

**Revised Example D46 – As-Built Piping Meets Functional Capability Requirements  
ITAAC Closure Notification**

XX/YY/ZZZZ (Date)

To: NRC

From: {Name of Licensee}  
{Site Name and Unit #}  
{Docket #}

Subject: Completion of ITAAC 2.1.02.05b

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 52.99(c)(1) of the completion of {Site Name and Unit #} Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.1.02.05b for verification that an American Society of Mechanical Engineers (ASME) Design Report for Class 1 Piping and Class 2/3 Piping exists and concludes that each of the as-built Reactor Coolant System (RCS) piping lines identified in ITAAC Table 2.1.2-2 meets its functional capability requirements. The closure process for this ITAAC is based on the guidance described in NEI 08-01 (Reference 1).

**ITAAC Statement**

**Design Commitment:**

*Each of the lines identified in Table 2.1.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.*

**Inspections, Tests, Analyses:**

*Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.*

**Acceptance Criteria:**

*A report exists and concludes that each of the as-built lines identified in Table 2.1.2-2 for which functional capability is required meets the requirements for functional capability.*

**ITAAC Determination Basis**

An inspection was performed of the ASME Section III as-built piping design report XXX to verify that the report demonstrates that each of the RCS piping lines identified in ITAAC Table 2.1.2-2 (~~Attachment 1~~) that requires functional capability is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability. “Functional capability,” in this context, refers to the capability of the piping to withstand the effects of

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earthquakes, without a loss of safety function (to convey fluids from one location to another). Specific functional capability requirements are defined in the AP1000 Design Control Document (DCD) Tier 2 Table 3.9-11 (Reference 2).

Piping functional capability is not a specific ASME Code requirement but it is a requirement in the AP1000 DCD (Reference 2). As such, information demonstrating that DCD functional capability requirements are met was included in the ASME Section III As-Built Design Reports for safety class piping prepared in accordance with ASME Section III NCA-3550 under the ASME Boiler & Pressure Vessel Code [Licensee insert Edition/Addenda] Section III requirements. [The as-built piping systems have been subjected to a reconciliation process \(Reference 3\), which verifies that the as-built piping systems have been analyzed for functional capability and for compliance with the design specification and ASME Code provisions. Design reconciliation of the as-built systems validates that construction completion, including field changes and any nonconforming condition dispositions, is consistent with and bounded by the approved design.](#) As required by ASME Code, the As-Built Design Report includes the results of physical inspection of the piping and reconciliation to the design pipe stress report.

Inspections of the ASME Section III As-Built Piping Design Reports XXX for the RCS piping lines identified in ITAAC Table 2.1.2-2 were completed and concluded that each of the as-built RCS piping lines for which functional capability is required meets the requirements for functional capability. The ASME Section III As-Built Piping Design Reports for each of the as-built RCS piping lines in ITAAC Table 2.1.2-2 are identified in Attachment 1.

### **ITAAC Finding Review**

In accordance with XXX-XXX-XXX (project specific procedure for ITAAC completion), {Licensee} performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in ITAAC Completion Package for ITAAC 2.1.02.05b (Reference 34) and available for NRC inspection.

### **ITAAC Completion Statement**

Based on the above information, [Licensee] hereby notifies the NRC that ITAAC 2.1.02.05b was performed for Plant/Unit XYZ, and that the prescribed acceptance criteria are met.

Systems, structures and components verified as part this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

[\[Licensee\]](#)We requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact XXX at xxx-xxx-xxxx.

Sincerely,

~~August 16~~ November 1, 2012

{Signature of Licensee Representative}  
{Typed Name of Licensee Representative}  
{Title of Licensee Representative}

Attachment

**References (available for NRC inspection)**

1. NEI 08-01, Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52.
2. APP-GW-GL-700 – AP1000 Design Control Document, Tier 2, Chapter 3, Table 3.9-11
- ~~2.3.~~ [Licensee's Program for As-Built Reconciliation of the ASME Piping Systems](#)
- ~~3.4.~~ ITAAC 2.1 02.05b Completion Package

**Attachment 1**  
**Reports on Functional Capability of Reactor Coolant System (RCS) Piping – ITAAC 2.1.02.05b**  
**Piping Identified as Functional Capability Required in ~~ITAAC~~ Tier 1 Table 2.1.2-2**

Table 2.1.2-2					
Line Name	Line Number	ASME Code Section III	Leak Before Break	Functional Capability Required	ASME III As-Built Design Report
Hot Legs	RCS-L001A RCS-L001B	Yes	Yes	Yes	XXX
Cold Legs	RCS-L002A RCS-L002B RCS-L002C RCS-L002D	Yes	Yes	Yes	YYY
Pressurizer Surge Line	RCS-L003	Yes	Yes	Yes	ZZZ
ADS Inlet Headers	RCS-L004A/B RCS-L006A/B RCS-L030A/B RCS-L020A/B	Yes	Yes	Yes	AAA
Safety Valve Inlet Piping	RCS-L005A RCS-L005B	Yes	Yes	Yes	AAA
Safety Valve Discharge Piping	RCS-L050A/B RCS-L051A/B	Yes	No	Yes	AAA
ADS First-stage Valve Inlet Piping	RCS-L010A/B RCS-L011A/B	Yes	No	Yes	AAA
ADS Second-stage Valve Inlet Piping	RCS-L021A/B RCS-L022A/B	Yes	Yes No	Yes	AAA
ADS Third-stage Valve Inlet Piping	RCS-L131 RCS-L031A/B RCS-L032A/B	Yes	Yes Yes No	Yes	AAA
ADS Outlet Piping	RCS-L012A/B RCS-L023A/B RCS-L033A/B RCS-L061A/B RCS-L063A/B RCS-L064A/B RCS-L200 RCS-L069A/B RCS-L240A/B PXS-L130A/B	Yes	No	Yes	AAA
ADS Fourth-stage Inlet Piping	RCS-L133A/B RCS-L135A/B RCS-L136A/B RCS-L137A/B	Yes	Yes	Yes	BBB