



Definition of *As-Built*

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Background

- Due to widespread use of the term *as-built* in ITAAC, it is defined in Tier 1 of all DCDs
- Definition also appears in NEI 08-01 ITAAC closure guidance

Original Definition

- *As-built* means the physical properties of a structure, system, or component following the completion of its installation or construction activities at its final location at the plant site
- NRC interprets this definition as not allowing credit for offsite ITA performance

Definition in NEI 08-01

- *As-built* means the physical properties of a structure, system, or component following the completion of its installation or construction activities at its final location at the plant site. Determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation, provided that subsequent fabrication, handling, installation, and testing do not alter the properties

Caveats to Definition in NEI 08-01

- Section 3.1.4 provides additional text on the definition of *as-built*
- Many ITAAC require verification of “as-built” SSCs. However, some of these ITAAC will involve measurements and/or testing that can only be conducted at the vendor site due to the configuration of equipment or modules or the nature of the test (e.g., measurements of reactor vessel internals). For these specific items where access to the component for inspection or test is impractical after installation in the plant, the ITAAC closure documentation (e.g., test or inspection record) will be generated at the vendor site and provided to the licensee.

Industry Concerns

- There are advantages to performing tests and inspections under factory controlled conditions, rather than in the field, provided that test and inspection results are not altered by subsequent fabrication, transportation and installation activities
- It is premature – without any experience with either module construction or ITAAC implementation to try to draw the definition of as-built so tightly as to preclude effective options for the future

NRC Concerns

- ITAAC in early DCs were written without consideration of modular construction
- Vendors for early DCs have not determined impact of changing definition of *as-built*
- Some ITAAC need to be performed at final, in-plant location to adequately demonstrate acceptance criteria are met
- Some designs use both *as-built* and *as-installed*, but only define *as-built*
- Some designs use *as-built* in ITAAC in a manner that is in conflict with their definition

Revised Definition for NEI 08-01

- *As-built* means the physical properties of a structure, system, or component following the completion of its installation or construction activities at its final location at the plant site. In cases where it is technically justifiable, determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation, provided that subsequent fabrication, handling, installation, and testing do not alter the properties.

NEI 08-01 Revision

- Draft revision of NEI 08-01:
 - Provides explanatory text on what “technically justifiable” means
 - Provides examples of types of ITAAC where the industry & NRC have agreed there is technical justification to perform ITAAC closure at offsite location
 - Provide examples of types of ITAAC where the industry & NRC have agreed that ITA must be performed at final, in-plant location

Technical Justification

- Implementation of the new definition necessitates that licensees be prepared to provide to the NRC a valid technical justification for the performance of as-built verification activities away from the plant site
 - For ITA described in NEI 08-01 as having generic “technical justification” for offsite performance, no further justification is needed
 - For ITA not described in NEI 08-01, a technical justification should be included in the onsite ITAAC closure package

ITAAC Closure Letters

- For ITA described in NEI 08-01, a statement describing the offsite ITA and referencing the generic technical justification in NEI 08-01 should suffice
- For ITA not described in NEI 08-01, licensees should include:
 - A statement describing the offsite ITA
 - A brief summary of the technical justification for offsite performance
 - References to licensee documents containing the full technical justification for offsite performance (e.g., transportation evaluations, loading analyses, receipt inspection records)