Regulatory Analysis for Proposed Rule - Requirements for Maintenance of Inspections, Tests, Analyses, and Acceptance Criteria

U.S. Nuclear Regulatory Commission

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EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations related to verification of nuclear power plant construction activities through inspections, tests, analyses, and acceptance criteria (ITAAC) under a combined license. Specifically, the NRC is proposing new provisions that apply after a licensee has completed an ITAAC and submitted an ITAAC closure notification. The new provisions would require licensees to report new information materially altering the basis for determining that a prescribed inspection, test, or analysis was performed as required, or finding that a prescribed acceptance criterion is met; to document the basis for all ITAAC notifications; and to notify the NRC of completion of all ITAAC activities. In addition, the NRC is proposing editorial corrections to existing language in the NRC's regulations to correct and clarify ambiguous language and make it consistent with language in the Atomic Energy Act of 1954, as amended (AEA).

The analysis presented in this document examines the benefits and costs of the proposed requirements. The key findings of the analysis are as follows:

- *Total Cost to Industry*. The proposed rule would result in additional reporting and recordkeeping costs for the industry. The total annual cost for the rule is $2,013,480. The total present value of the costs is estimated at $37,668,316 (using a 7-percent discount rate) and $39,177,089 (using a 3-percent discount rate) over the next 20 years.

- *Annual Impact to the Economy*. Under the Congressional Review Act of 1996 and as a result of consultations with the Office of Information and Regulatory Affairs of the Office of Management and Budget, the NRC has determined that this action is a non-major rule. This determination is based on the estimated one-time costs (expected to occur within the first year) of implementing this action for the total industry is not to exceed $274,555.

- *Value of Benefits Not Reflected Above*. The cost figures shown above do not reflect the value of the benefits of the proposed rule. These benefits are evaluated qualitatively in Section 3.1. This regulatory analysis concluded the costs of the rule are justified in view of the qualitative benefits.

- *Costs to NRC*. The annual cost of the rule to the NRC is negligible. The NRC would incur costs to review and process licensee responses to the proposed reporting requirements and to conduct inspections triggered by the new notifications. The total annual costs are approximately $509,184. The NRC will incur one-time costs for developing the infrastructure to process the new notifications, developing guidance, and training NRC staff on the proposed requirements estimated to be $63,360.

- *Decision Rationale*. Although the NRC did not quantify the benefits of this rule, the staff did qualitatively examine benefits and concluded that the rule would provide enhanced regulatory effectiveness and efficiency and enhanced openness of the regulatory process. The sum total of the requirements in the proposed rule would be to establish reporting of issues affecting closed ITAAC. Specifically, the proposed rule would require the following**:**

(1) licensee reporting of new information materially altering the basis for determining that a prescribed inspection, test or analysis was performed as required, or finding that a prescribed acceptance criterion is met;

(2) licensee documentation of the basis for all ITAAC notifications; and

(3) licensee notification of completion of all ITAAC activities.

The proposed amendments would affect NRC licensees who have received a combined license and who have begun construction.

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ACRONYMS AND ABBREVIATIONS

AEA	Atomic Energy Act of 1954, as amended
ADAMS	Agencywide Documents Access and Management System
CFR	*Code of Federal Regulations*
FR	*Federal Register*
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
NRC	Nuclear Regulatory Commission
NUREG/BR	NRC Nuclear Regulation/Brochure
RG	Regulatory Guide

1. INTRODUCTION

The NRC is proposing to amend the Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 2 and 52 to specify additional requirements for reporting and record keeping of ITAAC activities. The NRC regulations in 10 CFR 52.99 require NRC licensees to provide an ITAAC closure letter once a licensee has successfully completed a required inspection, test, or analysis and determined that the associated acceptance criteria are met. This rulemaking would amend these regulations to identify other occasions where a notification of activities affecting closed ITAAC would be required. The proposed rule would also require licensee documentation of the bases for all ITAAC notifications required under 10 CFR 52.99(c), as well as make corrections to existing language in 10 CFR 52.99 for consistency with other sections in 10 CFR Part 52 and with language in the Atomic Energy Act, as amended (the Act). Finally, this rulemaking would amend 10 CFR 2.340(j) to correct errors and clarify ambiguous statements.

This regulatory analysis has been prepared in accordance with the Regulatory Analysis Guidelines (RA Guidelines) of the NRC, NUREG/BR-0058, Revision 4, September 2004. This regulatory analysis evaluates the consequences associated with the "Requirements for Maintenance of Inspections, Tests, Analyses, and Acceptance Criteria" proposed rule. This document presents background material, rulemaking objectives, alternatives, input assumptions, and analysis of the consequences of the rule language. The regulatory analysis consists of two parts. The first is an aggregate analysis of the proposed rule. The second part is a screening review for disaggregation to identify any individual provisions whose costs are disproportionate to the potential benefits.

