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October 30, 2003

Chief, Rules and Directives Branch
Division of Administrative Services
Office of Administration, Mail Stop T6-D59
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: *Federal Register* Notice 68 FR 55416, September 25, 2003, Draft Construction Inspection Program for Reactors Built Under 10 CFR Part 52; Reopening of Comment Period

In response to the subject *Federal Register* notice, the enclosure provides industry comments on the NRC's draft Construction Inspection Program (CIP) Framework Document and the August 27 public workshop on that subject.

The ITAAC verification process is of central importance to the workability of Part 52, and the CIP Framework Document represents significant progress in this and related areas. We appreciate the NRC staff's efforts to develop draft framework guidance and the opportunity to provide input to its further development.

Section A of the industry comments is based on the August 27 discussions of the Framework Document, and Section B provides specific comments on the Framework Document itself.

As result of the August 27 discussions, we understand the NRC staff took the following action items:

1. Reconsider the applicability of Part 21 to early site permit (ESP) applicants. See also September 30, 2003, industry response to the Part 52 notice of proposed rulemaking, Comment 2.

2. Schedule follow-up interactions at an appropriate time to discuss coordination of construction and inspection schedules, use of common coding schema, protection of proprietary and business sensitive schedule

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information and related CIP information management system (CIPIMS) issues.

3. Consider use of the term "Section 52.99 ITAAC conclusion" instead of the term "interim ITAAC conclusion."

4. Provide within three weeks of the August 27 workshop NRC feedback on the November 2001 industry white paper regarding the Section 52.103 process. As we have yet to receive this feedback, we renew our request.

5. Clarify the intent of sign-as-you-go (SAYGO) ITAAC conclusions and the distinction between them, SAYGO process conclusions and Section 52.99 ITAAC conclusions.

   As discussed in our November 2001 white paper and in the enclosure, SAYGO process inspections provide a way for the NRC to efficiently make determinations and notify the public regarding the acceptability of quality related construction processes that cut across multiple systems or are used throughout the plant. While SAYGO process conclusions may not relate directly to ITAAC, they are nonetheless important because they provide enhanced predictability and stability, a systematic approach to assessing construction quality and conformance with quality assurance criteria, and more meaningful and timely public information concerning both licensee and NRC activities. We expect that some SAYGO process conclusions, e.g., for welding, would contribute to corresponding Section 52.99 ITAAC conclusions concerning pressure boundary welds in fluid systems.

   Section 52.99 ITAAC conclusions are made by the NRC staff after verifying the licensee's determination that one or more ITAAC have been completed and associated acceptance criteria are met.

   The need for and role of SAYGO ITAAC conclusions are not clear from either the Framework Document or the staff's August 27 workshop discussions. As discussed in the enclosure, we do not believe this third type of NRC inspection conclusion is necessary.

6. Consider the form and content of NRC ITAAC conclusion documentation and Section 52.99 notices and the implications for the scope of the Section 52.103 hearing and related issues. In the August 27 workshop, the staff said they would base ITAAC conclusions on a "dump" of inspection results from CIPIMS that have some relevance to the ITAAC in question. As discussed in the enclosure, a data dump approach to ITAAC verification would be a significant concern because while a great many NRC inspections may

somehow relate to an SSC that is the subject of an ITAAC, only a small subset of NRC inspections and conclusions will be material to the determination that a specific ITAAC acceptance criterion is met. A data dump approach to NRC ITAAC conclusions and documentation, including Section 52.99 notices, could significantly – and inappropriately – expand the scope of the Section 52.103 post-construction hearing.

Based on the August 27 discussions, Items 5 and 6, above, are the most fundamental issues associated with the NRC CIP and ITAAC verification process. Because of the importance of these issues to the workability of the ITAAC process under Part 52, we request the opportunity to discuss them further after the staff has had a chance to consider the enclosed and other stakeholder comments. Further, we request that CIP guidance on pre-COL, ITAAC and pre-operational phase inspections (IMC-2502, 2503 and 2504) also be made available in draft form for public comment. We appreciated the recent opportunity to comment on ESP phase inspection guidance (IMC-2501).

We look forward to follow-up interactions in the areas identified above to continue the progress to date in this important area. If you have any questions about the industry comments, please contact me (202-739-8128 or rls@nei.org) or Russ Bell (202-739-8087 or rjb@nei.org).

