

Generic HFE ITAAC Example (DAC)

	<i>Inspection, Test, Analysis</i>	<i>Acceptance Criteria</i>
<p>PROPOSED VERSION:</p> <p>A [Task Analysis] identifies the task requirements for accomplishing the functions allocated to plant personnel.</p> <p>NOTE: The Design Commitment should be written specifically for the NUREG-0711 element identified (e.g., HIS, V/V, DI, etc.). The above commitment is written for Task Analysis.</p>	<p>PROPOSED VERSION:</p> <p>An inspection of the [Task Analysis] will be performed.</p>	<p>PROPOSED VERSION:</p> <p>The [Task Analysis] results:</p> <ol style="list-style-type: none"> 1) are submitted to the NRC Staff as summarized in a Results Summary Report. 2) demonstrate that the [Task Analysis] was conducted in accordance with the [Task Analysis] Implementation Plan.

In this example, Task Analysis is a “DAC-ITAAC.” Because the final design product is not available for review the staff reviews/approves the process that will be used and it is this process that the SER is based on. Therefore the acceptance criteria must include the final design products as well as a demonstration that the approved process was followed. The latter ensures the bases for the SER is met. In some cases the products by themselves demonstrate the process was followed (for example, the scenarios can be used to verify the OCS was completely tested). In other cases it may not (for example, the completion of training for V&V crew and observers).

Depending on the maturity of the HFE design the following elements may be subject to DAC:

- Operating Experience Review
- Functional Requirements Analysis and Functional Allocation
- Task Analysis
- Staffing and Qualifications
- Treatment of Important Human Actions
- Human-System Interface
- Human Factors Verification and Validation

Based on the complexity introduced by the use of DAC the staff is reinforcing the following direction provided in SECY 92-053:

The applicant and staff would need to clearly define which portions of the plant design could use DAC, rather than detailed design information. Although there is nothing in Part 52 which would necessarily limit the use of DAC, the staff believes that the use of DAC,

instead of detailed design information, should be limited. The restrictions should be based upon a consideration of those design areas affected by rapidly changing technologies, or design areas for which as-built, or as-procured, information is not available. However, the staff must have sufficient information to reach a final conclusion on all safety questions associated with the design, before it can issue a design certification.

In summary the staff is not finding rapidly changing technologies and as-built, as procured information availability to be limiting applicant's ability to complete any of the HFE design activities. Consequently the staff is expecting a well-documented basis for applying DAC to the HFE area.

Comments on NEI ITAAC White Paper

1. Design Acceptance Criteria ITAAC only need to be completed once. They should not be deleted as part of the reduction of ITAACs based on "ITAAC for first plant and first three plant only tests."
2. Attachment 2 page 10. We need to ensure there is a common definition of "Minimum Inventory." My preference would be to replace minimum inventory with RG 1.97 parameters. 1.97 parameters are listed in the DCD and verified by an interdisciplinary team. This provides a better basis for the ITAAC acceptance criteria than the use of the term "Minimum Inventory."
3. Attachment 2 page 10. The use of HFE summary reports for the "As built inspection ITAAC" doesn't seem appropriate since the reports reflect the design specifications rather than the actual design configuration.