

Original Due Date: 12/26/2008

Ticket Number: 020080209

Document Date: 10/31/2008

NRR Received Date: 11/03/2008

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**Description:**  
NEI White Paper - Regulatory Issue Screening Process

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**Special Instructions:**  
Staff needs to comment on white paper generated by NEI as a result of the Oct 30, LATF meeting. Comments are due to by 12/23/08.

*Called DPR (no answer) on 11/3 at 4:30 p.m. for pick up*

# **NEI WHITE PAPER**

## **Regulatory Issue Screening Process**

*A Process for Resolving Disagreements about Licensing Actions  
and Inspection Findings that have Generic Applicability*

**OCTOBER 2008**

Revision 0 for Peer Review, 10/01/2008

# ACKNOWLEDGEMENTS

NEI acknowledges the assistance of the Regulatory Issue Screening Process (RISP) Team, a subset of the Licensing Action Task Force (LATF), in preparing this White Paper.

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# ABSTRACT

Regulatory stability and predictability are key enablers of (1) operating decisions for current nuclear plants and (2) business decisions for new nuclear plants. However, in Industry's opinion, stability and predictability have decreased in recent years. For example, there has been an increase in the number of disagreements between licensees and the NRC Staff about the adequacy of the "current licensing basis" (CLB).

This White Paper describes a proposed process by which Industry would screen plant-specific inspection findings and licensing actions to identify issues that could be, and arguably should be, addressed and resolved as generic issues. It includes terms, definitions, examples, and flow charts for (1) bundling common plant-specific issues into generic issues, and (2) using mediation to resolve disagreements about the resolution of at least some of these issues.

Although the paper contains examples, the immediate objective is not to resolve them but to use them to illustrate the potential benefit to all stakeholders (Industry, Staff, and public) of a process for prompt mediation of generic disagreements that are not safety or risk significant.

Industry and NRC Staff reviewers are requested to comment on the accuracy of the examples, to provide additional information about the cited examples or information, to provide information about other relevant examples, and to suggest improvements in the proposed RISP.

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## 1.0 INTRODUCTION

Communications between the nuclear industry ("Industry") and the NRC staff ("Staff") often use the phrase "*STABLE* and *PREDICTABLE* licensing process." To the Industry this phrase means the participants have a consistent interpretation of what the process is, why it is necessary, when it applies, where it applies, which documents are pertinent, who is responsible, and how it is conducted (or revised when necessary).

**WHAT** – The "licensing process" is the broad collection of Industry and Staff activities that are necessary to prepare, submit, review, approve, and maintain a license granted by the Staff pursuant to Title 10 of the Code of Federal Regulations. The overall licensing process is comprised of several sub-processes, such as the license amendment process (10 CFR 50.90<sup>1</sup>), various reporting processes (e.g., 10 CFR 50.72<sup>2</sup> and 50.73<sup>3</sup>), various change-management processes (e.g., 10 CFR 50.59<sup>4</sup>), the backfitting process (10 CFR 50.109<sup>5</sup>), the inspection process, and many more. Some sub-processes are broken down further. For example, the license amendment process includes the acceptance review process (LIC-109<sup>6</sup>) and the "request for additional information" (RAI) process (LIC-101<sup>7</sup>). The focus of this White Paper is the set of licensing processes that apply to the holder of a commercial power-reactor operating license.

**WHY** – Licensing decisions often involve multiple inputs (e.g., assumptions, data, calculations, design information, operating experience, hardware, software, etc.) to reach a safe, accurate, and fair conclusion. The details of a process and the degree to which participants understand them, can affect significantly the time and amount of resources needed to reach an outcome.

**WHEN** – A well-defined process is necessary whenever multiple organizations collaborate to evaluate complex technical or administrative situations (e.g., when there are a large number of participants, or the subject matter requires special expertise).

**WHERE** – Licensing decisions often involve multiple participants stationed in different locations. For example, a licensing action may have to balance inputs from multiple departments at a licensee's site and corporate headquarters locations, multiple Staff departments at Region and NRC Headquarters locations, Industry organizations, fuel supply vendors, NSSS suppliers, consultants, other support groups, and the public.

**WHICH** – A *CURRENT LICENSING BASIS* (CLB) for each plant that documents the design and licensing history of the plant is a necessary component of a stable and predictable licensing process is. The CLB should be the starting point for all Industry and Staff actions associated with a particular operating license.

**WHO** – Coordinating a complex technical and administrative process requires a formal process, especially when there are multiple participants. A high degree of participation by a large number of individuals does not necessarily lead to the most efficient and effective outcome. The better the process, the better it will be able to optimize participation.

**HOW** – Effective regulatory processes are implemented in accordance with policy statements, procedures, and other forms of written guidance. These can take many forms, from highly formal rulemakings through less formal guidelines. However, regardless of the degree of formality, a process is not stable if one party can change it unilaterally without the participation of other affected parties. Although the Industry understands that operating experience and new information will lead to Staff questions about individual CLBs during NRC inspections and licensing-action reviews, the frequency and magnitude of the questions, and the regulatory processes available for resolving them are important factors in enabling safe and efficient nuclear operations.

Industry believes that the trend in staffing demographics within the Industry and the Staff (i.e., staff growth combined with an increasing retirement rate) is reducing the stability and predictability of the licensing process, causing a corresponding increase in the number and duration of disagreements. This White Paper describes examples and proposes a process, called the Regulatory Issue Screening Process (RISP), for bundling common plant-specific issues into generic issues, and using peer reviews to resolve disagreements about the resolution of these issues.

NEI recommends that the Industry and the Staff schedule public working meetings to develop complementary guidance documents for administering the RISP, with emphasis on:

- Standardization
- Process maps (i.e., flow charts)
- Key terms and definitions
- Scope of applicability
- Timing
- Management oversight
- Change control

## 2.0 PROBLEM STATEMENT

A licensee can submit a REQUEST FOR LICENSING ACTION (RLA) for a variety of reasons, e.g., to increase power output, improve operational efficiency, correct discrepancies, and incorporate new information. Each RLA is based on the plant-specific CLB and relevant PRECEDENT. The Industry believes that the CLB is the most important factor in achieving an effective and predictable licensing process. The Industry relies on the stability of the CLB to optimize plans and budgets for plant operation and maintenance.

Generally, licensees will not submit a discretionary RLA if the outcome of the regulatory review is not reasonably predictable. The degree of predictability depends on whether the RLA satisfies generally accepted standards of SUBMITTAL QUALITY, the CLB is an acceptable licensing baseline, and the Staff is willing to consider relevant precedent.