Sincerely,

R. Simard

Ronald L. Simard

Enclosure

c: James E. Lyons, NRC/NRR
Mary Ann M. Ashley, NRC/NRR
Joseph M. Sebrosky, NRC/NRR

Enclosure

Industry Comments on the NRC's Draft Construction Inspection Program Framework Document and August 27, 2003, Public Workshop

A. Comments Based on the August 27 Workshop

1. IMC-2501 – ESP Phase

1.1. As noted in previous public meetings on the pilot ESP applications, concerns were again identified during the August 27 workshop about the ambiguity of the statement that ESP applicants "should provide QA measures that are *equivalent in substance* to the requirements of 10 CFR Part 50, Appendix B" (Framework Document, p. 8). The staff provided the following clarifications:

- ESP applicants are not required to establish and implement Appendix B QA controls
- Deviations from Appendix B criteria would not be considered an inspection deficiency that an ESP applicant would be required to justify or address
- NRC staff QA inspections will focus on the reliability and integrity of the ESP data, not on conformance with Appendix B

In light of the continuing questions and concerns regarding the expectation that ESP QA measures be *equivalent in substance* to Appendix B, we recommend that these clarifications be incorporated in the CIP framework document, as well as other guidance documents, including IMC-2501 and the ESP Review Standard, RS-002. The NRC staff took an action to consider appropriate clarification of these documents.

1.2. NRC Inspection Procedure 35002, "Applicant Early QA Meeting," is referenced in IMC-2501 and indicates that Part 21 applies to ESP applicants, even before an application is submitted. The NRC staff was asked to explain the basis for the conclusion that Part 21 applies ESP applicants given that by its terms, Part 21 is applicable only to those licensed to construct or operate a nuclear plant, and, as discussed in the Part 52 NOPR Supplementary Information, there is nothing in an ESP that could constitute a possible "defect" in a "basic component" pursuant to the terms and intent of Part 21. The NRC staff responded that they needed time to consider and respond to the comment.

As discussed in our September 30 detailed comments on the Part 52 NOPR, we recommend that Part 21 be modified to reflect that Part 21 is not applicable to ESP applicants or holders. Consistent with this change, we recommend that IP 35002 be modified to eliminate reference to Part 21 applicability to ESP applicants.

1.3. Slide 24 of the NRC's August 27 workshop slides stated that an "ESP expires after 20 years or a COL or CP is issued." This is not correct. An ESP provides approval of a site for one or more plants and may not expire when a COL or CP is issued. For example, if an ESP is referenced in a COL application for a single unit, that ESP remains valid and could later be referenced in a second COL application at the same site provided the terms and conditions of the ESP continue to be met.

2. IMC-2502 – Pre-COL Phase

2.1. Engineering Design Verification (EDV)

2.1.1. It was recommended that the Framework Document clearly identify that a principal objective of NRC EDV is to provide reasonable assurance that detailed design information on which construction will be based is consistent with the design approved during a design certification or COL review.

2.1.2. All safety issues associated with an approved standard design will have been resolved in the DC, and all safety issues associated with the plant-specific design will be resolved in the COL. Because of this, the NRC staff agreed that while EDV is expected to begin during the pre-COL inspection phase, EDV need not be completed prior to COL issuance. We recommend the framework document be modified to reflect this important principle.

2.1.3. We recommend the framework document discussion of EDV be expanded to include several additional points from our November 2001 white paper:

2.1.3.1. In addition to including review of the applicant/licensee's design change process, we recommend that the framework document reflect that the scope of EDV may encompass review of additional topical design areas such as fire protection, environmental qualification, seismic design, HELB analyses, and separation/independence.

2.1.3.2. Engineering design verification will be a significant inspection activity by the NRC both in terms of the resources involved and its importance, and its completion will be a significant milestone for the NRC and licensee. Accordingly, and to maximize public visibility, it is envisioned that the NRC determination that licensee design engineering processes are acceptable would be published via the *Federal Register,* public web site or equivalent mechanism.

2.1.3.3. Following the main thrust of NRC engineering design verification and a favorable significant inspection conclusion by the staff, it is anticipated that NRC will audit ("spot check") licensee implementation

of design engineering processes on an ongoing basis. Having already established the effectiveness of the design engineering processes, ongoing spot checks of design engineering would involve a significantly reduced level of NRC inspection resources. These inspections would focus on configuration management and design details completed after the main thrust of NRC engineering design verification was completed and established the acceptability of the licensee's overall design engineering processes.

2.1.3.4. Engineering design verification is distinct from ITAAC verification. EDV establishes confidence that the detailed design conforms with the design information approved in the COL, while ITAAC verify that the as-built plant satisfies the top level design and performance standards specified in the COL and associated acceptance criteria. Moreover, engineering design verification may be completed prior to COL issuance or in the very early stages of plant construction, while ITAAC verification will continue throughout construction until shortly before fuel load.

We envision that the main thrust of NRC engineering design verification would focus on design areas other than those covered by DAC (e.g., piping, instrumentation and control, and the main control room), unless the applicant chose to complete and seek NRC approval in the COL of all or a portion of the plant design in such DAC areas. After staff reviews in areas with DAC are complete, EDV in these areas may be accomplished as a follow-up to the main EDV milestone achieved at the time of COL issuance or early in construction. Or, perhaps more likely, the staff safety reviews and EDV may occur in parallel as the plant design in DAC areas is completed.