The remainder of this introduction is divided into two sections. Section 1.1 states the problem and the objective of the rulemaking. Section 1.2 provides background information and Section 2 identifies the alternatives evaluated in this rulemaking. Section 3 describes the analysis method and input assumptions, Section 4 describes the results, Section 5 discusses the decision rationale, Section 6 the Implementation of the preferred alternative, and Section 7 lists the references used in this Regulatory Analysis.

1.1 Statement of the Problem

As the NRC developed its processes for verification of nuclear power plant construction activities through ITAAC under a combined license, it became clear that there were a number of implementation issues left unaddressed by the existing provisions in 10 CFR Part 52. In particular, the NRC believes that additional notifications should be provided to the NRC by the combined license holder following the notification of ITAAC completion currently required by 10 CFR 52.99(c)(1). In general, the reasons for these proposed new notifications are to ensure that the NRC has sufficient information, in light of new information developed or identified after ITAAC completion and NRC notification, to complete all of the activities necessary for the Commission to make a determination on ITAAC, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing. Therefore, the NRC is proposing new provisions that apply after a licensee has completed an ITAAC and submitted an ITAAC closure letter.

1.2. Background

1.2.1 Current Regulatory Framework

In 54 FR 15371 (April 18, 1989), the Commission added 10 CFR 52.99, “Inspection during construction,” to clearly reflect that inspections (carried out during construction under a combined license) would be based on ITAAC proposed by the applicant, approved by the staff, and incorporated in the combined license. At that time, the Commission made it clear that it would make no findings with respect to construction until the construction was complete. Nonetheless, 10 CFR 52.99 envisioned a "sign-as-you-go" process, whereby NRC staff signed-off on inspection units and notice of the staff's sign-off would be published in the *Federal Register.*

In 2007, the Commission revised 10 CFR Part 52 to enhance the NRC’s license implementation and approval processes (72 FR 49351; August 28, 2007). In that revision, the NRC amended 10 CFR 52.99 to require licensees to notify the NRC that the prescribed inspections, tests, and analyses in the ITAAC were complete and that the acceptance criteria were met. The revision also required that notifications sufficiently demonstrate that the prescribed inspections, tests, and analyses were performed and the prescribed acceptance criteria were met. The NRC added this requirement to ensure that combined license applicants and holders were aware that (1) it was the licensee’s burden to demonstrate compliance with the ITAAC and (2) the NRC expected the notification of ITAAC completion to contain more information than just a simple statement that the licensee believes the ITAAC had been completed and the acceptance criteria met.

Under Section 185.b of the AEA and 10 CFR 52.97(b), a combined license for a nuclear power plant must contain ITAAC that are “necessary and sufficient to reasonably assure that the facility was constructed and will operate in conformity with” the license, the AEA, and NRC regulations. Following issuance of the combined license, Section 189.b of the AEA and 10 CFR 52.99(e) require that the Commission “ensure that the prescribed inspections, tests, and analyses are performed.” Finally, before operation of the facility, Section 189.b and 10 CFR 52.103(g) require that the Commission find that the “prescribed acceptance criteria are met.” This Commission finding will not occur until construction is complete, near the date for scheduled initial fuel load.

As currently required by 10 CFR 52.99(c)(1), the licensee must submit ITAAC closure letters containing “sufficient information to demonstrate that the prescribed inspections, tests, and analyses have been performed and that the associated acceptance criteria have been met.” These notification letters perform two functions, as discussed in the Supplementary Information for the 2007 final rule amending Part 52: (1) T hey alert the NRC to the licensee’s ITAAC completion and ensure that the NRC has sufficient information to complete all of the necessary activities for the Commission to make a determination as to whether all of the ITAAC have been or will be met (the latter is relevant to any hearing on ITAAC under 10 CFR 52.103) before initial operation; and (2) They ensure that interested persons have access to completed and uncompleted ITAAC information at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing on acceptance criteria (72 FR 49352; August 28, 2007, at 49450 (second column)).

Following the 2007 rulemaking, the NRC began to develop ITAAC closure process guidance on the requirements under 10 CFR 52.99. In October 2009, the NRC issued regulatory guidance for the implementation of the revised 10 CFR 52.99 in Regulatory Guide (RG) 1.215, “Guidance

for ITAAC Closure Under 10 CFR Part 52," which endorsed guidance developed by the Nuclear Energy Institute (NEI) in NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52," Revision 3, issued January 2009 (ADAMS Accession No. ML090270415).

The NRC realized (after a series of public meetings) that a number of additional implementation issues were left unaddressed by various provisions found in 10 CFR Part 52. In particular, the NRC believes that additional notifications should be provided to the NRC by the combined license holder following the notification of ITAAC completion currently required by 10 CFR 52.99(c)(1).