The Staff has the authority to question the plant-specific CLB for a variety of reasons. Occasionally, a question will lead to a disagreement between the Staff and the licensee. Typically, disagreements are resolved through public meetings, requests for additional information, generic communications, or some other administrative process. *However, the current frequency, duration, and significance of such disagreements warrant Industry and NRC attention.*

Many of these issues apply to more than one plant and warrant consolidated resolution. In terms of resource management and operational needs, a consolidated issue (i.e., an issue that affects a significant subset of plants in the same or similar way) is resolved most efficiently, predictably, and transparently by a regulatory solution that can be implemented by affected plants in the same or similar way at the same time.

The purpose of this white paper is to initiate a dialogue between the Industry and the Staff to develop a process for identifying, managing, and documenting the disposition of Industry and Staff disagreements about generic issues. It describes the current situation from the industry point of view. The concerns, which affect applicants for new plants as well as operating plant licensees, are summarized in Section 3.0.

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### 3.0 EXAMPLES

Most licensing and inspection issues are resolved through routine interactions. However, some issues lead to disagreements about the applicability or interpretation of regulatory requirements. The ensuing discussions are often adversarial, time-consuming, and costly. This section of the white paper discusses the types of issues that can lead to an impasse between the Industry and the Staff. They illustrate the need for a process (e.g., the RISP) to manage significant disagreements that have generic applicability.

Most of the examples involve situations in which the Staff withholds permission for a licensee to perform a desired activity, and the licensee disagrees with the basis for the Staff position. The authority to withhold permission gives leverage to Staff positions that can outweigh their importance to safety. When the need is time limited (i.e., Staff approval is necessary to support startup from a refueling outage), licensees often make business decisions to accept disagreeable Staff positions to obtain approval of larger needs.

Typically, an individual licensee that believes a Staff position is a new or different interpretation will not exercise its due-process rights (i.e., will not file a backfit claim) because (1) the final outcome is uncertain, (2) the perceived impact on *REGULATORY MARGIN* is negative, (3) the cost is too high or unpredictable, or (4) the impasse may have a detrimental impact on other submittals in the Staff's review/inspection pipeline. The Industry has long maintained, in spite of Staff claims to the contrary, that the lack of backfit claims does not mean there are no backfits. Furthermore, the Industry is not opposed to backfits as long as they are accompanied by a quality regulatory analysis.

A single dissenting opinion, or dissent over one of many items in a complex review, is sufficient to delay a review. This dynamic can lead to gridlock even if the parties reach general agreement about the overall issue. When licensees observe situations of this type on other dockets, they tend to avoid similar submittals and become reluctant to use what they believe to be applicable precedent. In effect, the process enables individuals to establish regulatory positions without formal participation by external stakeholders. In some cases this becomes a disincentive to innovation and the introduction of improved technology because of the uncertain outcome of the Staff review.

A Staff review should represent a collective agency conclusion about whether a licensee or Industry proposal satisfies applicable regulatory requirements. The Industry perception is that a Staff review is a collection of individual reviews by however many technical or policy disciplines are affected by the RLA, without any normalization of individual Staff positions consistent with their scope and impact on stakeholders. In other words, Industry is concerned about the level of NRC oversight to ensure that reviews conform with internal procedures.

Licensing gridlock is a serious problem. The Industry and the Staff need a joint effort to either improve current licensing processes, or develop a supplemental process (e.g., the RISP) for timely resolution of disagreements that have generic applicability.

Table 3-1 is a list of examples that are summarized in terms of:

- (1) CATEGORY - the type of concern that Industry has with the example:
  - a. Modification of precedent
  - b. Reinterpretation
  - c. Plant-specific issue with generic applicability
  - d. Preemption of 10 CFR 50.59
  - e. Treatment of guidance as a requirement
  - f. Acceptance conditioned on a commitment
  - g. RAI scope exceeds CLB
  - h. LAR review scope exceeds CLB
- (2) DESCRIPTION - a brief description of the issue.

Appendix A contains additional background information on each example.

**TABLE 3-1  
EXAMPLES**

#	Category	Description
1.	Modification of precedent	TSTF Travelers: TSTF-360 <sup>8</sup> (DC power) and TSTF-423 <sup>9</sup> (end states)
2.	Modification of precedent	Revised Staff position on use of the TORMIS <sup>10</sup> computer code for evaluating tornado missile protection
3.	Modification of precedent	Revised Staff position on NUMARC 8700 <sup>11</sup> (SBO)
4.	Reinterpretation	Shutdown as an acceptable conservative alternative to an Action Statement (ISTS usage rules)
5.	Reinterpretation	Scope of the set of instruments to be treated as Limiting Safety System Settings (10 CFR 50.36(d)(1) <sup>12</sup> )
6.	Reinterpretation	Reportability of loss of shutdown cooling as a loss of safety function (10 CFR 50.73(a)(2)(v))
7.	Reinterpretation	ISTS usage rules for entry into a Mode when an LCO is not met (ISTS 3.0.4.a <sup>13</sup> )
8.	Plant-specific issue with generic applicability	CDBI findings on EDG frequency Tech Specs
9.	Plant-specific issue with generic applicability	Treatment of uncertainties (UHS temperature)
10.	Preemption of 10 CFR 50.59	CASMO computer code
11.	Treatment of guidance as a requirement	Rod drop analysis – fuel enthalpy limit (RG 1.70 <sup>14</sup> )
12.	Treatment of guidance as a requirement	SDP applied to performance deficiencies (TI-2515/167 <sup>15</sup> )
13.	Treatment of guidance as a requirement	Dry storage cladding temperature limits (ISG-11 <sup>16</sup> )
14.	Acceptance conditioned on a commitment	Safety-related setpoints and allowable values (10 CFR 50.36)
15.	Acceptance conditioned on a commitment	Ultrasonic flow meter (RIS 2007-24 <sup>17</sup> )
16.	Acceptance conditioned on a commitment	Equipment operability under degraded voltage conditions (IN 2007-09 <sup>18</sup> )
17.	RAI scope exceeds CLB	Technical Specification change to conform with a modification implemented under 10 CFR 50.59 (LIC-101)
18.	RAI scope exceeds CLB	Steam generator inspection reports are not licensing actions subject to the RAI process (LIC-101)
19.	LAR review scope exceeds CLB	Re-review of approved methods that were not affected by an LAR to implement steam generator replacement (10 CFR 50.46 <sup>19</sup> )
20.	LAR review scope exceeds CLB	Addition of SBO requirements beyond the scope of an EPU LAR (10 CFR 50.63 <sup>20</sup> )

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## 4.0 PROCESS DESCRIPTION

This section describes the proposed Regulatory Issue Screening Process (RISP).

The RISP is a process for identifying and managing plant-specific licensing and compliance issues that have generic implications for the Industry. Section 4.3 describe the steps for (1) identifying generic issues that are candidates for resolution through the RISP, (2) screening the candidate issues to determine those that warrant further evaluation, (3) evaluating the issues that screen in, (4) selecting issues for mediation, and (5) documenting the results as an APPLICABLE STAFF POSITION in a DURABLE GUIDANCE DOCUMENT.