2.2. The Framework Document says that the NRC plans to conduct independent design inspections during the pre-COL phase (p. 10), and CIPIMS should be available for scheduling and recording inspections necessary to support the application review (p.11). While not the fastest path to construction and operation of a new nuclear plant, the Framework Document should reflect that it is at least possible and perfectly acceptable under Part 52 that a COL applicant may not contract for major components, detailed design engineering or construction until after a COL is issued.

2.3. In the Framework Document and during the August 27 workshop, the staff identified that operational program inspections under IMC-2504, Preparations for Operations, would begin during the pre-COL phase. This is confusing, or at least counterintuitive. We understand a key purpose of IMC-2504 is to inspect the implementation of operational programs to determine the licensee's

readiness to operate the plant. Inspections of this type will not be possible during the pre-COL phase because operational programs will not be implemented until later.

We recommend that the framework document be modified to reflect a focus during the pre-COL phase on inspection of certain programs to be implemented at or before COL issuance, such as the Construction QA, Construction Fitness for Duty and Part 21 programs. The Framework Document should reflect a distinction between licensing reviews of operational program descriptions based on the SRP or other COL application review guidance versus operational program readiness inspections prior to plant operation in accordance with IMC-2504. This distinction should be made in the Framework Document regardless of the outcome of parallel interactions concerning the extent of operational program information to be provided in COL applications. Regardless of the outcome of those interactions, the Framework Document should reflect the focus of IMC-2504 on inspections to determine operational program readiness prior to operation. See also comment A.4.1, below.

3. IMC-2503 – ITAAC Verification

3.1. Construction schedules

3.1.1. As discussed on August 27, construction schedules come in varying levels of detail, and detailed schedules may contain proprietary or otherwise sensitive info that may warrant protection from public disclosure. The staff observed that they, too, will have detailed inspection scope and schedule information that would not be made publicly available or shared with the licensee. The staff indicated that this is not a new problem, and, as they have in the past, applicants may request certain information to be withheld from public disclosure. We recommend follow-up interactions at an appropriate time to work with the NRC to establish agreement on the types of information that may be protected. Activities such as these will determine the feasibility of NRC staff efforts to develop CIPIMS into a relational database for effectively managing ITAAC-relates activities and documentation.

3.1.2. We appreciated the staff's overview of efforts to develop and test their CIPIMS, including plans to work with Westinghouse to demonstrate CIPIMS ability to manage ITAAC related activities using actual AP600/AP1000 schedule and design information. We intend to monitor plans for this demonstration activity and look for complementary ways the industry can further demonstrate key aspects of the ITAAC verification

process.

3.1.3. We recommend follow-up interactions to establish the "common coding schema" to be used in separate NRC and licensee schedules to allow appropriate coordination between NRC and licensee inspection and construction activities, documentation etc.

3.2. SAYGO process conclusions, SAYGO ITAAC conclusions, and Section 52.99 conclusions

3.2.1. SAYGO process conclusions – On p. 17, the Framework Document says variously, "The NRC may make a process conclusion and apply it to more than one ITAAC," "The results of the process conclusion will be applied to applicable ITAAC," and "Process conclusions can impact more than one ITAAC." However, many SAYGO process conclusions, such as those related to re-bar, cable tray, cable pulling, etc., do not correspond to ITAAC and would therefore not be relevant to an ITAAC conclusion. In fact, as a general rule, ITAAC pertain to performance or characteristics of SSCs, not to processes. As such, in place of statements like the ones cited above, we recommend the Framework Document reflect that SAYGO process conclusions provide confidence in the acceptability of quality-related construction processes, including conformance with applicable codes and standards, QA Program requirements, etc.

SAYGO process inspections provide a way for the NRC to efficiently make determinations and notify the public regarding the acceptability of quality related construction processes that cut across multiple systems or are used throughout the plant. While SAYGO process conclusions may not relate directly to ITAAC, they are nonetheless important because they provide enhanced predictability and stability, a systematic approach to assessing construction processes and conformance with quality assurance criteria, and more meaningful and timely public information concerning both licensee and NRC activities.

We recommend that the list of example processes identified on p. 17 of the Framework Document be expanded to include still other construction-related processes that may be amenable to early, systematic assessment and determination of acceptability by the NRC, such as receipt inspection, commercial grade dedication, warehousing and others.

3.2.2. SAYGO ITAAC Conclusions – Welding is among the example SAYGO processes identified on p. 17 of the Framework Document. It may be that the staff intends that SAYGO process conclusions corresponding to ITAAC, such as welding, be referred to as SAYGO ITAAC conclusions, however, this

could not be determined from the confusing discussion at the August 27 workshop.