1.2.2 Regulatory Objectives

The NRC's objectives for the proposed rulemaking are to: (1) establish a new provision requiring licensees to report new information that materially alters the basis for determining that a prescribed inspection, test or analysis was performed as required, or finding that a prescribed acceptance criterion was met; (2) establish a new provision requiring licensees to document the basis for all ITAAC notifications; (3) establish a new provision to require licensees to notify NRC when all ITAAC activities are complete; and (4) make corrections to existing language in 10 CFR 2.340 and 52.99 to be consistent with other sections in 10 CFR Part 52 and with language in the AEA.

2. IDENTIFICATION OF ALTERNATIVE APPROACHES

The following discussion describes the two regulatory options being considered, with additional analysis presented in Section 3.

2.1 Alternative 1: No-Action

Under Option 1, the No-action alternative, NRC would not amend the current regulations regarding additional ITAAC notifications. The NRC would continue to work with industry to develop regulatory guidance to achieve the NRC's goals. This option would avoid certain costs that the rule would impose. However, taking no action would not ensure that the NRC has sufficient information, in light of new information developed or identified after ITAAC completion, to complete all of the activities necessary for the Commission to make a determination on ITAAC, as required by the AEA, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the threshold for requesting a hearing. The baseline of the analysis is Option 1, the No-action alternative, for which there are no costs.

2.2 Alternative 2: Rulemaking to Amend Regulations to Add ITAAC Notification and Recordkeeping Requirements

Under this option, NRC would conduct a rulemaking to amend its regulations in 10 CFR Part 52 related to verification of nuclear power plant construction activities through inspections, tests, analyses, and acceptance criteria (ITAAC) under a combined license. These changes are to: (1) amend 10 CFR 52.99(c)(3) to require licensee reporting of new information materially altering the basis for determining that a prescribed inspection, test or analysis was performed as required, or finding that a prescribed acceptance criterion is met; (2) amend 10 CFR 52.99(f) to require licensee notification of completion of all ITAAC activities, (3) amend 10 CFR 52.99(c)(4) to require licensee documentation of the basis for all ITAAC notifications, and (4) make

corrections to existing language in 10 CFR 2.340 and 52.99 to be consistent with other sections in 10 CFR Part 52 and with language in the AEA.

This alternative would be consistent with NRC's organizational excellence objectives of ensuring that its actions are efficient, effective, realistic, and timely. The rulemaking alternative is more efficient and effective than relying on voluntary actions by licensees to notify the NRC of these events. It would also be consistent with NRC's openness strategy. This alternative, through the rulemaking process, would provide for fair, timely, and meaningful stakeholder involvement in NRC's development of its ITAAC closure process.

The NRC has estimated the benefits and costs of this alternative, as described in Sections 3 and 4 of this regulatory analysis. The NRC has pursued Alternative 2: Rulemaking for the reasons discussed in Section 5.

3. ESTIMATION AND EVALUATION OF VALUES AND IMPACTS

3.1 Identification of Affected Attributes

This section describes the analysis of private and public sector factors that the proposed rule is expected to affect. The analysis is conducted to identify and evaluate the benefits (values) and costs (impacts) of the two regulatory options, using the list of potential attributes provided in Chapter 5 of NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook," dated January 1997, and in Chapter 4 of NUREG/BR-0058, Rev. 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," dated September 2004. The evaluation considered each attribute listed in Chapter 5. The basis for selecting those attributes is presented below. Section 3.1 identifies the attributes expected to be affected by the proposed rulemaking. Section 3.2 describes how the values and impacts have been analyzed. Finally, Section 3.3 presents the detailed results of the projected values and impacts.

Affected attributes include the following:

- *Industry Implementation* --The regulatory action would result in the need for combined license holders to read the amended regulations and develop procedures for processing notifications required by the proposed new provisions. The regulatory action would also require licensees to develop procedures for documenting the basis for all ITAAC notifications required under 10 CFR 52.99(c).

- *Industry Operation* -- The regulatory action would require combined license holders to: (1) report new information materially altering the basis for determining that a prescribed inspection, test or analysis was performed as required or finding that a prescribed acceptance criterion is met and (2) notify the NRC of completion of all ITAAC activities. The regulatory action would also require combined license holders to retain records of the bases for all ITAAC notifications required under 10 CFR 52.99(c) throughout construction and for five years after the date the Commission makes the finding under 10 CFR 52.103(g) that will allow fuel load and operation.

- *NRC Implementation* – The NRC would incur costs to develop rule guidance, develop the infrastructure to process the proposed new

notifications, develop inspection procedures for inspection activities triggered by the proposed new notifications, and develop and conduct NRC staff training on the new requirements.

- *NRC Operation* -- Under the regulatory actions, the NRC would incur costs to review licensee responses to the new reporting requirements of the proposed rule and to perform additional inspections as a result of the new reports.

- *Improvements in Knowledge* – The regulatory action would improve knowledge with regard to activities affecting closed ITAAC at facilities under construction.

