Relief Devices," requires that at least one pressure relief device shall have a set pressure not greater than any of the components within the system, and NB-7512.2, "Safety Valve Operating Requirements – Set Pressure Tolerance," requires a maximum of 1% set pressure tolerance for pressures over 1000 psig. Three lift check tests are performed by the manufacturer for each pressurizer safety valve and the values are recorded on a valve test report which is included in the quality data package for the valves.

Pressurizer safety valve RCS-PL-V005A had three set pressure tests performed with the following results: XXXX psig, XXXX psig and XXXX psig. Pressurizer safety valve RCS-PL-V005B had three set pressure tests performed with the following results: XXXX psig, XXXX psig and XXXX psig. Analysis of these lift check test results confirms the safety valves meet the required set pressure acceptance criteria.

The "Quality Release and Certificate of Conformance for PV62 Valves" (Reference 2) exists and contains valve test reports that conclude each safety valve's set pressure is 2485 psig \pm 25 psi which meets the ITAAC acceptance criteria. Reference 2 is available for NRC inspection as part of the ITAAC Completion Package (Reference 3).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, the Licensee performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found one closed (1) notice of nonconformance (NON) associated with this ITAAC:

1. 99901431/2013-201-01.
Corrective actions for this finding will be completed prior to ITAAC Closure Notification Submission.

References (available for NRC inspection)

1. ASME Boiler and Pressure Vessel Code, Section III, NB-7400 and NB-7512.2
2. XXX-PV62-VQQ-001, "Quality Release and Certificate of Conformance for PV62 Valves"
3. ITAAC 2.1.02.08a.ii Completion Package
4. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

Subject: Uncompleted ITAAC 2.3.11.02.i [Index No. 450]

ITAAC Statement

Design Commitment

2. *The equipment identified as having seismic design requirements in Table 2.3.11-1 can withstand seismic design basis loads without loss of its structural integrity function.*

Inspections/Tests/Analyses

- i) *Inspection will be performed to verify that the equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.*

Acceptance Criteria

- i) *The equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.*

ITAAC Completion Description

Multiple ITAAC are performed to demonstrate the equipment identified as having seismic design requirements in Table 2.3.11-1 can withstand seismic design basis loads without loss of its structural integrity function. This ITAAC requires an inspection to be performed to verify that the equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.

All of the components identified in Table 2.3.11-1 as having seismic design requirements are designed to be located on the seismic Category I Nuclear Island. In accordance with plant procedures, an inspection is conducted of the WGS Seismic Category I Equipment Location to confirm the satisfactory installation of the seismically designed components. The inspection includes verification of equipment number and location (Building, Elevation, Room). The inspection results are documented in the Inspection Report XXX (Reference 1). This report is available for NRC inspection as part of the ITAAC Completion Package (Reference 2).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, the Licensee performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

References (available for NRC inspection)

1. Inspection Report XXX
2. ITAAC 2.3.11.02.i Completion Package
3. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

P I L O T

Subject: Uncompleted ITAAC 2.5.01.03c [Index No. 513]

ITAAC Statement

Design Commitment

3.c) *Software diversity between the DAS and PMS will be achieved through the use of different algorithms, logic, program architecture, executable operating system, and executable software/logic.*

Inspections/Tests/Analyses

Inspection of the DAS and PMS design documentation will be performed.

Acceptance Criteria

Any DAS algorithms, logic, program architecture, executable operating systems, and executable software/logic are different than those used in the PMS.

ITAAC Completion Description

An inspection of the design documentation is performed to verify the algorithms, logic, program architecture, executable operating systems, and executable software/logic used within the DAS are different than those used in the PMS (including the Common Q and CIM Subsystem).

The basis of diversity used for prevention of common mode failure is established by Method for Performing Diversity and Defense-in-Depth Analysis of Reactor Protection Systems, NUREG/CR-6303 (Reference 1). The DAS and PMS software is assessed on the elements of diversity established within the ITAAC Acceptance Criteria. The results of this inspection are documented in AP1000 Diverse Actuation System Diversity Analysis (Reference 2). A summary of the observed differences between the DAS and PMS software are shown in the table below:

Diversity Type	DAS	PMS	
		Common Q	CIM Subsystem
Algorithms	XXXX	XXXX	XXXX
Logic	XXXX	XXXX	XXXX
Program Architecture	XXXX	XXXX	XXXX
Executable Operating Systems	XXXX	XXXX	XXXX
Executable Software/Logic	XXXX	XXXX	XXXX

The AP1000 Diverse Actuation System Diversity Analysis concludes that the software diversity between DAS and PMS is achieved through the use of different algorithms, logic, program architecture, executable operating systems, and executable software/logic (Reference 2). The inspection results are available for NRC inspection as part of the ITAAC Completion Package (Reference 3).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, the Licensee performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

References (available for NRC inspection)

1. NUREG/CR-6303, "Method for Performing Diversity and Defense-in-Depth Analysis of Reactor Protection Systems"
2. APP-DAS-JOR-002, "AP1000 Diverse Actuation System Diversity Analysis"
3. ITAAC 2.5.01.03c Completion Package
4. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

Subject: Uncompleted ITAAC E.3.9.05.01.05 [Index No. 853]

ITAAC Statement

Program Commitment

5.1 *The licensee has established a technical support center (TSC) and an onsite operations support center (OSC). [H.1]*

Inspections/Tests/Analyses

5.1 *An inspection of the as-built TSC and OSC will be performed, including a test of the capabilities.*

Acceptance Criteria

5.1.5 *The OSC is located in the Maintenance Support Building.*

ITAAC Completion Description

Multiple ITAAC are performed to demonstrate that a Technical Support Center (TSC) and an onsite Operations Support Center (OSC) are established. The subject ITAAC requires an inspection to be performed to verify that the OSC is located in the Maintenance Support Building.

A walk down inspection is conducted by the Contractor using final design drawing XXX-XXX-XX-XXXXXX (Reference 1) to verify the OSC is located in the Maintenance Support Building. The results of the inspection confirm the as-built OSC is located in the Maintenance Support Building. The inspection is documented in XXX-XXXX-XXX-XXXXXX, "ITAAC Technical Deliverables Report for ITAAC E.3.9.05.01.05" (Reference 2). The Contractor's technical report concludes that the location of the as-built OSC meets the ITAAC Acceptance Criteria. This report is available for NRC inspection as part of the ITAAC Completion Package (Reference 3).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, the Licensee performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

References (available for NRC inspection)

1. XXX-XXX-XX-XXXXXX, "Maintenance Support Building Final Design Drawing"
2. XXX-XXXX-XXX-XXXXXX, "ITAAC Technical Deliverables Report for ITAAC E.3.9.05.01.05"

3. ITAAC E3.9.05.01.05 Completion Package
4. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

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