We believe there may be a limited number of areas where SAYGO process conclusions can contribute to NRC staff Section 52.99 ITAAC conclusions. For example, with respect to system ITAAC on pressure boundary welds, a specific fluid system may span multiple modules that were fabricated at multiple locations. The NRC may issue separate inspection reports documenting SAYGO ITAAC conclusions regarding the acceptable quality of welding performed at each location, including field welds done on site. After the system is completely installed, the licensee would request that NRC verify satisfactory completion of the welding ITAAC for this system, make its Section 52.99 ITAAC conclusion and publish the required *Federal Register* notice. The NRC would be expected base its Section 52.99 conclusion regarding the welds in this system on the combination of relevant SAYGO ITAAC conclusions.

The NRC staff agreed to consider further the intent of SAYGO ITAAC conclusions and the distinction between them, SAYGO process conclusions and Section 52.99 ITAAC conclusions.

We recommend that SAYGO ITAAC conclusions be defined as SAYGO process conclusions that correspond directly to ITAAC acceptance criteria. Alternatively, we do not believe it is necessary to define a separate category of NRC inspection conclusions; the concept of SAYGO ITAAC conclusions could be eliminated.

3.2.3. Section 52.99 ITAAC conclusions – The draft Framework Document calls these "interim ITAAC conclusions." As discussed on August 27, the word "interim" is misleading in that ITAAC conclusions by the NRC staff reflect that, absent significant new information, the staff considers ITAAC to be successfully completed. The distinction between ITAAC conclusions by the NRC staff and the Commission's ITAAC finding is clear without the word "interim." The staff agreed to consider using the term "Section 52.99 ITAAC conclusions," and we urge the staff to do so.

3.3. ITAAC verification process

3.3.1. The staff clarified during the August 27 workshop that the "independent review" envisioned on p. 19 (bottom) of the Framework Document would be more than merely an administrative check to confirm all ITAAC are met. The staff envisions an independent set of inspectors, perhaps the ORAT, would be tasked to verify the ITAAC verification activities of the primary regional inspectors.

As discussed at the workshop, such an independent review must be structured so as to not introduce undue delay in the completion of the staff's ITAAC verification activities and recommendation to the Commission regarding the completion of all ITAAC. The staff clarified that the independent review would not involve re-review of the completion status of all ITAAC, but rather would employ vertical slice or similar audit/sampling methods. Moreover, the staff indicated that the independent review could begin well in advance of the scheduled date for fuel load and conducted in parallel with the Region's continuing ITAAC verification activities. This would allow both the primary ITAAC verifications and independent reviews to be completed at essentially the same time. We recommend that the Framework Document discussion regarding independent review of ITAAC verifications be expanded to include these important clarifications.

3.3.2. As discussed at the workshop, the Framework Document should, but does not, discuss the process for triggering the Section 52.103(a) notice of opportunity for hearing. This notice is required at least 180 days before the scheduled date of fuel load. As described on pp. 24-25 of NEI's November 2001 white paper:

> At least 180 days prior to the scheduled fuel load date, the NRC is to publish a *Federal Register* notice of intended operation required by Section 52.103(a). The licensee will trigger the Section 52.103 process with a letter that notifies the NRC of the scheduled date for fuel load, states that all ITAAC will be met prior to that date and requests that the NRC publish the required Section 52.103(a) notice. Because many ITAAC correspond to preoperational tests that are performed during the last six months before fuel load, not all ITAAC will have been completed and signed off by the NRC staff at the time of the Section 52.103(a) notice.[1] The licensee letter and associated Section 52.103(a) notice are expected to clearly identify the ITAAC that have yet to be completed and a schedule for their completion. NRC ITAAC verification and issuance of ITAAC completion notices in accordance with Section 52.99 will continue after the Section 52.103(a) notice until all ITAAC are complete. All ITAAC must be completed and verified by the NRC in order to support the Commission's Section 52.103(g) finding and subsequent fuel load.

[1] Indeed, Part 52 contemplates that there will be uncompleted ITAAC at the time of the notice of intended operation when it states in Section 52.103(a) that the public may request a hearing on "whether the facility as constructed complies, *or on completion will comply*, [with the ITAAC]," and in Section 52.103(b) that requests for hearing must show "that one or more of the acceptance criteria ... have not been, *or will not be met*." (Emphases added)

The NRC staff would be expected to inform the Commission regarding the status of ITAAC completion and to publish the required Section 52.103(a) notice—despite the existence of open QAP deficiencies or other incomplete activities—provided that the deficiencies and incomplete activities do not impact the determination that the ITAAC have been or will be satisfied before fuel load. As discussed earlier, deficiencies in QAP implementation identified by either the licensee or NRC staff will be referred to the licensee's normal corrective actions process and their satisfactory disposition assured through NRC inspection and enforcement. The NRC retains plenary Part 50 authority to take enforcement action as necessary to address such matters, including suspension, modification or revocation of the COL itself. Interactions between the licensee and the NRC staff are expected to ensure effective coordination on the actions that must be completed in the last six months before fuel load.