### 4.1 Overview

Absent an immediate plant-specific concern about ADEQUATE PROTECTION, the RISP is one acceptable way to resolve plant-specific issues that have generic applicability. The process includes criteria, importance measures, thresholds, process maps, and documentation guidelines.

NEI proposes that the NRC/NEI LATF interface be used to manage the RISP. The key attributes of the process are:

- (1) Establishing whether the issue is important to safety
- (2) Establishing whether the issue is risk significant
- (3) Stakeholder participation
- (4) Identifying information sources (e.g., operating experience, or research)
- (5) Establishing the underlying regulatory requirements
- (6) Coordinating Industry and Staff activities
- (7) Information quality guidelines
- (8) Key terms and concepts.
- (9) Working public meetings
- (10) Timeliness goals
- (11) Milestone scheduling
- (12) Consensus on precedent
- (13) Management oversight
- (14) Documenting the applicable staff position

### 4.2 RISP Principles

The RISP is designed to improve NRC and Industry efficiency and effectiveness in resolving disagreements about generic issues that are neither safety nor risk significant. The underlying principles of the RISP are:

- (1) Issues that affect more than one plant should be managed through a single generic resolution rather than separate plant-specific resolutions.
- (2) If the issue is not risk significant, licensees should be permitted to continue operation in accordance with their respective CLBs pending resolution of the generic issue.
- (3) If necessary, time-limited mediation should be used to disposition disagreements.
- (4) Each affected plant and the NRC staff should agree to accept the outcome of the generic review or the mediation.

### 4.3 Process

The elements of the RISP are identification, screening, evaluation, documentation, and mediation.

#### 4.3.1 Identification

- (1) A representative from an NEI member company identifies a potential RISP issue at his/her organization and informs the coordinator of the NEI Licensing Action Task Force (LATF) Steering Group.
- (2) The NEI coordinator documents the issue and posts a summary on the LATF website.

#### **4.3.2 Screening**

- (1) RISP Team members monitor the LATF website and perform an initial screen of each new potential RISP issue against the following importance measures:
  - (a) Generic applicability
  - (b) Importance to safety
  - (c) Risk significance
  - (d) Relevant "applicable staff positions"
  - (e) Relevant precedent
  - (f) Impact on Industry resources
- (2) The NEI coordinator schedules a RISP Team web conference to complete the initial screen.
- (3) During the screening conference, the Team decides which issues to table and which to forward to the Steering Group for a second screening.
- (4) The NEI coordinator documents the results of the initial screen and updates the issue summary on the NEI website.
- (5) Steering Group members monitor the LATF website and perform a second screen of each issue that passes the RISP Team screen. The purpose of the second screen is to prioritize the issues and choose a limited number for forwarding to NRC based on supplemental importance measures:
  - (a) The technical, policy, and economic significance of the issue
  - (b) The number of licensees or other Industry groups affected
  - (c) The likelihood of a favorable regulatory outcome
- (6) The NEI coordinator schedules a Steering Group web conference to complete the screening process.
- (7) The NEI coordinator documents the results of the second screen and updates the issue summary on the LATF website.
- (8) During its quarterly internal meetings at NEI, the Steering Group prepares a summary presentation for each issue that passed the second screen. The presentation includes a detailed description of the issue, the screening results, and a recommendation that the Staff participate with Industry in evaluating and dispositioning the issue.
- (9) The NEI coordinator prepares a "RISP Request" package for use at a future public NRC/NEI LATF meeting. The package is forwarded to the NRC for review in advance of the public meeting.

#### **4.3.3 Evaluation**

- (1) The evaluation phase for an issue begins with the NRC/NEI LATF public meeting where the issue is first discussed.
- (2) If NRC accepts the request for further evaluation, the NEI and NRC staffs coordinate to develop a schedule for public working meetings.
- (3) The objective of the working meetings is timely agreement/concurrence for a practical resolution that efficiently and effectively balances individual Industry and Staff positions.
- (4) If NRC/Industry public meetings cannot resolve the issue, Industry has the option to request mediation in accordance with the step 4.3.4.

#### **4.3.4 Mediation**

- (1) If NRC accepts a request for mediation, it forms a panel of one or more individuals that have the appropriate expertise and that have not been involved in the issue.
- (2) The panel allots equal time to hear arguments from the Industry and the Staff.
- (3) Decisions are documented in accordance with Section 4.3.4.

- (4) If mediation cannot resolve the issue, Industry has the option to see a remedy by other means, e.g., a 10 CFR 50.109 backfitting claim.

#### **4.3.5 Documentation**

- (1) NRC – The Staff publishes the result of each evaluation or mediation as an “applicable staff position” published in a durable guidance document suitable for licensees to reference or incorporate in the UFSAR as part of the CLB.
- (2) Industry – NEI confirms the result of each evaluation or mediation and posts a summary on the LATF website.

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## EXAMPLES

### 1.0 Modification of precedent – TSTF Travelers (DC power & End States)

*DC Power:* The Technical Specification Task Force (TSTF) submitted TSTF-360 (DC Electrical Rewrite) for NRC Staff review in the late 1990s. The TSTF submitted TSTF-360 Rev. 1<sup>21</sup> on November 6, 2000 to incorporate the results of several technical discussions with the Staff. NRC approved Rev. 1 on December 18, 2000.<sup>22</sup> However, in 2006, the Staff identified new concerns<sup>23</sup> with TSTF-360. The Industry and the Staff were not able to reach a mutually acceptable resolution of the Staff's concerns. The Staff did not perform a Regulatory Analysis of its revised position on the acceptability of TSTF-360. NEI believes there should be a more rigorous process for updating approved Travelers and the associated NRC safety evaluations based on new information. The process should include participation by all stakeholders.

*End States:* The NRC approved TSTF-423<sup>24</sup>, "Technical Specifications End States, NEDC-32988-A," on March 23, 2006. The approval was published in the Federal Register as a CLIP Notice of Availability.<sup>25</sup> Two plants received license amendments adopting the change. However, other licensees were advised that LARs based on TSTF-423 could not be approved unless they conformed with Administrative Letter 98-10<sup>26</sup>, "Dispositioning Of Technical Specifications that are Insufficient to Assure Plant Safety." In one case the Staff declined to accept a change in end state for primary containment, even though that change had been approved in the Staff's review of Topical Report NEDC-32988-A and again in the Staff's review of TSTF-423. The Staff no longer finds TSTF-423 acceptable. This is a significant change that the Staff implemented unilaterally without stakeholder participation or a regulatory analysis.