- *Regulatory Efficiency* -- The regulatory action would improve regulatory efficiency by ensuring that the NRC has sufficient, timely information, in light of new information developed or identified after ITAAC completion and NRC notification, to complete all of the activities necessary for the Commission to make a determination on ITAAC, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing.

- *General Public* -- The regulatory action would improve the general public's ability to participate effectively in the licensing process by ensuring that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189a(1)(B) threshold for requesting a hearing.

Attributes that are *not* expected to be affected by the rulemaking options include the following:

- Occupational Health (Routine);
- Occupational Health (Accident);
- Public Health (Routine);
- Public Health (Accident);
- Off-site Property;
- On-site Property;
- Environmental Considerations;
- Antitrust Considerations;
  Other Government;
  Safeguards and Security Considerations

3.2 Analytical Methodology

This section describes the methodology used to analyze the consequences associated with the proposed rule. The values (benefits) include any desirable changes in the affected attributes. The impacts (costs) include any undesirable changes in affected attributes.

The NRC collected input assumptions using data and information from the following sources: NRC workgroups and staff experience; NRC databases; and reports and documents.

As described in Section 3.1, the attributes expected to be affected include the following:

- Industry Implementation
- Industry Operation

- NRC Implementation
- NRC Operation
- Improvements in Knowledge
- Regulatory Efficiency
- General Public

This analysis relies on a qualitative evaluation for several of the affected attributes (e.g., improvements in knowledge, regulatory efficiency, and general public) due to difficulty in quantifying the impact of the current rulemaking. The remaining attributes (industry implementation, industry operation, NRC implementation, and NRC operation) are evaluated quantitatively. The analysis proceeds quantitatively for these attributes and makes assumptions as discussed in Section 3.2.1.

In accordance with Office of Management and Budget guidance and NUREG/BR-0058, Rev. 4, the results of the analysis are presented using both 3 percent and 7 percent real discount rates. The NRC seeks public comments on the accuracy of these regulatory analysis assumptions and on the validity of the proposed rules value and impact estimation methods.

3.2.1 Data and Assumptions

3.2.1.1 Affected Entities

Licensees

This regulatory action would affect combined license holders who have begun ITAAC closure activities. The NRC estimates that this could affect 17 licensees over the next 20 years, based on the published schedules for combined license applications currently under NRC review.

NRC

NRC costs for implementing this regulation would be incurred primarily by the Office of New Reactors. There would also be costs incurred by Region II for additional inspections.

3.2.1.2 Other Data and Attributes

- Assumed labor rate for NRC staff is $120 per hour and for licensee personnel is $100 per hour.

- Ongoing costs of operation related to the rule are assumed to begin in 2011, and are modeled on an annual cost basis. Ongoing costs related to the No-Action Alternative are assumed to be ongoing and begin in 2011 and are modeled on an annual cost basis.

- The analysis calculated cost and savings over a 4-year construction timeframe and a 3-year post-construction recordkeeping period, with each year's costs or savings discounted back at a 7-percent and 3-percent discount rate, in accordance with NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 4.

- For the analysis, annual costs have been multiplied by 1.2 to capture inflationary cost increases incurred by the 17 licensees constructing over a 20 year staggered time-frame.

- For the analysis, the NRC assumed that all combined license applications currently under active review would be approved and issued on their current published schedules. In addition, the NRC assumed that each combined license holder would begin construction upon issuance of the combined license and that construction would span a period of 4 years. The NRC also assumed that each licensee would submit 6 supplemental ITAAC closure notifications per year of construction and that 2 of those supplemental notifications would result in additional NRC inspection.

- Finally, for analysis of the recordkeeping requirements, the NRC assumed that, on average, ITAAC closure records would need to be retained for 7 years (2 years during construction and 5 years after the 10 CFR 52.103(g) finding).

3.3 Detailed Results

This section presents a detailed estimate of the values and impacts for the proposed rulemaking (Option 2). Some values and impacts are addressed qualitatively for reasons discussed in Section 3.2. These results are summarized in Table 3.

Option 1: No-action

By definition, this option does not result in any values or impacts.

Option 2: Amend Regulations to Add ITAAC Notification and Recordkeeping Requirements

Industry Implementation

Impact: Read the amended regulations.

- One time incremental effort of 1.5 hours per licensee.

Impact: Develop procedures for processing notifications required by the proposed new provisions.

- One time incremental effort of 80 hours per licensee.

Impact: Develop procedures for documenting the basis for all ITAAC notifications required under 10 CFR52.99(c).

- One time incremental effort of 80 hours per licensee.

Industry Operation

Impact: Report new information materially altering the ITAAC determination basis.

- Effort of 1.5 hours per licensee for each early notification under

- 10 CFR 52.99(c)(3)(i).
- Effort of 20 hours per licensee for each supplemental ITAAC closure letter under 10 CFR 52.99(c)(3)(ii).

