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# **Regulatory Analysis for Final Rule - Requirements for Maintenance of Inspections, Tests, Analyses, and Acceptance Criteria**

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**U.S. Nuclear Regulatory Commission  
January 2012**



## EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is amending 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 will require new provisions that apply after a combined license holder (licensee) has completed an ITAAC and submitted an ITAAC closure notification. The new provisions require licensees to 1) report new information materially altering the basis for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met, and 2) to notify the NRC of completion of all ITAAC activities. This regulatory analysis focuses on these regulatory provisions.

In addition, the NRC is making editorial corrections to existing language in the NRC's rules of practice and procedure, in order to make it consistent with language in the Atomic Energy Act of 1954, as amended (AEA) regarding the Commission's findings on inspections, tests, analyses and acceptance criteria for combined licenses, and to clarify the relationship between an adjudicatory hearing on a combined license and the issuance of that combined license. Inasmuch as these changes are not regulatory in nature and address procedural matters for which the NRC typically does not perform detailed regulatory analysis, this regulatory analysis does not address these latter corrections and changes.

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

- *Total Cost to Industry.* The final rule will result in additional reporting and recordkeeping costs for the industry. The total annual cost for the rule is \$244,800. The total present value of the costs is estimated at \$940,000 (using a 7-percent discount rate) and \$1,021,000 (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 \$111,350.
- *Value of Benefits Not Reflected Above.* The cost figures shown above do not reflect the value of the benefits of this 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 NRC will incur costs to review and process licensee responses to the reporting requirements. The total annual costs are approximately \$293,760. The NRC will incur one-time costs for developing the infrastructure to process the new notifications, developing guidance, and training NRC staff on the requirements estimated to be \$49,920.

- *Decision Rationale.* Although the NRC did not quantify the benefits of this rule, the staff did qualitatively examine benefits and concluded that the rule will provide enhanced regulatory effectiveness and efficiency, and enhanced openness of the regulatory process. The requirements in this rule will establish minimum NRC requirements governing the reporting of issues affecting ITAAC which the licensee has previously reported to the NRC as “closed,” until the NRC makes the 10 CFR 52.103(g) finding that the specified acceptance criteria are satisfied. The amendments will 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	NRC's Agencywide Documents Access and Management System
CFR	<i>Code of Federal Regulations</i>
FR	<i>Federal Register</i>
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NUREG/BR	Nuclear Regulatory Commission/Brochure
RG	Regulatory Guide

## **1. INTRODUCTION**

The NRC is amending Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 2 and 52 to specify additional requirements for reporting of inspections, tests, analyses, and acceptance criteria (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 amends these regulations to identify other occasions where a notification of activities affecting closed ITAAC will be required. This regulatory analysis focuses on these regulatory provisions.

The rule also corrects 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 of 1954, as amended (AEA). Finally, this rulemaking will amend 10 CFR 2.340(j) to make it consistent with language in the AEA regarding the Commission's findings on inspections, tests, analyses and acceptance criteria for combined licenses, and to clarify the relationship between an adjudicatory hearing on a combined license and the issuance of that combined license. Inasmuch as these changes are not regulatory in nature and address procedural matters for which the NRC typically does not perform detailed regulatory analysis, this regulatory analysis does not address these corrections and changes.

This regulatory analysis was 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" final 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 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 implements 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 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 developed 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 adopted 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 Part 52 (72 FR 49351; August 28, 2007) to, among other things, enhance the NRC's ITAAC processes. 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 statement of considerations for the 2007 rule indicated that this requirement would ensure that combined license applicants and holders were aware that it was the licensee's burden to demonstrate compliance with the ITAAC, and that the notification of ITAAC completion will 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 185.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 185.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: 1) They 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 (Agencywide Documents Access and Management System (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 rulemaking which are the subject of this regulatory analysis, are to: 1) establish a new provision requiring licensees to report new information that materially alters the bases for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met; and 2) establish a new provision to requires licensees to notify the NRC when all ITAAC activities are complete.

## **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, the 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 imposed by the rule. However, taking no action would not necessarily ensure that the NRC has sufficient information, in light of new information developed or identified after ITAAC completion, to do the following: 1) complete all of the activities necessary for the Commission to make a determination on ITAAC, as required by the AEA, and 2) 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 success of the no-action alternative is contingent upon: (i) industry agreement to develop guidance which achieves the NRC's goals, and (ii) voluntary industry action in the future to provide, in a timely fashion, information on ITAAC consistent with that industry-developed guidance. The baseline of the analysis is Option 1, the No-action alternative, for which there is no cost.

### **2.2 Alternative 2: Amend Regulations to Add ITAAC Notification Requirements**



Under this option, the NRC would amend its regulations in 10 CFR Part 52 related to verification of nuclear power plant construction activities through ITAAC under a combined license. These changes amend 10 CFR 52.99(c) to: 1) require licensee reporting of new information that materially alters the bases for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met; and 2) require licensee notification of completion of all ITAAC activities.