### 2.0 Modification of precedent – TORMIS

Some licensees have identified exposed exhaust ductwork or piping that is not protected against tornado missiles. This is an apparent discrepancy between the as-built plant and the current licensing basis. The options for corrective action are (1) plant-specific evaluations to exclude the components from the design basis for tornado missile protection (using the EPRI TORMIS<sup>27</sup> computer code or some other methodology), or (2) modify the plant to either eliminate or protect the components. Option 1 is preferred because NRC has published a safety evaluation<sup>28</sup> of TORMIS, and there have been a number of precedent approvals at other plants<sup>29,30,31,32,33</sup>. However, recent LARs based on TORMIS precedent have not been successful. There is no stable licensing process for the identification and use of precedent-setting Staff SEs.

### 3.0 Modification of precedent – NUMARC 8700 (SBO)

A 2005 inspection report<sup>34</sup> cited a licensee for "...failure to establish a target reliability for the plant's alternate power source consistent with the reliability approved by NRC staff in the licensee's Station Blackout submittal for 10 CFR 50.63." The NRC staff concluded that the licensee's methodology (based on NRC-endorsed NUMARC 87-00, rev. 1<sup>35</sup>) was "non-conservative" and represented a performance deficiency. Region findings of this type should be referred to NRC headquarters for evaluation as generic issues.

### 4.0 Reinterpretation – Shutdown as a conservative alternative to an LCO Action Statement

In October 2005, a licensee entered a Tech Spec action statement due to a blown fuse. The licensee determined that plant shutdown was a conservative alternative to implementing the action statement. Taking the more conservative action is standard industry practice that has been evaluated and accepted by NRC and is consistent with the format and usage rules for implementing the improved Standard Technical Specifications (ISTS). Nevertheless, the NRC issued a non-cited violation (NCV). The licensee denied the violation (without success) based on inconsistency with past NRC practice.

### 5.0 Reinterpretation – Scope of Limiting Safety System Settings

Since the "setpoints" issue first emerged in approximately 2004, the NRC staff has been adjusting its position on what constitutes compliance with 10 CFR 50.36(d)(1). First it was an "ISA Method 3" issue,

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then a calibration issue, and now an "LSSS scope" issue. NEI submitted two technical reports<sup>36,37</sup> in defense of its opposing position with respect to methodology and calibration requirements, but NRC declined to review them. The Tech Spec Task Force then submitted TSTF-493<sup>38</sup> to address the NRC staff's concerns, but that review remains incomplete. Recently, the staff concluded that all automatic functions in the TS that mitigate Anticipated Operational Occurrences (AOOs) or Design Basis Accidents (DBAs) could be considered limiting safety system settings (LSSS).<sup>39</sup> The regulatory mandate in 10 CFR 50.36 on protecting Safety Limits applies only to AOOs. This is a significant change that the staff has implemented unilaterally without stakeholder participation or a regulatory analysis.

### **6.0** Reinterpretation – Reportability of loss of shutdown cooling as a loss of safety function

The Staff documented an interpretation of the reporting requirements of 10 CFR 50.73(a)(2)(v)(B) in a 2005 Inspection Report<sup>40</sup>. Regional Utility Group (RUG) IV submitted a letter<sup>41</sup> to NRC documenting its disagreement with the Staff's interpretation. NRC Region IV reaffirmed its interpretation in a letter<sup>42</sup> to the RUG IV chairman. Industry continues to disagree with the staff's conclusion, which has significant generic implications regarding performance indicators. The licensee and RUG IV have referred the matter to the NEI Licensing Action Task Force for further evaluation and communication with NRC.<sup>43</sup>

### **7.0** Reinterpretation – Entry into a Mode when an LCO is not met

Based on NRC Task Interface Agreement (TIA) 2008-002, the NRC cited a licensee for not having adequate procedures to ensure that actions required by LCO 3.0.4.a (entry into a Mode when an LCO is not met) were completed prior to a Mode transition. The Industry disagrees with the staff's conclusion for reasons stated in a July 17, 2008 letter<sup>44</sup> from the Technical Specification Task Force to the NRR Division of Inspection and Regional Support. This is a generic issue that could affect many licensees and should be developed with stakeholder participation.

### **8.0** Plant-specific issue with generic applicability – CDBI findings on EDG frequency Tech Specs

Identical CDBI findings pertaining to the Tech Spec surveillance requirements on emergency diesel generator (EDG) frequency have been documented at several plants<sup>45</sup>. The typical TS surveillance criterion for EDG frequency is  $\pm 2\%$  of the 60 Hz nominal frequency (i.e., 58.8 Hz to 61.2 Hz) as recommended in Regulatory Guide 1.9<sup>46</sup>. Typically, licensees do not analyze at the extremes of the frequency range. The industry position is (1) the use of nominal values within a standard tolerance is typical, accepted practice in electrical engineering, and (2) plant procedures do not permit operation at the extremes for extended periods of time. However, the NRC staff has taken the position, through CDBI inspection reports, that either a plant-specific analysis must be performed to support steady state operation at the extremes, or the TS surveillance should be changed to limit such operation. NEI recommends that NRC perform a regulatory analysis of this interpretation.

### **9.0** Plant-specific issue with generic applicability – Treatment of uncertainties (UHS temperature)

The Staff cited a licensee for failure to demonstrate conservative acceptance criteria for uncertainties in ultimate heat sink (UHS) temperature instrumentation. NEI recommends that NRC perform a regulatory analysis. This is a generic issue that could affect many licensees and should be developed with stakeholder participation.

### **10.0** Preemption of 10 CFR 50.59 – CASMO computer code

After performing the necessary 10 CFR 50.59 review, a licensee planned to use an updated computer code without prior NRC approval. The NRC staff was aware of the licensee plan and advised the licensee that the updated code could not be implemented without prior NRC approval. The staff's position is contrary to Generic Letter 83-11<sup>47</sup>, NEI 96-07<sup>48</sup>, and Regulatory Guide 1.187<sup>49</sup>. Licensees cannot be preempted from using 10 CFR 50.59.

## APPENDIX A EXAMPLES

### **11.0** Treatment of guidance as a requirement – Rod drop analysis fuel enthalpy limit

The calculated fuel enthalpy reported in a licensee's EPU LAR<sup>50</sup> was 234 cal/gm, well below the 280 cal/gm limit in the plant-specific licensing basis and SRP 4.2 (Rev. 2)<sup>51</sup>. However, the Staff review imposed a more restrictive 230 cal/gm limit based on a Staff paper published in an industry journal and on other unpublished internal documents. Licensees should be able to rely on criteria in durable guidance documents such as the SRP. In this case, the Staff should have considered the reported value on its merits and not rejected it because it exceeded an unofficial limit by a small amount. (Note: the 230 cal/gm limit has since been published in Rev. 3 of SRP 4.2).