Impact: Submit All ITAAC Complete Letter under 10 CFR 52.99(f).

- Effort of 8 hours per licensee.

Impact: Recordkeeping:

- 20 hours per ITAAC for each licensee to develop records documenting the basis for all ITAAC notifications required under 10 CFR 52.99(c) and 1 hour per year per ITAAC for each licensee to maintain records (810 hours per year per licensee).

NRC Implementation

Impact: Develop rule guidance:

- One time incremental effort of 200 hours to develop new guidance or revise existing guidance.

Impact: Develop infrastructure to process supplemental ITAAC notifications and All ITAAC Complete notifications:

- One time incremental effort of 160 hours of labor.

Impact: Develop inspection procedures for inspection of activities triggered by early notification of ITAAC maintenance issues under 10 CFR 52.99(c)(3)(i):

- One time incremental effort of 80 hours.

Impact: Develop and conduct NRC staff training on new requirements.

- One time incremental effort of 40 hours.

NRC Operation

Impact: Review and process early notifications required by 10 CFR 52.99(c)(3)(i):

- Incremental effort of 8 hours per report to collect, review, and process early notifications.

Impact: Review and process supplemental ITAAC closure notifications under 10 CFR 52.99(c)(3)(ii):

- Incremental effort of 20 hours per report.

Impact: Perform unplanned inspection of ITAAC maintenance issues:

- Annual incremental effort of 20 hours per licensee.

Impact: Review and process All ITAAC Complete notification under 10 CFR 52.99(f)(1)

- Incremental effort of 8 hours per report to collect, review, and process.

Table 3
Quantitative Results
Value (+) or Impact (-)

	One-time Implementation Costs	*Annual Operating Costs
Industry Costs	**$274,555	$2,013,480
NRC Costs	$63,360	$509,184
Total	$337,915	$2,522,664

*Annual Operating costs have been factored by 1.2 to account for inflation over the 20 year construction period that the 17 licensees will be constructing plants.
**The one-time industry reporting cost of $27,540,000 is not reflected here, because it is not an implementation cost.

4. PRESENTATION OF RESULTS

4.1 Values and Impacts

This section presents results of values and impacts (i.e., costs) that are expected to be derived from the proposed rule. To the extent that the affected attributes could be analyzed quantitatively, the net effect of each alternative has been calculated and is presented below. However, some values and impacts could be evaluated only on a qualitative basis.

The results of the value-impact analysis are summarized in Tables 4-1 and 4-2. Table 4-3 provides the cost comparison for the two alternatives. The Rulemaking Alternative would result in additional costs when compared to the No-Action Alternative. The quantitative impact estimated for the Rulemaking Alternative is in the millions. The rulemaking is estimated to cost between $39,443,488 and $41,092,239 (7-percent and 3-percent discount rate, respectively). Costs are mostly borne by industry.

TABLE 4-1

Summary of Benefits/Savings and Costs/Burdens

Net Monetary Savings (or Costs) – Total Present Value in millions	Non-Monetary Benefits/Costs
Alternative 1: No Action **Industry:** $0 **NRC:** $0	Qualitative Benefits: None. Qualitative Costs: Regulatory Efficiency: Regulatory efficiency would be reduced by not providing the most efficient timely ITAAC completion notifications. General Public: The general public's ability to participate effectively in the licensing process could be reduced because taking no action would not ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing.
Alternative 2: Rulemaking **Industry:** ($39.46) using a 3% discount rate ($37.94) using a 7% discount rate **NRC:** ($1.63) using a 3% discount rate ($1.50) using a 7% discount rate	Qualitative Benefits: Improvements in Knowledge: Increase knowledge of closed ITAAC at facilities under construction. Regulatory Efficiency: Improve regulatory efficiency by ensuring that the NRC has sufficient, timely information, in light of new information developed or identified after ITAAC completion and NRC notification. General Public: Improve the general public's ability to participate effectively in the licensing process. Qualitative Costs: None.

Table 4-2 presents the net impact of the rule. A positive value below is a cost. A number in parentheses is a negative cost, or a savings.

Table 4-2: Net Impact of Alternatives 1 and 2

Regulatory Alternative	Total at 3% discount rate ($)	Total 7% discount rate ($)
1. No-Action	$0	$0
2. Rulemaking	$41,092,239	$39,443,488

*Reporting was recorded over a 4 year timeframe and recordkeeping over a 7 year timeframe. This was factored by 1.20 for inflationary considerations (see attributes section for further information).

There are no "new" substantial costs to industry associated with the No-Action Alternative. No changes would be made to the regulation.

There are no quantifiable values (i.e. benefits) associated with the rule. The qualitative values of the rule are associated with improved regulatory efficiency by ensuring that the NRC has sufficient, timely information, in light of new information developed or identified after ITAAC completion and NRC notification, to complete all of the activities necessary for the Commission to make a determination on ITAAC, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing. This has a beneficial effect on the attributes of improvements in knowledge, regulatory efficiency, and general public

Table 4-3 shows the estimated costs by attribute.

