
ABWR "Basic Configuration" ITAAC

Basic Configuration (for a Building) --- means the arrangement of the building features(e.g., floors, ceilings, walls, basemat and doorways) and of the structures, systems, or components within, as specified in the building Design Description.

Basic Configuration (for a System) ---- means the functional arrangement of structures, systems, and components specified in the Design Description; and verifications for that system as specified in Section 1.2.

1.2 General Provisions

Verifications for Basic Configuration of systems include and are limited to **(-1) inspection of the system functional arrangement** and the following inspections, tests, and analyses:

(1) Inspections, including non-destructive examination (NDE), of the **(-2) as-built, pressure boundary welds for ASME Code Class 1, 2, or 3 components identified in the Design Description to demonstrate that the requirements of ASME Code Section III for the quality of pressure boundary welds are met.**

(2) Type tests, analyses, or a combination of type tests and analyses of the Seismic Category I mechanical and electrical equipment (including connected instrumentation and controls) identified in the Design Description to demonstrate that **(-3) the as-built equipment, including associated anchorage, is qualified to withstand design basis dynamic loads without loss of its safety function.**

(3) Type tests, or type tests and analyses, of the **(-4) Class 1E electrical equipment identified in the Design Description (or on accompanying figures)** to demonstrate that it *is qualified to withstand the environmental conditions that would exist during and following a design basis accident without loss of its safety function* for the time needed to be functional. These environmental conditions, as applicable to the bounding design basis accident(s), are as follows: expected time-dependent temperature and pressure profiles, humidity, chemical effects, radiation, aging, submergence, and their synergistic effects which have a significant effect on equipment performance. As used in this paragraph, the term "Class 1E electrical equipment" constitutes the equipment itself, connected instrumentation and controls, connected electrical components (such as cabling, wiring, and terminations), and the lubricants necessary to support performance of the safety functions of the Class 1E electrical components identified in the Design Description, to the extent such equipment is not located in a mild environment during or following a design basis accident.

(4) Tests or type tests of active safety-related motor-operated valves (MOV) identified in the Design Description to demonstrate that the **(-5) MOVs are qualified to perform their safety functions under design basis differential pressure, system pressure, fluid temperature, ambient temperature, minimum voltage, and minimum and/or maximum stroke times.**

NOTES:

The expert panels divided up the ABWR basic configuration ITAAC and determined which of the 5 attributes would apply. So, ITAAC 2.1.3.1, basic configuration of the Reactor Recirculation System, does not appear in the prioritization database. However, 2.1.3.1-1 thru 2.1.3.1-5 (or what ever combination of attributes were determined by the expert panel to apply to that system) were rated and do appear in the prioritization data base. The numbering scheme was used consistently - even if a number had to be skipped because an attribute did not apply. So, every -1 refers to functional arrangement and every -5 refers to MOVs.

The plan was to have the 'attribute' ITAACs we created become prerequisite to the actual basic configuration ITAAC. Dividing the ITAAC up was necessary to achieve the homogeneous groups in the family but we have informed the industry or discussed it with them. ITAAC closeout will likely be easier if the industry will agree to report on the component parts rather than this entire ITAAC. Also, GE has agreed, in principle, to break out this ITAAC in the ESBWR - we already talked to them about this.