### **12.0** Treatment of guidance as a requirement – SDP for performance deficiencies (TI 2515/167)

The NRC staff issued an Inspection Manual Temporary Instruction (TI 2515/167<sup>52</sup>) to confirm continued industry implementation of voluntary shutdown initiatives described in NUMARC 91-06<sup>53</sup> and Generic Letter 88-17<sup>54</sup>. The TI enables the staff to classify the failure to implement NEI 91-06 as a performance deficiency subject to the significance determination process (SDP) and PRA analysis. This represents a use of the inspection process to bypass the rulemaking process and establish non-mandatory guidance as a de facto requirement.

### **13.0** Treatment of guidance as a requirement – Dry storage cladding temperature limits (ISG-11)

10 CFR 72 does not contain a fuel cladding temperature limit. NRC staff guidance on this topic is contained in NUREG-1536<sup>55</sup>. Interim Staff Guidance (ISG) 11 pertains to spent fuel cladding temperature limits during dry storage and transportation. ISG-11 Rev. 2<sup>56</sup> established a fuel cladding temperature limit of 400C (752F) for normal storage conditions and expanded the definition of normal conditions to include short-term normal operations, such as vacuum drying. Historically, casks have been licensed with a higher fuel cladding temperature limit for short-term operations. A lower cladding temperature limit for vacuum drying conditions obliges the holder of a cask Certificate of Compliance (CoC) to require licensees to use new cooling procedures and equipment to meet the revised temperature limit. NEI recommends that guidance of this type be subject to a regulatory analysis. It represents a generic issue that could affect many licensees and should be developed with stakeholder participation.

### **14.0** Acceptance conditioned on a commitment – Setpoints and allowable values (RIS 2006-17)

During the acceptance review of an EPU LAR<sup>57</sup>, the Staff advised the licensees that it would not be accepted without a commitment to follow the setpoint guidance in RIS 2006-17<sup>58</sup>. This makes the "guidance" in the RIS a de facto requirement. It is also inconsistent with guidance in LIC 101<sup>59</sup> that Staff should not use information requests to obtain commitments.

### **15.0** Acceptance conditioned on a commitment – Ultrasonic flow meter (RIS 2007-24)

The NRC has approved several LARs to increase rated power by utilizing Ultrasonic Flow Meters (UFMs) to increase the accuracy of the power measurement. Until recently, the NRC Staff accepted that UFMs were not included in the TS because they are not credited in the safety analysis. However, the Staff has changed its position and now expects to see UFM TS in power uprate amendments that rely on the technology. In addition, Industry does not believe the staff's proposed model Technical Specification is consistent with ISTS format and usage rules. The issue remains open after several discussions with the Staff.

### **16.0** Acceptance conditioned on a commitment – Operability with degraded voltage (IN 2007-09)

A licensee's LAR<sup>60</sup> had been under review for approximately one year at the time the NRC published Information Notice 2007-09<sup>61</sup>. The Staff determined that the LAR could not be approved unless it addressed the IN. The licensee withdrew the LAR.<sup>62</sup> This is an example of a lower tier generic communication decreasing the efficiency of a regulatory review. The LAR could have been approved conditional on a follow-up LAR to address the IN.

## APPENDIX A EXAMPLES

### **17.0** RAI scope exceeds CLB – TS change to conform with a 10 CFR 50.59 modification

A licensee modified the containment sump under 10 CFR 50.59 and submitted an LAR<sup>63</sup> to revise the Tech Spec surveillance requirements to conform to the design. The LAR was based on precedent set by other plants. The Staff asked several questions<sup>64,65</sup> about missile protection, jet impingement, dynamic loading, structural design, and the performance of containment sump strainers and screens that went well beyond the scope of the proposed surveillance requirements. The licensee answered the questions because it needed the amendment in support of continued operation.

### **18.0** RAI scope exceeds CLB – Steam generator inspections reports are not licensing actions

Licensees are being asked to answer RAI questions on summary reports of steam generator inspections results. These reports are not licensing actions. Some of the questions are information gathering, and others could be answered verbally during the inspections. The RAI process should not be used for routing information requests.

### **19.0** LAR review scope – Re-review of approved methods that were not affected by an LAR

A licensee submitted an LAR in support of steam generator replacement. The LAR included the results from the reanalysis of postulated accidents using NRC-approved methods in accordance with the CLB. The NRC staff use the RAI process to open previously approved licensing basis methods for re-review. Apparently, some NRC staff members believe that an LAR opens the entire CLB to re-review. Industry believes that the only part of the CLB subject to re-review is the part within the scope of the proposed change.

### **20.0** LAR review scope – Addition of SBO requirements beyond the scope of an EPU LAR

A licensee submitted an LAR for a small power uprate. The LAR was similar to a previously approved LAR for another unit at the same site. NRC issued a request for additional information (RAI) asking the licensee to change the plant's station blackout coping duration from 4 hours to 16 hours. This was a substantial change to the plant-specific licensing basis that was unrelated to the licensee's request. The NRC Staff used a time-sensitive LAR to leverage a new position. The licensee was obliged to trade off its reluctance to change a compliance strategy (station blackout coping duration) with its need for the uprate amendment.

## **APPENDIX B TERMS & DEFINITIONS**

### **ACCEPTANCE REVIEW PROCESS**

An "acceptance review" is an initial determination whether a "request for licensing action" (RLA) reasonably appears to contain sufficient technical information, both in scope and depth, for the NRC staff to complete a detailed technical review and render, in an appropriate time frame for the associated action, an independent assessment of the proposed action with regard to applicable regulatory requirements and the protection of public health, safety, and security. *[Reference: LIC-109]*

### **ADEQUATE PROTECTION**

The Atomic Energy Act delegates to NRC the responsibility to interpret what is necessary to meet "adequate protection." NRC establishes what is meant by adequate protection through rulemaking and the adjudicatory process. In general, adequate protection is presumptively assured by compliance with NRC requirements. The NRC staff evaluates situations of noncompliance to determine the degree of risk and whether immediate action is necessary. If the NRC determines that non-compliance itself is of such safety significance that adequate protection is no longer provided, or that it was caused by a deficiency so significant it questions a licensee's ability to ensure adequate protection, the NRC may demand immediate action, up to and including shutdown or cessation of licensed activities. *[Reference: Atomic Energy Act, Section 182<sup>66</sup>]*

### **APPLICABLE STAFF POSITION**

An "applicable staff position" is an NRC staff position that is a documented, approved, explicit interpretation of the regulations and is contained in a document such as the SRP (Standard Review Plan), a branch technical position, a regulatory guide, a generic letter, or a bulletin; and to which a licensee or an applicant has previously committed to or relied upon. *[Reference: NRC Management Directive 8.4<sup>67</sup>, page G-1]*

### **BACKFITTING**

The Commission recognized the importance of backfitting controls in 1985 when it approved a change to 10 CFR 50.109 (subsequently amended in 1988) to establish administrative standards for NRC imposition of new regulations or new interpretations of existing regulations. The rule defines the term "backfitting" as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position. *[Reference: 10 CFR 50.109(a)(1)]*

### **COMMITMENT**

See Regulatory Commitment.