The staff responded that the Section 52.103(a) process was beyond the scope of the Framework Document. While that may be so, the process for triggering the Section 52.103(a) notice is a key point of interface between the IMC-2503 ITAAC verification process and the Section 52.103(a) ITAAC hearing process that leads to fuel load. Because of the significance of this interface, we recommend that the Framework Document be expanded to discuss the process for triggering the Section 52.103(a) notice consistent with the description above from the NEI white paper.

The staff also stated on August 27 that the staff would, within three weeks, provide comments on the industry view of the Section 52.103(a) process described in the November 2001 white paper. As of October 30, we have not yet received the staff response.

3.3.3. During the August 27 workshop, the staff described that NRC ITAAC conclusions would be based on a "dump" from CIPIMS of all (i.e., Tier 1 and Tier 2) related inspection activities. As a general matter related to recordkeeping and traceability, we appreciate the value of a CIPIMS that provides for efficient organization and retrievability of quality- and ITAAC-related documentation. However, a data dump approach to ITAAC verification would be a significant concern because while a great many NRC inspections may somehow relate to an SSC that is the subject of an ITAAC, only a small subset of NRC inspections and conclusions will be material to the determination that a specific ITAAC acceptance criterion is met.

If NRC ITAAC documentation, e.g., the 52.99 *Federal Register* notice, identifies a dump of all related NRC inspections and conclusions as basis for its conclusion that a particular ITAAC has been satisfied, the perception and effect may be that all of those inspections and conclusions become subject to the Section 52.103 post-construction hearing opportunity. Such a result would be contrary to the intended focus of ITAAC on top level design and performance standards and the careful delineation of acceptance criteria that demonstrate those top level standards are met. Moreover, such a result would exponentially expand the scope of the Section 52.103 hearing. A data dump approach may have the effect of transforming tightly focused Section 52.103 hearings into unbridled hearings on construction quality assurance similar to what was experienced under Part 50. In that event, predictability and certainty – major objectives and benefits of Part 52 – would be lost.

The process described by the NRC staff in the middle paragraph on p. 14 of the Framework Document is one way to avoid undesirable expansion of the post-construction hearing:

> The inspection program will rely on the licensee to ensure that all of the ITAAC have been met and the inspectors will perform sampling type inspections to verify compliance with the ITAAC. The sampling type inspections will be planned by the staff at the earliest stages of construction based on a review of the ITAAC for the plant to be constructed. Because several ITAAC are expected to be closely related, the staff may use inspection conclusions reached for one ITAAC and apply them to other related ITAAC. However, the staff does intend to perform a minimum set of inspections for all of the ITAAC. The minimum set of inspections for all of the ITAAC is based on NEI's proposed process, set forth in a November 20, 2001, letter, for informing the staff when an ITAAC or portion of an ITAAC is completed. In accordance with this proposed process, the NRC staff expects that a licensee will provide an ITAAC determination letter when an ITAAC or portion of an ITAAC is completed. This letter will also inform the staff that the bases for the determination are available for audit at the plant site. For those ITAAC which have not received an NRC inspection directly related to that ITAAC or a similar ITAAC as discussed in the previous paragraph, the inspectors will determine, at a minimum, if the licensee's ITAAC determination letter and its associated bases are satisfactory by reviewing the documentation.

Under this approach, Section 52.99 conclusions by the staff would focus on the licensee's ITAAC determination bases. Provided this focus was also reflected in associated ITAAC documentation, including the required 52.99 notice of ITAAC completion, such an approach would provide for the proper focus and scope of the post-construction hearing.

However, the data dump approach to NRC ITAAC verification described by the staff during the August 27 workshop is not consistent with the approach described in the Framework Document. Such an approach could result in NRC ITAAC documentation that reflects a mixture of inspection conclusions that are material to determining acceptance criteria are met and inspection reports on general processes and related/secondary matters. In this event, NRC ITAAC documentation, including Section 52.99 notices, must make clear that the only inspection conclusions that are subject to the post-construction hearing opportunity are those that are directly material to the ITAAC conclusion.

