

Example D100 – Containment Coatings and Transportable Material Density ITAAC Closure Notification

XX/YY/ZZZZ (Date)

To: NRC

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

Subject: Completion of ITAAC 2.2.03.08c.x

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 2.2.03.08c.x for verification that coatings, caulking, signs and tags, and ventilation filters and fiber-producing fire barriers specified in the ITAAC meet specified minimum density requirements. The closure process for this ITAAC is based on the guidance described in NEI 08-01 (Reference 1).

ITAAC Statement

Design Commitment:

The PXS provides RCS makeup, boration, and safety injection during design basis events.

Inspections, Tests, Analyses:

x) Inspections will be conducted of the as-built nonsafety-related coatings or of plant records of the nonsafety-related coatings used inside containment on walls, floors, ceilings, and structural steel except in the CVS room. Inspections will be conducted of the as-built non-safety-related coatings or of plant records of the non-safety-related coatings used on components below the maximum flood level of a design basis LOCA or located above the maximum flood level and not inside cabinets or enclosures.

Inspections will be conducted on caulking, tags, and signs used inside containment below the maximum flood level of a design basis LOCA or located above the maximum flood level and not inside cabinets or enclosures.

Inspections will be conducted of ventilation filters and fiber-producing fire barriers used inside containment within the ZOI or below the maximum flood level of a design basis LOCA.

Acceptance Criteria:

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x) A report exists and concludes that the coatings used on these surfaces have a dry film density of $\geq 100 \text{ lb/ft}^3$. If a coating is used that has a lower dry film density, a report must exist and conclude that the coating will not transport. A report exists and concludes that inorganic zinc coatings used on these surfaces are Safety – Service Level I.

A report exists and concludes that tags and signs used in these locations are made of steel or another metal with a density $\geq 100 \text{ lb/ft}^3$. In addition, a report exists and concludes that caulking used in these locations or coatings used on these signs or tags have a dry film density of $\geq 100 \text{ lb/ft}^3$. If a material is used that has a lower density, a report must exist and conclude that there is insufficient water flow to transport lightweight caulking, signs, or tags.

A report exists and concludes that the ventilation filters and fire barriers in these locations have a density of $\geq 100 \text{ lb/ft}^3$.

ITAAC Determination Basis

Multiple ITAAC are performed to demonstrate that the Passive Core Cooling System (PXS) provides Reactor Coolant System (RCS) makeup, boration, and safety injection during design basis events. The subject ITAAC requires inspections to verify that:

1. Nonsafety-related coatings used inside containment on walls, floors, ceilings and structural steel (except in the Chemical and Volume Control System CVS room) have a dry film density of $\geq 100 \text{ lb/ft}^3$, and inorganic zinc (IOZ) coatings used on these surfaces are Safety-Service Level I
2. Nonsafety-related coatings used on components below the maximum flood level of a design basis Loss of Coolant Accident (LOCA) or located above the maximum flood level and not inside cabinets or enclosures have a dry film density of $\geq 100 \text{ lb/ft}^3$, and inorganic zinc coatings used on these surfaces are Safety-Service Level I
3. Caulking, tags and signs used below the maximum flood level of a design basis LOCA or located above the maximum flood level and not inside cabinets or enclosures have a density of $\geq 100 \text{ lb/ft}^3$, including coatings used on these signs and tags
4. Ventilation filters and fiber-producing fire barriers used inside containment within the Zone of Influence (ZOI) or below the maximum flood level of a design basis LOCA have a density of $\geq 100 \text{ lb/ft}^3$.

1. – Surface Coatings

Prior to application of protective coatings to floors, walls, ceilings, structural steel and piping, personnel confirmed that the selected coating system meets the minimum dry film density requirement of $\geq 100 \text{ lb/ft}^3$. Some of these protective coatings were applied at a vendor facility prior to shipment of SSCs to the site and documented in vendor Quality Assurance Data Packages in accordance with the vendor's approved Quality Plan. The Engineering, Procurement and Construction (EPC) Contractor's QA personnel performed receipt and QC inspections of coated walls, floors, ceilings, structural steel and piping coated in the vendor facility in accordance with Contractor procedure ABC (Reference 3). Included in these receipt inspection activities, was an inspection of the quality documentation accompanying the coating work. This inspection, documented in Receiving Inspection Reports XYZ (Reference 4), confirmed that vendor Quality Assurance Data Packages for the delivered SSCs included a

Certificate of Conformance confirming the dry film density of the selected coating system, as well as application/inspection certifications for surfaces coated with IOZ.

The basis for inspecting protective coatings of as-built SSCs at other than their final installed locations is provided in NEI 08-01, Section 9.5.

Installation of walls, floors, ceilings, structural steel and piping was performed in accordance with applicable procedures to assure that protective coatings were not adversely impacted during installation. EPC Contractor inspections of protective coatings applied to SSCs are documented in the ITAAC Completion Package (Reference 2).