### **CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (CLIP)**

The "Consolidated Line Item Improvement Process" (CLIP) is an administrative process designed to facilitate plant-specific adoption of NRC-accepted changes to the Standard Technical Specifications (STS) NUREG applicable to their plant design. The CLIP improves the efficiency of the NRC licensing processes by reviewing and documenting STS change requests

## **APPENDIX B TERMS & DEFINITIONS**

in a manner that supports subsequent license amendment applications. By soliciting comments from NRC stakeholders, the CLIP enhances the visibility of the staff's review and revision processes for the STS as well as subsequent license amendment applications. Following the staff's resolution of public comments on a proposed change to the STS, the licensees may submit a license amendment application to adopt the NRC-accepted change by citing the relevant information that would have been made available. Each amendment application made as part of the CLIP will be processed and noticed in accordance with applicable rules and NRC procedures. Participation in the CLIP is voluntary. *[Reference: RIS 2000-<sup>68</sup>06]*

### **CURRENT LICENSING BASIS**

The "current licensing basis" is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 52, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports. *[Reference 10 CFR 54.3(a)<sup>69</sup>]*

### **COMPLIANCE**

The term "compliance" means that a structure, system, or component (SSC) satisfies all requirements of applicable rules, regulations, orders, and licenses (including Technical Specifications). Compliance is based on the intent of the requirement at the time of its promulgation. The NRC typically documents the intent of a requirement in a Federal Register notice, and licensees typically incorporate implementing language into the CLB by updating the Final Safety Analysis Report (FSAR) or other licensee-controlled document. NRC regulations (10 CFR 50.59 and 10 CFR 50.109), supplemented by NRC and licensee procedures, control the imposition of new or different interpretations.

### **DESIGN BASIS**

The "design basis" is the set of design information that identifies the specific functions to be performed by the structures, systems, or components of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be (1) restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals, or (2) requirements derived from analysis (based on calculations and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals. *[References: 10 CFR 50.2<sup>70</sup>, NEI 97-04<sup>71</sup>]*

### **DETERMINISTIC**

The term "deterministic," means that specific causes completely and certainly determine effects. As applied in nuclear technology, it generally deals with evaluating the safety of a nuclear power plant

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in terms of the consequences of a predetermined bounding subset of accident sequences. Compare with PROBABILISTIC. [*Reference: NRC Website Glossary*<sup>72</sup>]

### **EMERGENCY LICENSE AMENDMENT**

The term "emergency license amendment" applies to situations where the Commission finds that failure to act in a timely way would result in de-rating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level. In such cases the NRC may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for hearing or for public comment. [*References: 10 CFR 50.91(a)(5)*<sup>73</sup>, *LIC-101 Section 3.6*]

### **EXIGENT LICENSE AMENDMENT**

The term "exigent license amendment" applies to situations where a license amendment request is submitted with a need date of more than seven days but less than four or five weeks in the future. The preferred exigent process is to use a shortened public notice period in the *Federal Register*. Local media may be used to notice amendment requests that require disposition in less time than needed for a 2-week comment period in the *Federal Register*. [*References: 10 CFR 50.91(a)(6), LIC-101 Sections 3.4 and 3.5*]

### **LICENSE AMENDMENT REQUEST**

A licensee submits a "license amendment request" (LAR) pursuant to 10 CFR 50.90 whenever it determines that a proposed activity (e.g., plant modification, procedure change) requires modification of the plant Operating License or Technical Specifications. [*References: LIC-101, NEI 06-02*<sup>74</sup>]

### **FIRST-OF-A-KIND (FOAK) LICENSE AMENDMENT**

The term "first-of-a-kind" (FOAK) is used to describe a unique or complex LAR for which there is no body of precedent that could be used to inform the regulatory review. [*Reference: NEI 06-02*]

### **DURABLE GUIDANCE DOCUMENT**

A "durable guidance document" is an NRC guidance document that is subject to an agency change-control process. For example, the Standard Review Plan, Branch Technical Positions, Regulatory Guides, and Safety Evaluations are durable guidance documents.

### **GENERIC – GENERIC ISSUE – GENERIC SAFETY ISSUE**

The term "generic" pertains to all of the individual entities forming a group, kind, or class (e.g., the set of pressurized water reactors compared to a specific PWR). [*Reference: New Webster's Dictionary of the English Language*]

A "generic issue" is a well-defined, discrete, technical or security issue, the risk/or safety significance of which can be adequately determined, and which: 1) applies to two or more facilities and/or licensees/certificate holders, or holders of other regulatory approvals (including design certification rules); 2) affects public health and safety, the common defense and security, or the environment; 3) is not already being processed under an existing program or process; 4) cannot be readily addressed through other regulatory programs and processes, existing regulations, policies,

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guidance, or voluntary industry initiatives; and 5) can be resolved by new or revised regulation, policy, or guidance or voluntary industry initiatives. A generic issue may lead to regulatory changes that either enhance safety, or reduce unnecessary regulatory burden.<sup>75</sup> [Reference:

The NRC has classified five groups of issues as "generic safety issues:" (1) TMI Action Plan items, documented in NUREG-0660<sup>76</sup> and NUREG-0737<sup>77</sup>; (2) Task Action Plan items, documented in NUREG-0371<sup>78</sup> and NUREG-0471<sup>79</sup>, as well as all Unresolved Safety Issues (USIs) not originally identified in these two documents; (3) new generic issues identified from various sources; (4) human factors issues, documented in NUREG-0985<sup>80</sup>; and (5) Chernobyl issues, documented in NUREG-1251<sup>81</sup>. [Reference: NUREG-0933<sup>82</sup>]

### **LEAD PLANT (FOR TSTF "T"-TRAVELERS)**

Licensees that submit LARs based on a T-Traveler are encouraged to volunteer as a "lead plant" to sponsor a generic review by NRC that will result not only in a plant-specific license amendment for the lead plant, but will also convert the T-Traveler to an A-Traveler approved by the NRC. Under the lead plant approach, the NRC's plant-specific safety evaluation (SE) will be sufficiently generic to serve as the approval of the Traveler.

### **MEDIATION**

The term "mediation" in the context of the Regulatory Issue Screening Process white paper is an informal cooperative approach to resolving disagreements as an alternative to adversarial procedures. The NRC and Industry parties develop mutually agreeable corrective actions rather than initiate protracted formal proceedings. Agreements are developed and confirmed in public working meetings under the guidance of one or more independent mediators.