Table 4-3: Estimated Values and Impacts by Attribute

Attribute	Alternative 2: Rulemaking Total Cost (million $)	
	3% Discount	7% Discount
Industry Implementation	(.27)	(.27)
Industry Operation	(39.19)	(37.67)
NRC Implementation	(.06)	(.06)
NRC Operation	(1.57)	(1.44)
Total	(41.09)	(39.44)

Note: Total may differ from sum of values due to rounding.
*4 years have been considered for ITAAC reporting and 7 years for ITAAC recordkeeping purposes

5. DECISION RATIONALE

NRC's current regulations in 10 CFR 52.99 require licensees to notify the NRC that the prescribed inspections, tests, and analyses in the ITAAC were complete and that the acceptance criteria were met. As the NRC developed its processes for verification of nuclear power plant construction activities through ITAAC under a combined license, it became clear that there were a number of implementation issues left unaddressed by the existing provisions in 10 CFR Part 52. In particular, the NRC believes that additional notifications should be provided to the NRC by the combined license holder following the notification of ITAAC completion currently required by 10 CFR 52.99(c)(1). In general, the reasons for these proposed new notifications are to ensure that the NRC has sufficient information, in light of new information developed or identified after ITAAC completion and NRC notification, to complete all of the activities necessary for the Commission to make a determination on ITAAC, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing. Therefore, the NRC is proposing new provisions that apply after a licensee has completed an ITAAC and submitted an ITAAC closure letter.

5.1 Aggregate Analysis

Two alternatives were evaluated in this Regulatory Analysis. Alternative 1, the No-Action Alternative, would maintain the regulations as currently written and the NRC would continue to work with industry to develop regulatory guidance to achieve the NRC's goals. This option would avoid certain costs that the rule would impose. However, taking no action would not ensure that the NRC has sufficient information, in light of new information developed or identified after ITAAC completion, to complete all of the activities necessary for the Commission to make a determination on ITAAC, as required by the AEA, and to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the threshold for requesting a hearing.

Alternative 2, the Rulemaking Alternative, would amend NRC regulations to: (1) amend 10 CFR 52.99(c)(3) to require licensee reporting of new information materially altering the basis for determining that a prescribed inspection, test or analysis was performed as required, or finding that a prescribed acceptance criterion is met; (2) amend 10 CFR 52.99(f) to require licensee notification of completion of all ITAAC activities, (3) amend 10 CFR 52.99(c)(4) to require licensee documentation of the basis for all ITAAC notifications, and (4) make corrections to existing language in 10 CFR 2.340 and 52.99 to be consistent with other sections in 10 CFR Part 52 and with language in the Act. Alternative 2 would improve regulatory efficiency by ensuring that the NRC has sufficient, timely information, in light of new information developed or identified after ITAAC completion and NRC notification, to complete all of the activities necessary for the Commission to make a determination on ITAAC, and ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189a(1)(B) threshold for requesting a hearing. Therefore, the Rulemaking Alternative is the preferred approach.

5.2 Disaggregation Analysis

The NRC has prepared an analysis of the impact of the changes (Appendix A) that identifies each provision affected by the rulemaking and determines its contribution to the overall cost of the proposed rule. The NRC has determined that each individual requirement is needed for the regulatory initiative to resolve the problems and concerns and meet the stated objectives that are the focus of the regulatory initiative, as illustrated in Table 5-1 below. The NRC also performed an analysis to identify any individual provision that could impose cost disproportionate to the benefits attributable to each provision. The NRC has concluded that there are no provisions whose costs are disproportionate to the benefits and whose inclusion in the aggregate analysis could mask the impact of this rulemaking.

Table 5-1: Disaggregation Analysis

Rule Objectives	52.99(c)(3)(i)	52.99(c)(3)(ii)	52.99(f)(1)	52.99(f)(2)	52.99(c)(4)
	New information on ITAAC closure	Supplemental ITAAC closure notification	All ITAAC Complete notification	24-hour notification of new information	ITAAC closure records
NRC has information to support inspections	X			X	X
NRC has sufficient information for ITAAC finding	X	X	X	X	X
Interested persons have access to ITAAC information		X			

6. IMPLEMENTATION

The staff is recommending that the final rule be effective 30 days after publication in the *Federal Register*. The industry has proactively been revising their own guidance document to require many of the things that would be imposed by this proposed rule. Therefore, the NRC expects that combined license holders will already be planning for these reports and records by the time this rule is promulgated, should it be adopted by the NRC in a final rule.

7. REFERENCES

NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 4.

NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook, Final Report," Office of Nuclear Regulatory Research, January 1997.

