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Request for Additional Information No. 140 (1595), Revision 0

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U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 14.03 - Inspections, Tests, Analyses, and Acceptance Criteria
Application Section: FSAR 14.3

QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)

14.03-7

A key design feature of long term core cooling is the debris source term evaluated in FSAR Section 6.3 and its impact on NPSH. No ITAAC exists to verify the debris source term. Therefore, develop ITAAC to inspect containment materials to ensure as-built is consistent with as analyzed/tested for long term core cooling capability or justify why no ITAAC is required. Specifically address debris source term that was evaluated, including material types, sizes, and quantities, to ensure only analyzed/tested materials are installed and quantities and sizes installed are bounded by the evaluation.

14.03-8

ITAAC guidance provided in SRP 14.3 indicates that filters (e.g. strainers) required for a safety function are in the design description. FSAR Tier 1, Table 2.2.2-1 describes a trash rack, retaining basket, and sump strainer functioning as filtering devices or debris retaining devices. However, only the suction strainer has ITAAC. Therefore, develop ITAAC to inspect the trash racks and the retaining baskets serving as debris retaining devices listed in FSAR Tier 1, Table 2.2.2-1. Acceptance criteria to ensure as-built is consistent with as analyzed/tested filtering characteristics, should verify maximum mesh or grid opening size, minimum surface area, bypass flow, and include other special features that are used to provide protection such as curbs (weirs).

14.03-9

ITAAC guidance provided in SRP 14.3 indicates that filters required for a safety function are in the design description. FSAR Tier 2, Table 14.3-6, Item 6-9 lists each suction inlet line as having a debris screen (sump strainer). FSAR Tier 1, Table 2.2.2-1 describes the sump strainer functioning as a filtering device. ITAAC acceptance criteria in FSAR Tier 1, Table 2.2.2-3, Item 7.5, verifies that the screen exists. No performance criteria is provided. To ensure as-built is consistent with as analyzed/tested filtering characteristics, in addition to verifying the debris screen exists, propose revisions to Acceptance Criteria to verify it exists and is consistent with the design characteristics such as the maximum mesh opening size, minimum surface area, and other special features that are used to provide protection such as curbs (weirs) or justify how the current Acceptance Criteria meets requirements.