EPC Contractor QC personnel reviewed application and inspection records pertaining to the on-site application of protective coatings to walls, floors, ceilings, structural steel and piping by doing an inspection of the Construction Work Packages. Construction Work Packages include a Certificate of Conformance confirming the dry film density of the selected coating system ≥ 100 lb/ft³, as well as application/inspection certifications for surfaces coated with IOZ. These inspections are documented in Inspection Report(s) VVV (Reference 5). Inspection of on-site application of protective coatings included repairs or “touch-ups” applied following the initial application as well as following installation of SSCs coated at the vendor facility.

Inspection of the Quality Assurance Data Packages for SSCs coated at the vendor facility and Construction Work Packages concerning on-site application of coatings concluded that the coatings used on these surfaces have a dry film density ≥ 100 lb/ft³, and that IOZ applications were Safety – Service Level I.

2. – Component Coatings

Prior to application of protective coatings to components below the maximum flood level of a design basis loss-of-coolant accident (LOCA), or located above the maximum flood level and not inside cabinets or enclosures, personnel confirmed that the selected coating system meets the dry film density requirement. These protective coatings were applied at a vendor facility prior to shipment of components to the site and documented in vendor Quality Assurance Data Packages in accordance with the vendor’s approved Quality Plan.

The Engineering, Procurement and Construction (EPC) Contractor’s QA personnel performed receipt and QC inspections of components coated in the vendor facility in accordance with Contractor procedure ABC (Reference 3). Included in these activities, was an inspection of the quality documentation accompanying the coating work. This inspection, documented in Receiving Inspection Reports XYZ (Reference 6), confirmed that vendor Quality Assurance Data Packages for the delivered SSCs included a Certificate of Conformance confirming the dry film density of the selected coating system, as well as application/inspection certifications for surfaces coated with IOZ.

The basis for inspecting protective coatings of as-built SSCs at other than their final installed locations is provided in NEI 08-01, Section 9.5.

“Touch-ups” or repairs required during installation of the components are included in the “on-site” coating applications from item 1 above.

Inspection of the Quality Assurance Data Packages for components coated at the vendor facility concluded that the coatings used on these surfaces have a dry film density $\geq 100 \text{ lb/ft}^3$, and that IOZ applications were Safety – Service Level I.

3. – Caulking, Tags, and Signs

Prior to application of any tags, signs or caulking inside containment, personnel confirmed that the selected material was either steel, or another metal with a density of $\geq 100 \text{ lb/ft}^3$. Signs or tags that are coated were also verified to have coatings with a dry film density of $\geq 100 \text{ lb/ft}^3$. These inspections, performed in accordance with the constructor’s Quality Plan are documented in Construction Work Packages.

EPC Contractor QC personnel have reviewed application and inspection records pertaining to the application of signs, tags and caulking by doing an inspection of the Construction Work Packages; these are identified and contained in Inspection Reports AAA (Reference 7). This activity confirmed that Construction Work Packages included a Certificate of Conformance confirming the material of the tags and signs, and the dry film density of caulking and the selected coating system used on any tags or signs.

Inspection of the Construction Work Packages, concluded that the tags and signs are made of steel or other metal with a density of $\geq 100 \text{ lb/ft}^3$ and that caulking used in these locations or coatings used on these signs or tags have a dry film density $\geq 100 \text{ lb/ft}^3$.

4. – Ventilation Filters and Fiber-producing Fire Barriers

Prior to installation of ventilation filters and fiber-producing fiber barriers inside containment that are within the ZOI or below the maximum flood level, personnel confirmed that the filters have a density of $\geq 100 \text{ lb/ft}^3$, and fire barriers are either non-fiber-producing type barriers, or have a density of $\geq 100 \text{ lb/ft}^3$. The density was confirmed using information provided by the material supplier specific to the filters and barrier material provided. These inspections, performed in accordance with the constructor’s Quality Plan are documented in Construction Work Packages.

EPC Contractor QC personnel have reviewed installation records pertaining to the ventilation filters and fire barriers by doing an inspection of the Construction Work Packages; these are identified and contained in Inspection Reports BBB (Reference 8). Inspection of the Construction Work Packages, concluded that ventilation filters and fire barriers have a density $\geq 100 \text{ lb/ft}^3$.

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

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associated with this ITAAC. The ITAAC completion review is documented in ITAAC Completion Package for ITAAC 2.2.03.08c.x (Reference 2) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, [Licensee] hereby notifies the NRC that ITAAC 2.2.03.08c.x was performed, 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 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,

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

References (available for NRC inspection)

1. NEI 08-01, Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52
2. ITAAC 2.2 03.08c.x Completion Package
3. EPC Contractor Procedure ABC
4. Receiving Inspection Reports XYZ
5. Inspection Reports VVV
6. Receiving Inspection Reports UVW
7. Inspection Reports AAA
8. Inspection Reports BBB

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