### **MODEL SAFETY EVALUATION**

A "model safety evaluation" is prepared by the NRC staff pursuant to the consolidated line item improvement process (CLIIP). NRC publishes proposed CLIIPs in the Federal Register for public comment. If public comments are satisfactorily resolved, NRC publishes a final model SE in the Federal Register for licensees to reference as the basis for plant-specific LARs. [Reference: RIS 2000-06]

### **OBLIGATION**

An "obligation" is any condition or action that is a legally binding requirement imposed on licensees through applicable rules, regulations, orders and licenses (including technical specifications and license conditions). These conditions (also referred to as regulatory requirements) generally require formal NRC approval as part of the change-control process. Also included in the category of obligations are those regulations and license conditions that define change-control processes and reporting requirements for licensing basis documents such as the updated FSAR, quality assurance program, emergency plan, security plan, fire protection program, etc. [References: NEI 99-04<sup>83</sup>, LIC-105<sup>84</sup>]

### **PILOT PLANT (FOR TOPICAL REPORTS OR FOAK LARS)**

A "pilot plant" is a licensee that submits a FOAK LAR for a review by NRC that will result in a plant-specific license amendment for the pilot plant, and also lead the way for additional plants to submit

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similar LARs. The NRC will consider accepting a Pilot Plant LAR if it will assist the staff in identifying enhancements to the NRC's generic regulatory program by identifying process improvements and lessons learned for review of a future LAR.

### **PRECEDENT**

The term "precedent" is defined as something done or said that may serve or be adduced as an example or rule to be followed in a subsequent act of a like kind. In a regulatory context, precedents can be used as models to aid the evaluation of similar future proposals. The Industry is a strong proponent of the use of precedent to reduce the amount of time needed to prepare an LAR, to minimize the likelihood of RAIs, and to achieve a more predictable regulatory review schedule. *[Reference: NEI 06-02]*

### **PREDICTABLE**

The attributes of a "predictable" regulatory process are:

- Underlying requirements and guidance are clear and interpreted consistently by Industry and the Staff
- The starting point for the regulatory review is the plant-specific CLB
- All parties have confidence in the outcome of regulatory reviews based on the CLB
- Each outcome is documented and easily recovered for future reference.

### **PROBABILISTIC**

The term "probabilistic" is associated with an evaluation that explicitly accounts for the likelihood and consequences of possible accident sequences in an integrated fashion. Compare with DETERMINISTIC. *[Reference: NRC Website Glossary]*

### **REGULATORY ANALYSIS**

The NRC has long-standing guidance on the performance of regulatory analyses to ensure that it makes sound decisions regarding actions needed to protect the health and safety of the public or the common defense and security. Regulatory analyses are required for all regulatory actions that involve backfitting.

NEI believes that a significant improvement in the efficiency and effectiveness of the overall licensing process would be achieved by simplifying the NRC's regulatory analysis guidance and applying it to a broader scope of licensing documents and activities. NEI is prepared to participate in a public process to simplify the regulatory analysis guidance.

### **REGULATORY COMMITMENT**

Regulatory Commitment means an explicit statement to take a specific action agreed to, or volunteered by, a licensee *and* submitted in writing on the docket to the NRC. *[Reference: NEI 99-04, RIS 2000-17<sup>85</sup>]*

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### **REGULATORY FINDING**

A determination made by the Commission based on the Code of Federal Regulations. Before approving a plant-specific licensing action, the NRC reviewer must make a regulatory "finding." However, reviewers are not obliged to articulate the finding that must be made. NEI believes that NRC should advise all parties to a licensing action of the findings necessary to approve the action. The better the licensing community understands the agency's obligations, the better it can provide the necessary information to help satisfy those obligations.

### **REGULATORY MARGIN**

"Regulatory margin" is a subjective concept analogous to equity, good will, and tolerance. It represents a licensee's intangible reputation based on past performance. Some observers perceive that strong licensee performance (e.g., a good record of compliance, a good reputation for quality submittals, fewer operational problems, cordial professional relationships among NRC and Industry peers, etc.) leads to greater regulatory margin (e.g., more favorable NRC accommodation of requests for relief, first-of-a-kind requests, compensatory measures, alternative actions, corrective actions, commitments, etc.).

### **REQUEST FOR ADDITIONAL INFORMATION (RAI)**

A "formal RAI" is an official NRC request, usually in the form of a letter that is used to request additional information that will form part of the basis for the reviewer's conclusion. The information is exchanged through formal correspondence and incorporated into the licensee's docket file at the NRC Public Document Room and in the electronic ADAMS.

A "generic RAI" is a question posed during the NRC review of a plant-specific LAR that refers to an agency position on a generic issue that, in the reviewer's opinion, should be incorporated into the review of the LAR. If a licensee receives what it believes is an inappropriate generic RAI, it should forward the question to the NEI Licensing Action Task Force (LATF) for a disposition.

An "informal RAI" (e.g., telephone conference, e-mail, or meeting) is used to request or provide explanatory information to expedite the NRC review. Typically, an informal RAI is limited in scope, and the response does not involve significant effort on the part of the licensee. The licensee has the option to ask NRC to convert an informal RAI into a formal RAI. Similarly, the licensee has the option to provide a formal response to an informal RAI.

### **REQUEST FOR LICENSING ACTION**

The term "request for licensing action" (RLA) is defined in NRR Office Instruction LIC-109. An RLA is a licensing action requiring NRC approval prior to implementation or generic use, with the exclusion of license renewal applications, research and test reactor activities, or RLAs that require a regulatory decision in such a limited time that performance of an acceptance review would not be possible (e.g., emergency or exigent amendment requests).

## **APPENDIX B TERMS & DEFINITIONS**

### **REQUIREMENT**

The term "requirement" as used in this white paper means a legally binding requirement such as a statute, regulation, license condition, technical specification, or order.

### **RISK-INFORMED REGULATION**

Since 1975, the NRC and its licensees have advanced significantly in their knowledge of (and experience with) probabilistic risk assessment (PRA). PRA considers nuclear safety in a more comprehensive way by examining a broad spectrum of initiating events (circumstances that put a facility in an off-normal condition, such as a reactor trip or "scram" at a nuclear power plant). As a result, PRA analysts ask the additional question of how likely it is that something will occur. Analysts then explore the frequency and consequences of various scenarios, giving a measure of risk.<sup>86</sup>

### **STABLE**

A documented, accessible, well-managed CLB is the foundation of regulatory stability. It is a licensee's baseline for evaluating all aspects of plant design and operation, and it is central to the NRC's management and control of regulatory requirements and interpretations for each licensee.