SECY-09-0119, "Staff Progress in Resolving Issues Associated with Inspections, Tests, Analyses and Acceptance Criteria," August 26, 2009.

SRM-M090922 - "Staff Requirements - Periodic Briefing on New Reactor Issues - Progress in Resolving Issues Associated with Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC), 9:30 A.M., Tuesday, September 22, 2009," October 16, 2009.

Regulatory Guide 1.215, "Guidance for ITAAC Closure Under 10 CFR Part 52," Revision 0, October 31, 2009.

NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52," Revision 3, January 2009."

Appendix: Analysis Details

52.99(c)(3)(i) New Information on ITAAC Closure.

NRC's current regulations in 10 CFR 52.99 require licensees to notify the NRC that the prescribed inspections, tests, and analyses in the ITAAC were complete and that the acceptance criteria were met. The NRC believes that additional notifications should be provided to the NRC by the combined license holder following the notification of ITAAC completion currently required by 10 CFR 52.99(c)(1). The proposed revisions would require licensees to notify the NRC of new information materially altering the basis for determining that a prescribed inspection, test or analysis was performed as required or finding that a prescribed acceptance criterion is met. The notification would be required to be by e-mail to hoo.hoc@nrc.gov, which is the preferred method of notification, by facsimile to the NRC Operations Center at (301) 816–5151, or by telephone at (301) 816–5100 within 7 days following licensee determination that the new information materially alters the basis for determining that a prescribed inspection, test or analysis was performed as required or finding that a prescribed acceptance criterion is met.

NRC Costs to Review Early Notifications

Cost of NRC staff time	$120
Hours of NRC staff time	x 8
Average Annual No. of ITAAC per Licensee	x 6
Number of Licensees	x 17
Total Annual Early Notification Review Costs	**($97,920)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
TOTAL NRC EARLY NOTIFICATION REVIEW COSTS	**($470,016)**

NRC Costs to Perform Unplanned ITAAC Inspections

Cost of NRC staff time	$120
Hours of NRC staff time	x 20
Average Annual No. of ITAAC per Licensee	x 2
Number of Licensees	x 17
Total Annual Unplanned ITAAC Complete Inspection Costs	**($81,600)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
TOTAL NRC UNPLANNED ITAAC COMPLETE INSPECTION COSTS	**($391,680)**

Licensee Early Notification Costs

Cost of Licensee staff time	$100
Hours of Industry staff time	x 1.5
Average Annual No. of ITAAC per Licensee	x 6
Number of Licensees	x 17
Total Annual Licensee Early Notification Costs	**($15,300)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
TOTAL LICENSEE EARLY NOTIFICATION COSTS	**($73,440)**

NRC One Time Costs for Developing Inspection Procedures

Cost of NRC staff time	$120
Hours of NRC staff time	x 80
Total NRC One Time Costs for Developing Inspection Procedures	**($9,600)**

NRC One Time Costs – Developing Guidance

Cost of NRC staff time	$120
Hours of NRC staff time	x 60
Total NRC One Time Costs for Developing Guidance	**($7,200)**

NRC One Time Costs – Developing Processing Infrastructure

Cost of NRC staff time	$120
Hours of NRC staff time	x 48
Total NRC One Time Costs for Develop Processing Infrastructure	**($5,760)**

NRC One Time Costs – Conducting Staff Training

Cost of NRC staff time	$120
Hours of NRC staff time	x 12
Total NRC One Time Costs for Conducting Staff Training	**($1,440)**

Licensee One Time Costs – Developing Processing Procedures

Cost of Industry staff time	$100
Number of Licensees	x 17
Hours of Industry staff time	x 24
Total Industry One Time Costs for Developing Processing Procedures	**($40,800)**

52.99(c)(3)(ii) Supplemental ITAAC Closure Notification

The proposed revisions would require the licensee, after submitting a notification under paragraph (c)(3)(i), to submit a supplemental ITAAC closure notification documenting the resolution of the issue which prompted the paragraph (c)(3)(i) report. The information provided in the notification should be at a level of detail comparable to the ITAAC closure notification under paragraph (c)(1). The dual purposes of the proposed paragraph (c)(3)(ii) notification are (1) to ensure that the NRC has sufficient information, in light of new information developed or identified after the ITAAC closure notification under 10 CFR 52.99(c)(1), to complete all of the activities necessary for the Commission to make a determination on ITAAC, and (2) to ensure that interested persons have access to information on ITAAC at a level of detail sufficient to address the AEA Section 189.a(1)(B) threshold for requesting a hearing.