The distinction between inspection conclusions that are directly material to the ITAAC conclusion versus those that are not is the direct, logical extension of the crucial distinction between Tier 1 and Tier 2 that was painstakingly established in the design certification rules. The NRC staff has noted the "special significance" of ITAAC and otherwise recognized the distinction between ITAAC and non-ITAAC inspections and conclusions in its SECY-00-0092 discussions of ITAAC verification and the role of the QA program. This important distinction must be sustained in the COL and ITAAC verification processes. Appendix B of the NEI's November 2001 white paper contains several examples of ITAAC determination bases as distinguished from supporting information.

There is general agreement that matters directly material to an ITAAC conclusion are subject to challenge in the 52.103 hearing. If, *at any time* during the term of the COL, a member of the public has a question about any other matter, including QA program deficiencies that are not material to ITAAC, operational program implementation (assuming no programmatic ITAAC), and many of the topics identified in the SECY-94-294 sample hardware inspection matrix, the person may petition the Commission under 10 CFR 2.206.

Accordingly, we recommend that NRC ITAAC documentation, including Section 52.99 notices, focus on the licensee's ITAAC determination bases, as discussed above and on p. 14 of the Framework Document. As discussed in our November 2001 white paper, matters not material to ITAAC determinations would be the subject of normal NRC inspections and reports. We have previously suggested and continue to be interested in discussing with the NRC the potential to develop a complete set of ITAAC determination bases for one or more approved standard designs. We believe such a task would improve our common understanding of the ITAAC process overall and bring clarity and certainty to the scope and purpose of the Section 52.103 hearing process.

However, to the extent that the NRC staff intends to pursue a data dump approach for some or all of its Section 52.99 ITAAC conclusions and documentation, further discussion is needed to ensure the proper distinction between matters directly material to ITAAC and subject to petition under Section 52.103, versus matters that are not material to ITAAC and subject to petition under Section 2.206. The staff took an action at the August 27 workshop to consider further the format and content of NRC ITAAC conclusion docuemtnation and Section 52.99 notices and the implications for the scope of the 52.103 hearing and related issues.

3.3.4. Invalidating ITAAC Conclusions

Section IX.A.3 of the design certification rules states:

> In the event that an activity is subject to an ITAAC, and the applicant or licensee who references this appendix has not demonstrated that the ITAAC has been satisfied, <u>the applicant or licensee may either take corrective actions to successfully complete that ITAAC</u>, request an exemption from the ITAAC in accordance with Section VIII of this appendix and 10 CFR 52.227(b), or petition for rulemaking to amend this appendix by changing the requirements of the ITAAC, under 10 CFR 2.802 and 52.227(b). Such rulemaking changes to the ITAAC must meet the requirements of Section VIII.A.1 of this appendix.

Based on the discussion during the August 27 workshop, there appears to be general agreement that the licensee's corrective actions program would be relied upon to address most issues affecting installed SSCs that arise after an ITAAC is completed and a 52.99 notice is issued.

As indicated by the NRC examples of ITAAC invalidation in Appendix D of the Framework Document, a completed ITAAC would be invalidated and need to be repeated only if it was based on incorrect or falsified information. In this event, it is not necessary for the NRC to rescind a previous ITAAC conclusion; rather the licensee would be expected to report the situation to the NRC and describe the corrective actions underway to resolve the issue. The following describes the envisioned sequence of events following identification of a deficiency:

- Deficiency placed into the corrective actions program
- If the answer is "no" to any of the following questions, then the deficiency has no impact on completed ITAAC, but would continue to be addressed via the corrective actions program.
  - Does the deficiency relate to previously completed ITAAC?

- If yes, was the ITAAC determination based on incorrect information?
- If yes, is the incorrect information material to the ITAAC determination?
- If yes, the licensee notifies the NRC under Section 50.9 and identifies corrective actions underway; NRC and licensee ITAAC status databases would be modified to reflect that this ITAAC is not complete and refer to the Section 50.9 notice.

- Licensee resolves deficiency via the corrective actions program, re-performs the ITAAC as appropriate, and notifies the NRC of successful ITAAC completion
- Upon notification that corrective actions are finished and the ITAAC is once again complete, the NRC issues a supplement to its prior 52.99 notice for that ITAAC that identifies the corrected ITAAC determination bases, including the corrective actions to restore the ITAAC to completed status

Note that under this approach, it is not necessary for NRC to issue a letter rescinding a prior ITAAC conclusion as discussed on p. 19 of the Framework Document. The licensee's Section 50.9 report and NRC and licensee updates to ITAAC tracking databases provide adequate documentation and public information regarding changes in ITAAC completion status.

3.3.5. Negative inspection conclusions

The Framework Document (pp. 18-19) envisions public meetings to discuss negative findings related to SAYGO process, SAYGO ITAAC and ITAAC conclusions. We recommend that the staff reserve public meetings to exchange information regarding ITAAC deficiencies for situations when there are particularly significant negative findings necessitating involvement of NRC and licensee senior management.

