Draft Supplemental ITAAC Closure Letter Thresholds

This enclosure provides information on the development of draft threshold concepts related to the supplemental ITAAC closure letter. The information provided below reflects the outcome of staff and stakeholder work to date. Development of these thresholds is ongoing and will continue during future public workshops and meetings, and may result in modification to some or all of the thresholds.

The licensee is responsible for maintaining the ITAAC after completion of the ITAAC. If the ITAAC determination basis is materially altered, the licensee is expected to notify the NRC by submitting a supplemental ITAAC closure letter. The staff and stakeholders are developing thresholds to further define "materially altered."

Draft Threshold 1:

> *When post-work verification (PWV) is not the same as the testing method described in the ITAAC closure letter, can the PWV objectively stand alone (i.e., without an engineering justification to support it) as evidence that the specified acceptance criteria continue to be met?*

This threshold focuses on the significance of the inspections, tests, and analyses (ITA). Under 10 CFR 52.99(c)(1), a licensee must demonstrate that it complied with the ITA in the COL by describing in its closure letter the manner in which it performed the ITA. Based on the closure letter and any other available information (including the results of inspections), the NRC staff will determine whether the ITA have been successfully completed. A PWV should not be considered a re-performance of the ITA because the ITA was previously performed. However, consistent with the principles underlying 10 CFR 52.99(c)(1), the NRC should be formally notified if the manner in which the PWV is performed could materially affect the Commission's finding under 10 CFR 52.103(g).

If the PWV is the same as the method described in the original inspections, tests, analyses, and acceptance criteria (ITAAC) closure letter, then no notification would be needed because the licensee chose to use an already approved method. The staff, however, recognizes that the ITA as originally performed may not be practicable or possible to repeat during all phases of construction. When the PWV differs from the performance of the ITA as described in the original ITAAC closure letter and relies on an engineering justification to justify the method for verifying that the acceptance criterion continues to be met, the staff believes that the licensee should notify the NRC by submitting a supplemental ITAAC closure letter. If an engineering justification is not needed, then the method in which the PWV is performed should not materially affect the Commission's finding under 10 CFR 52.103(g). The threshold would not be exceeded, therefore, if either the PWV is the same method described in the original ITAAC closure letter or the PWV can objectively stand alone. At the time of the 10 CFR 52.103(g) finding, ITAAC related affected structures, systems, and components (SSCs) may be "out of service" while the NRC continues to have confidence that the ITAAC criteria continue to be met if the threshold is not exceeded.

For example, if a pump in a system is replaced, it might be the case that the original performance of an ITA that tests flow through the system cannot feasibly be repeated in full. It would be acceptable in such a situation to perform the part of the test affected by the

maintenance through a test loop because the PWV does not need an engineering justification to support it. That is, a reasonable engineer would agree that the PWV ensures that the acceptance criteria is met in a manner consistent with the principles underlying the original performance of the ITA as described in the closure letter and approved by the Staff. Therefore, no supplemental ITAAC closure letter is needed. Of course, using the test method described in the ITAAC closure letter also allows the staff to have confidence that the acceptance criteria continue to be met and to proceed with the recommendation to the Commission that all ITAAC are met.

However, in a particular system, if a supply valve is replaced and no test loop exists to verify the required flow, the licensee may have to perform another type of PWV and an analysis to justify why the PWV is acceptable for ensuring that the acceptance criterion continues to be met. In this case, a supplemental ITAAC closure letter is needed.

Draft Threshold 2:

> *Has an engineering change been implemented to specifically address a condition, related to a previously closed ITAAC, that invalidates the acceptability of the affected SSCs?*

This threshold focuses on the significance of the acceptance criteria (AC). If a licensee learns that the original AC conclusion is no longer valid and implements an engineering change to address the issue, then the ITAAC determination basis has been altered, and the licensee should notify the staff by submitting a supplemental ITAAC closure letter. If the licensee initiates an engineering change for another reason (for example, to repair damage caused by other construction activities), then supplemental notification is not needed under this threshold.

For example, a damaged fire protection support requires repairs that bring it outside existing tolerances. Although this is an engineering change, the pipe support is not substantially changed and the engineering change was not needed to ensure that the acceptance criteria continue to be met. This repair does not exceed threshold 2. However, in another example, the support is an American Society of Mechanical Engineers (ASME) support, and certain ITAAC acceptance criteria are no longer met because of damage caused by water hammer. If the ASME pipe support is reengineered to allow the support to withstand all future operational loads, this is a correction to a design flaw. A supplemental ITAAC closure letter is needed because the support was modified to meet the ITAAC acceptance criteria.

Draft Threshold 3:

> *Has the population of SSCs and subcomponents identified in the ITAAC been increased subsequent to closure notification, which results in more SSCs or subcomponents than were applicable in the original ITAAC closure letter?*

This threshold focuses on the significance of the design commitment. Typically, the design commitment establishes the population of SSCs and subcomponents that are subject to the specific ITAAC (e.g., all of the spool pieces, welds, and components within an ASME piping

system). If after ITAAC completion and acceptance, a pipe piece is accidentally gouged, repair may be performed in accordance with the ASME Code without adding any filler material. In such a case, no supplemental notification is required. However, under certain conditions, the repair of the pipe gouge may require additional filler material (i.e., equivalent to a new weld) with additional nondestructive examination and other ASME Code restrictions. Since this adds to the population of SSCs or subcomponents covered by the original ITAAC closure letter, a supplemental notification is required.

Draft Threshold 4:

> *Does the scope of additional licensee activities warrant augmentation of the statements made in the ITAAC determination basis?*

This threshold focuses on the complete and valid representation of the ITAAC in the ITAAC closure letter. If the additional work activities add newly pertinent or technically relevant information that is material to the ITAAC determination basis, then supplemental notification is needed.

For example, the licensee installs a new motor-operated valve operator that has terminal blocks and a torque switch different from the original. If all ITAAC conclusions remain valid (including environmental qualification ITAAC for this valve, the terminal blocks, and the torque switch), then no supplemental ITAAC closure letter is required. However, if in this example, the torque switch and terminal blocks require a supplemental environmental qualification evaluation to meet the acceptance criteria, this constitutes a material change to the original ITAAC determination basis, and a supplemental ITAAC closure letter is required.