This alternative would be consistent with the 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 the NRC's openness strategy. This alternative, through the rulemaking process, would provide for fair, timely, and meaningful stakeholder involvement in the 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 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 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 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 will result in the need for combined license holders to read the amended regulations and develop procedures for processing notifications required by the new provisions.
- *Industry Operation* -- The regulatory action will require combined license holders to: 1) report new information materially altering the bases for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met and 2) notify the NRC of completion of all ITAAC activities.
- *NRC Implementation* --The NRC will incur costs to develop rule guidance, develop the infrastructure to process the new notifications, and develop and conduct NRC staff training on the new requirements.

- *NRC Operation* -- Under the regulatory actions, the NRC will incur costs to review licensee responses to the new reporting requirements of the rule.
- *Improvements in Knowledge* --The regulatory action will improve the NRC's knowledge of activities affecting closed ITAAC at facilities under construction.
- *Regulatory Efficiency* -- The regulatory action will 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 1) complete all of the activities necessary for the Commission to make a determination on ITAAC, and 2) 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 will 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 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.

### **3.2.1 Data and Assumptions**

#### **3.2.1.1 Affected Entities**

##### Licensees

This regulatory action will affect combined license holders who have begun ITAAC closure activities. The NRC estimates that this will 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 will be incurred primarily by the Office of New Reactors.

#### **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 2012, and are modeled on an annual cost basis. Ongoing costs related to the No-Action Alternative are zero because no new requirements are imposed for this alternative.
- The analysis calculated cost and savings over a 4-year construction timeframe, 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 conservatively assumed that all 17 combined license applications currently under active review will be approved and issued in 2012.

In addition, the NRC assumed that each combined license holder will begin construction upon issuance of the combined license and that construction will span a period of 4 years. The NRC also assumed that each licensee will submit 6 ITAAC post-closure notifications per year of construction.

### 3.3 Detailed Results

This section presents a detailed estimate of the values and impacts for the 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 new provisions.

- One time incremental effort of 56 hours per licensee.

##### Industry Operation

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

- Effort of 20 hours per licensee for each ITAAC post-closure letter under 10 CFR 52.99(c)(2).

Impact: Submit All ITAAC Complete Letter under 10 CFR 52.99(c)(4).

- Effort of 8 hours per licensee.

##### NRC Implementation

Impact: Develop rule guidance:

- One time incremental effort of 140 hours to develop new guidance or revise existing guidance.

Impact: Develop infrastructure to process ITAAC post-closure notifications and All ITAAC Complete notifications:

- One time incremental effort of 112 hours of labor.

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

- One time incremental effort of 28 hours.

NRC Operation

Impact: Review and process ITAAC post-closure notifications under 10 CFR 52.99(c)(2):

- Incremental effort of 20 hours per report.

Impact: Review and process All ITAAC Complete notification under 10 CFR 52.99(c)(4)

- 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	-\$111,350	-\$244,800
NRC Costs	-\$49,920	-\$293,760
Total	-\$161,270	-\$538,560

\*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.

**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 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 will result in additional costs when compared to the No-Action Alternative. The quantitative impact for the Rulemaking Alternative is estimated to cost between \$1,985,000 and \$2,163,000 (7-percent and 3-percent discount rate, respectively). Costs are shared nearly equally by industry and the NRC.

**TABLE 4-1**

Summary of Benefits/Savings and Costs/Burdens

Net Monetary Savings (or Costs) – Total Present Value in millions	Non-Monetary Benefits/Costs
<p><b>Alternative 1: No Action</b></p> <p><b>Industry:</b> \$0</p> <p><b>NRC:</b> \$0</p>	<p><u>Qualitative Benefits:</u> None.</p> <p><u>Qualitative Costs:</u> Regulatory Efficiency: Regulatory efficiency will be reduced by not providing the most efficient timely ITAAC completion notifications.</p> <p>General Public: The general public’s ability to participate effectively in the licensing process could be reduced because taking no action will 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.</p>
<p><b>Alternative 2: Rulemaking</b></p> <p><b>Industry:</b> (\$1.02) using a 3% discount rate (\$0.94) using a 7% discount rate</p> <p><b>NRC:</b> (\$1.14) using a 3% discount rate (\$1.04) using a 7% discount rate</p>	<p><u>Qualitative Benefits:</u> Improvements in Knowledge: Increase knowledge of closed ITAAC at facilities under construction.</p> <p>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.</p> <p>General Public: Improve the general public’s ability to participate effectively in the licensing process.</p> <p><u>Qualitative Costs:</u> None.</p>

Table 4-2 presents the net impact of the rule. A negative value below is a cost. A positive number is 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	-\$2,163,000	-\$1,985,000

\*Annual costs were 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 will 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	(0.10)	(0.10)
Industry Operation	(0.92)	(0.84)
NRC Implementation	(0.03)	(0.03)
NRC Operation	(1.11)	(1.01)
<b>Total</b>	<b>(2.16)</b>	<b>(1.98)</b>

Note: Total may differ from sum of values due to rounding.