In this regard, we agree with the Framework Document Executive Summary which states, "It is expected that most negative findings will be resolved primarily by the licensee's corrective action program, but more significant findings may require NRC management involvement. All findings, conclusions and unresolved items with be tracked by the CIPIMS." The Framework Document should be modified to reflect that public meetings to discuss ITAAC deficiencies would be held only when the significance of negative findings warrants NRC and licensee senior management involvement.

4. IMC-2504 – Preparations for Operations

4.1. The staff indicated on August 27 that one reason that IMC-2504 might begin during the pre-COL phase is because the staff considers IMC-2504 to include inspections to assure adequate implementation of work and configuration controls after an ITAAC is completed, and some ITAAC may be completed prior to COL issuance. We believe it makes more sense for IMC-2504 to focus on (1) non-ITAAC inspections prior to fuel load (primarily ORAT inspections) that will support Region and NRR recommendations regarding readiness to load fuel, and (2) post-fuel load inspections prior to power operations (primarily start-up testing inspections). Inspections to ensure adequate implementation of work and configuration controls after an ITAAC is completed can and should be considered to be part of continuing spot checks under IMC-2502 of licensee design engineering processes or, alternatively, as part of IMC-2503 ITAAC verification activities.

Accordingly, and consistent with the discussion in earlier comment 2.2, Figure 4 of the Framework Document should be modified to reflect that IMC-2504 will begin after the COL is issued.

4.2. On p. 24 of the Framework Document, the staff uses the term regulatory "gap" to describe the time between when an individual ITAAC is complete and when the Commission makes it's Section 52.103(g) finding and discusses the need for inspections to ensure that the licensee is "managing this 'gap' appropriately." During the August 27 workshop, the staff explained that this refers to the inspections discussed in the previous comment relative to assuring adequate implementation of work and configuration controls after an ITAAC is completed. While such inspections may be appropriate, it is incorrect and misleading to refer to a regulatory"gap," and we recommended that the staff use different terminology to describe these inspections. The staff agreed to consider using different terminology.

B. Specific Comments on the Draft CIP Framework Document

In addition to modifications and clarifications consistent with the comments in Section A, above, we have the following specific comments on the Framework Document:

1. On page 5, the Framework Document says that "the licensee will do some ITAACs *over a long period of time.*" This statement confuses ITAAC, which are brief, focused, end-of-process determinations, with normal fabrication, installation, inspection and testing processes, which may, indeed, occur over a long period of time. To promote understanding of the distinction between ITAAC determinations/ verifications versus underlying fabrication, installation, inspection and testing activities, we recommend the staff avoid further use of this language. Instead, the pertinent points are (1) that ITAAC can be shown to be complete only after the underlying construction, inspection and test activities are complete. This necessarily means that demonstration of ITAAC completion will occur later in construction for some ITAAC versus others. And (2) ITAAC verification by the NRC will be based on SAYGO and other NRC inspection conclusions that are material to the ITAAC conclusion.

2. On page 10, the Framework Document says that the ITAAC for the control room design "could, and possibly should, be completed during the licensing review." As discussed at the August 27 workshop, the Framework Document should clearly state that the control room ITAAC and other "design acceptance criteria" are not required to be completed at time of COL issuance.

3. There is a typo on p. 11. The reference in paragraph D.1 should be to Section 52.79(b)(1).

4. If the p. 15 table of ABWR ITAAC for the Reactor Pressure Vessel System is retained (notwithstanding our comment A.3.2.2, above, on SAYGO ITAAC conclusions), the acceptance criteria should be stated verbatim.

5. On page 19 of the Framework Document, we recommend this statement be modified as follows: "Upon receipt of an ITAAC determination letter, the NRC staff will base its decision regarding ITAAC acceptability on a review of the licensee's ITAAC determination record and/or ~~on~~ NRC inspection reports and NRC SAYGO documentation that are material to the ITAAC in question." This modification is consistent with:

- The intended focus of ITAAC on top level design and performance standards and the careful delineation of acceptance criteria that demonstrate those top level standards are met
- The statement regarding inspection program philosophy on page 14 that NRC "inspectors will determine, at a minimum, if the licensee's ITAAC determination letter and its associated bases are satisfactory by reviewing the documentation"
- Section IX.B.1 of the design certification rules, which states:

> The NRC shall ensure that the required inspections, tests, and analyses in the ITAAC are performed. The NRC shall verify that the inspections, tests, and analyses referenced by the licensee have been successfully completed and, based solely thereon, find the prescribed acceptance criteria have been met. [Emphasis added]

6. On p. 19, the Framework Document says "the staff will perform an independent review to ensure that that it has received an ITAAC determination letter for each ITAAC and the staff agrees that all the ITAAC have been met." This language should be modified to reflect the purpose as clarified by the NRC staff during the August 27 workshop to audit and independently verify the ITAAC verification activities of the primary regional inspectors. As discussed in comment A.3.3.1, above, a 100% re-verification is not envisioned; it is expected that sampling and vertical slice audit methods would be used by the independent review team.