NRC Costs to Review/Process Supplemental ITAAC

Cost of NRC staff time	$120
Hours of NRC staff time	x 20
Average Annual No. of ITAAC per Licensee	x 6
Number of Licensees	x 17
Total Annual ITAAC Complete Notification Costs	**($244,800)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
TOTAL NRC REVIEW/PROCESS COSTS	**($1,175,040)**

Licensee Costs Supplemental ITAAC Closure

Cost of Licensee staff time	$100
Hours of Industry staff time	x 20
Average Annual No. of ITAAC per Licensee	x 6
Number of Licensees	x 17
Total Annual Supplemental ITAAC Closure Costs	**($204,000)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
TOTAL LICENSEE SUPPLEMETAL ITAAC CLOSURE COSTS	**($979,200)**

NRC One Time Costs – Developing Guidance

Cost of NRC staff time	$120
Hours of NRC staff time	x 120
Total NRC One Time Costs for Developing Guidance	**($14,400)**

NRC One Time Costs – Develop Processing Infrastructure

Cost of NRC staff time	$120
Hours of NRC staff time	x 96
Total NRC One Time Costs for Develop Processing Infrastructure	**($11,520)**

NRC One Time Costs – Conducting Staff Training

Cost of NRC staff time	$120
Hours of NRC staff time	x 24
Total NRC One Time Costs for Conducting Staff Training	**($2,880)**

Licensee One Time Costs – Developing Processing Procedures

Cost of Industry staff time	$100
Number of Licensees	x 17
Hours of Industry staff time	x 48
Total Industry One Time Costs for Developing Processing Procedures	**($81,600)**

52.99(c)(4) ITAAC Closure Documentation

The proposed revisions would require that licensees maintain records of the bases for determining whether a notification of new information on ITAAC closure under 10 CFR 52.99(c)(3)(i) is required and records of the bases for all notifications required under 10 CFR 52.99(c). This would include records supporting initial ITAAC closure letters under paragraph (c)(1), uncomplete ITAAC notifications under paragraph (c)(2), supplemental ITAAC closure letters under (c)(3). The onsite ITAAC closure package would provide the technical basis for the licensee's submittals under 10 CFR 52.99(c). As such, it can be viewed as a "roadmap" documenting how the licensee has established that the activities related to verifying that the ITAAC acceptance criteria are met were accomplished. Licensees would be required to retain these records for a period of 5 years after the date the Commission makes the finding under 10 CFR 52.103(g).

Annual – ITAAC Closure Documentation

Cost of Industry staff time	$100
Hours of Industry staff time	x 1
Number of ITAAC per Lisencee	x 810
Number of Licensees	x 17
Total Annual ITAAC Closure Documentation	**($1,377,000)**
Average Years Needed for Recordkeeping	x 7
Inflationary Ratio to account for 20 year Construction Period	x 1.2
ITAAC CLOSURE DOCUMENTAATION COSTS (Annualized)	**($11,566,800)**

One Time Recordkeeping - ITAAC Closure Documentation

Cost of Industry staff time	$100
Hours of Industry staff time	x 20
No. of ITAAC per Licensee	x 810
Number of Licensees	x 17
ITAAC CLOSURE DOCUMENTATION COSTS (One Time)	**+ ($27,540,000)**

TOTAL ITAAC CLOSURE DOCUMENTATION COSTS **($39,106,800)**

One Time Costs – Developing Documenting Procedures

Cost of Industry staff time	$100
Number of Licensees	x 17
Hours of Industry staff time	x 80

Total Industry One Time Costs for Developing Documenting Procedures ($136,000)

52.99(f) All ITAAC Complete Notification

The proposed revisions would require licensees to notify the NRC that all ITAAC are complete. At the time the licensee submits the all ITAAC complete notification, the NRC would expect that all activities requiring supplemental ITAAC closure letters have been completed, that the associated ITAAC determination bases have been updated, and that all required notifications under paragraphs (c)(3) have been made.

Licensee All ITAAC Complete Notification

Cost of Industry staff time	$100
Hours of Industry staff time	x 8
Average Annual No. of ITAAC per Licensee	x 6
Number of Licensees	x 17
Total Annual All ITAAC Complete Notification Costs	**($81,600)**
Years to Complete Plant Construction	x 4
Inflationary Ratio to account for 20 year Construction Period	x 1.2
ALL ITAAC COMPLETE NOTIFICATION COSTS	**($391,680)**

Licensee One Time Costs – Developing Processing Procedures

Cost of Industry staff time	$100
Number of Licensees	x 17
Hours of Industry staff time	x 8
Total Industry One Time Costs for Developing Processing Procedures	**($13,600)**

NRC One Time Costs – Developing Guidance

Cost of NRC staff time	$120
Hours of NRC staff time	x 20
Total NRC One Time Costs for Developing Guidance	**($2,400)**

NRC One Time Costs – Develop Processing Infrastructure

Cost of NRC staff time	$120
Hours of NRC staff time	x 16
Total NRC One Time Costs for Develop Processing Infrastructure	**($1,920)**

NRC One Time Costs – Conducting Staff Training

Cost of NRC staff time	$120
Hours of NRC staff time	x 4
Total NRC One Time Costs for Conducting Staff Training	**($480)**