## 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 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 189a(1)(B) threshold for requesting a hearing. Therefore, the NRC developed

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 amend 10 CFR 52.99(c)(2) to: 1) require licensee reporting of new information that materially alters the bases for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met; 2) require licensee notification of completion of all ITAAC activities, and 3) 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. 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 this 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)(2)	52.99(c)(4)
	ITAAC post-closure notification	All ITAAC Complete notification
NRC has sufficient information for ITAAC finding	X	X
Interested persons have timely access to new ITAAC information to support a hearing on acceptance criteria	X	

## 6. IMPLEMENTATION

The staff recommends 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 recommend many of the actions that would be imposed by this 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)(2) ITAAC Post-Closure Notification

The revisions will require the licensee to submit an Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) post-closure notification to report new information that materially alters the bases for determining that either inspections, tests, or analyses were performed as required, or that acceptance criteria are met. 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 paragraph (c)(2) notification are 1) to ensure that the U.S. Nuclear Regulatory Commission (NRC) has sufficient information, in light of new information developed or identified after the ITAAC closure notification under Title 10 of the *Code of Federal Regulations* (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 Atomic Energy Act of 1954, as amended (AEA) Section 189a(1)(B) threshold for requesting a hearing.

#### *NRC Costs to Review/Process ITAAC Post-Closure Notifications*

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 <u>17</u>
<b>Total Annual ITAAC Post-Closure Notification Costs</b>	<b>(\$244,800)</b>
Years to Complete Plant Construction	x 4
Inflationary Ratio to Account for 20 Year Construction Period	x <u>1.2</u>
<b>TOTAL NRC REVIEW/PROCESS COSTS</b>	<b>(\$1,175,040)</b>

#### *Licensee Costs ITAAC Post-Closure Notifications*

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 <u>17</u>
<b>Total Annual ITAAC Post-Closure Notification Costs</b>	<b>(\$204,000)</b>
Years to Complete Plant Construction	x 4
Inflationary Ratio to Account for 20 Year Construction Period	x <u>1.2</u>
<b>TOTAL LICENSEE ITAAC POST-CLOSURE NOTIFICATIONS COSTS</b>	<b>(\$979,200)</b>

*NRC One-Time Costs – Developing  
Guidance*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>120</u>
<b>Total NRC One-Time Costs for Developing Guidance</b>	<b>(\$14,400)</b>

*NRC On- Time Costs – Develop  
Processing Infrastructure*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>96</u>
<b>Total NRC One-Time Costs for Develop Processing Infrastructure</b>	<b>(\$11,520)</b>

*NRC One-Time Costs – Conducting  
Staff Training*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>24</u>
<b>Total NRC One-Time Costs for Conducting Staff Training</b>	<b>(\$2,880)</b>

*Licensee One-Time Costs – Developing  
Processing Procedures*

Cost of Industry Staff Time	\$100
Number of Licensees	x 17
Hours of Industry Staff Time	x <u>48</u>
<b>Total Industry One-Time Costs for Developing Processing Procedures</b>	<b>(\$81,600)</b>

**52.99(c)(4) All ITAAC Complete Notification**

The revisions require licensees to notify the NRC that all ITAAC are complete. At the time the licensee submits the all ITAAC complete notification, the NRC expects that all activities requiring ITAAC post-closure letters have been completed, that the associated ITAAC determination bases have been updated, and that all required notifications under paragraph 52.99(c)(2) have been made.

*NRC One-Time Cost to Review/Process  
All ITAAC Complete Notification*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x 8
Number of Licensees	x <u>17</u>
<b>TOTAL NRC REVIEW/PROCESS COSTS</b>	<b>(\$16,320)</b>

*Licensee One-Time Cost for All ITAAC Complete Notification*

Cost of Industry Staff Time	\$100
Hours of Industry Staff Time	x 8
Number of Licensees	x <u>17</u>
<b>ALL ITAAC COMPLETE NOTIFICATION COSTS</b>	<b>(\$13,600)</b>

*NRC One-Time Costs – Developing  
Guidance*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>20</u>
<b>Total NRC One-Time Costs for Developing Guidance</b>	<b>(\$2,400)</b>

*NRC One-Time Costs – Develop Processing Infrastructure*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>16</u>
<b>Total NRC One-Time Costs for Develop Processing Infrastructure</b>	<b>(\$1,920)</b>

*NRC One-Time Costs – Conducting  
Staff Training*

Cost of NRC Staff Time	\$120
Hours of NRC Staff Time	x <u>4</u>
<b>Total NRC One-Time Costs for Conducting Staff Training</b>	<b>(\$480)</b>

*Licensee One-Time Costs – Developing  
Processing Procedures*

Cost of Industry Staff Time	\$100
Number of Licensees	x 17
Hours of Industry Staff Time	x <u>8</u>
<b>Total Industry One-Time Costs for Developing Processing Procedures</b>	<b>(\$13,600)</b>