7. On page 23 of the Framework Document, we recommend this statement be modified as follows pending the final resolution of the programmatic ITAAC issue: "~~Therefore, if~~ Regardless of whether or not an operational program ~~does not have~~ has an ITAAC, there is an expectation that the staff will perform inspections prior to operation to verify the licensee's compliance with regulations."

8. By definition, operational program inspections under IMC-2504 are separate from ITAAC verifications under IMC-2503. Therefore, on page 23 of the Framework Document, we recommend this statement be modified as follows: "To the extent these [transition to ROP] inspections are performed prior to loading fuel, these inspections will also supplement the bases for the regional administrator's recommendation to the Director of NRR regarding ~~ITAAC~~ plant readiness to load fuel." This change is consistent with language on p. 24 regarding consideration of ORAT results.

9. On page 24, the Framework Document states that programs such as technical specifications must be in place and fully functional prior to the

52.103(g) finding. This statement is not accurate and conflicts with an earlier statement on the same page, which states that technical specifications will not become effective until the NRC issues its 52.103(g) finding. This page should be revised to indicate that the licensee must be ready to implement the technical specifications and other applicable operational programs prior to the 52.103(g), and not that they be "fully functional" before that finding.

10. On p. 25 of the Framework Document, the staff envisions separate NRC authorizations after the Commission makes its 52.103(g) finding to go above 5% power and to full power. The staff notes that the Commission approved these authorizations in the SRM on SECY-00-0092. However, the staff recommendation and the Commission approval of separate low- and full-power authorizations occurred without discussion with stakeholders of whether these actions are consistent with Part 52 and before the impact of these actions could be fully explored.

    Under Part 52, the only positive finding that the NRC must make post-construction is the 52.103(g) ITAAC finding. Required authorizations to go above 5% power and to full power are tantamount to additional positive findings that Part 52 does not envision. We envision that after ITAAC are completed, the licensee would still need to satisfy a license condition on satisfactory completion of start-up testing. The licensee would also be required to be in compliance with all applicable technical specifications, other license conditions and NRC regulations.

    The key point is that further broad determinations by NRC after the ITAAC finding are not required or appropriate. The time for general readiness determinations is before fuel load, not after. Our November 2001 white paper and programmatic ITAAC comments describe a two-track approach where Track 1 is ITAAC and Track 2 is the Operational Program Readiness Inspections.

    We are particularly puzzled by the proposed requirement for NRC approval for full power operation because such a license condition would be inconsistent with the NRC's practice under Part 50. Since the NRC does not require such approval under Part 50, there is no need or basis for requiring such approval for plants licensed under Part 52.

    At the time of the SRM and SECY-00-0092, transition to operation under Part 52 had simply not been adequately explored, and there are some aspects of the generic COL approved by the Commission in 2000 that we need to discuss further with the staff and Commission, as appropriate. The staff itself has identified that the recommended set of

generic license conditions approved by the Commission was incomplete. The staff has identified that it intends to revisit with stakeholders the Commission-approved COL form and content to discuss addition of the standard fire protection license condition.

The staff has indicated that because the issue of low- and full-power authorizations is one that the Commission has already addressed in an SRM, NEI should address this concern in writing to the Commission. We plan to do so in the near future.

11. In our November 2001 white paper and June 25, 2002, response to NRC staff comments on it, we recommended a target, such as 30-days from receipt of an ITAAC determination letter from the licensee, be established for NRC to complete the ITAAC verification process and issue the required 52.99 notice. We reiterate this recommendation.

    We agree with the June 4, 2002, staff comment that based on various factors, the actual time to complete NRC ITAAC verification may be more or less than the target. We also agree that the density of ITAAC sign-offs will be greater at the back end. But mitigating factors are expected to enable ITAAC sign-offs to keep pace. These factors include, ability for one sign-off to cover many logically grouped ITAAC, increased ITAAC verification efficiency in the later stages of construction, and increased NRC resources to meet the surge in licensee ITAAC determinations.

    The 30-day target is consistent with – and reinforces – the intent that ITAAC verification will generally not require additional NRC inspection once the licensee's ITAAC determination letter is received. The 30-day target also reflects the expectation that ITAAC determination bases will be readily available and that NRC personnel will be familiar with the adequacy and status of plant construction, including licensee performance in the areas pertaining to a particular ITAAC verification.

    We continue to believe the staff should set a target such as 30 days for completing ITAAC verification and recommend this be reflected in the Framework Document.