The concept of the "current licensing basis" (CLB) is an important element of the licensing process. A key attribute of the CLB is its "stability." The CLB is stable if it is well documented, requires infrequent updates, is seldom challenged, and provides an adequate but thorough baseline for subsequent licensing reviews.

### **SUBMITTAL QUALITY**

Submittal quality is in large part subjective. It cannot be defined precisely, especially for complex and evolving nuclear technology. However, the Industry and the NRC staff have approximately 40 years of operating experience from which to draw. Therefore, submittal quality is a function of NRC expectations (format, content, scope, level of detail, etc.), the extent to which individual licensees understand NRC expectations, and the degree to which a licensee can reasonably conclude that that a submittal meets NRC expectations. High quality submittals ensure that all relevant information is included (system descriptions, results of calculations, bases that support compliance with applicable requirements, bases that support conformance with applicable NRC and Industry guidance, comparisons with precedent, references, definitions, procedures, commitments, implementation plans and schedules, etc.). It is the role of NRC management to ensure reasonable expectations across the agency. [*LIC-101, LIC-109, NEI 06-02*]

### **TASK INTERFACE AGREEMENT (TIA)**

A "task interface agreement" (TIA) is an agreement between one or more NRC Region and NRC Headquarters. NRC uses TIAs to gather information about plant-specific licensing bases, regulatory requirements, technical positions, plant configurations, or operating practices to support the regulatory review of an issue, event, or inspection finding. [*COM-106<sup>87</sup>*]

### **TECHNICAL SPECIFICATION TASK FORCE (TSTF) TRAVELER**

The Technical Specification Task Force (TSTF), in support of the PWR and BWR Owners Groups, develops generic changes to the improved Standard Technical Specifications (ISTS). The documentation in support of the change is called a "TSTF Traveler."

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A "T-Traveler" is a TSTF Traveler for a change that is not sufficiently cost-beneficial to justify Owners Group funding of NRC review fees and is not submitted to the NRC for review and approval. Nevertheless, T-Travelers are sufficiently cost-beneficial to develop and post to the TSTF web site for use as templates for plant-specific licensee amendments. The "T" stands for "template," e.g., TSTF-445-T. The Traveler review process ensures that T-Travelers meet the same ISTS format and usage rules as Travelers that are submitted for generic NRC approval.

An "A-Traveler" is either a Traveler or a T-Traveler that has been approved by the NRC.

### **TOPICAL REPORT**

A topical report is a document about a technical nuclear safety topic that is submitted for NRC review and approval. When the NRC approves a Topical Report, licensees may reference NRC-approved TR safety evaluations in RLAs, subject to conditions and limitations documented in the SE.

TRs are typically submitted by a vendor or an owners group in accordance with the guidance provided on the NRC's [website](#). [*LIC-101, LIC-500<sup>88</sup>, COM-204<sup>89</sup>*]

## APPENDIX C ACRONYMS

AOO	Abnormal Operating Occurrence
ASP	Applicable Staff Position
CDBI	Component Design Basis Inspection
CFR	Code of Federal Regulations
CLB	Current Licensing Basis
CLIIP	Consolidated Line Item Improvement Program
CoC	Certificate of Compliance (transportation and storage casks)
DBA	Design Basis Accident
EDG	Emergency Diesel Generator
EPRI	Electric Power Research Institute
EPU	Extended Power Uprate
FOAK	First of a Kind
FSAR	Final Safety Analysis Report
GSI	Generic Safety Issue
IN	Information Notice
ISA	Instrumentation, Systems and Automation Society
ISG	Interim Staff Guide
ISTS	Improved Standard Technical Specifications (the latest version of the STS)
LAR	License Amendment Request
LATF	Licensing Action Task Force
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LSSS	Limiting Safety System Setting
NCV	Non-cited Violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PRA	Probabilistic Risk Assessment
RAI	Request for Additional Information
RG	Regulatory Guide
RIS	Regulatory Issue Summary
RISP	Regulatory Issue Screening Process
RLA	Request for Licensing Action
SBO	Station Blackout
SDP	Significance Determination Process
SE	Safety Evaluation (NRC staff)
SRP	Standard Review Plan
SSCs	Structures, Systems, and Components
STS	Standard Technical Specifications (NUREG series 1430-1434)
TI	Temporary Instruction
TIA	Task Interface Agreement
TS	Technical Specifications
TSTF	Tech Spec Task Force (sponsored by the BWR and PWR Owners Groups)
UFM	Ultrasonic Flow Meter
UHS	Ultimate Heat Sink

## APPENDIX D REFERENCES

- <sup>1</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.90](#), "Application for amendment of license, construction permit, or early site permit."
- <sup>2</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.72](#), "Immediate notification requirements for operating nuclear power reactors."
- <sup>3</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.73](#), "Licensee event report system."
- <sup>4</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.59](#), "Changes, tests and experiments."
- <sup>5</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.109](#), "Changes, tests and experiments."
- <sup>6</sup> U.S. Nuclear Regulatory Commission, NRR Office Instruction [LIC-109](#), "Acceptance Review Procedures," May 2, 2008.
- <sup>7</sup> U.S. Nuclear Regulatory Commission, NRR Office Instruction [LIC-101](#), Revision 3, "License Amendment Review Procedures," February 9, 2004.
- <sup>8</sup> Tech Spec Task Force Traveler, TSTF-360, "DC Electrical Rewrite," December 12, 2000.
- <sup>9</sup> Tech Spec Task Force Traveler, TSTF-423, "Technical Specifications End States," August 12, 2003.
- <sup>10</sup> Electric Power Research Institute, NP-2005, "Tornado Missile Risk Evaluation Methodology," August 1981.
- <sup>11</sup> Nuclear Utility Management and Resource Council (forerunner to NEI), NUMARC 8700, Rev. 1, "NUMARC Initiatives Addressing Station Blackout at Nuclear Power Plants," August 1991.
- <sup>12</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.36](#), "Technical specifications."
- <sup>13</sup> U.S. Nuclear Regulatory Commission, [Improved Standard Technical Specifications](#), LCO 3.0.4.a (entry into a Mode when an LCO is not met).
- <sup>14</sup> U.S. Nuclear Regulatory Commission, Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," Rev. 3, November 1978.
- <sup>15</sup> U.S. Nuclear Regulatory Commission, Inspection Manual, Temporary Instruction TI 2515/167, "Assurance of Industry Implementation of Key Shutdown Voluntary Initiatives."
- <sup>16</sup> U.S. Nuclear Regulatory Commission, Interim Staff Guide, [ISG-11](#), "Cladding Considerations for the Transportation and Storage of Spent Fuel."
- <sup>17</sup> U.S. Nuclear Regulatory Commission, Regulatory Issue Summary, [RIS 2007-24](#), "NRC Staff Position on Use of the Westinghouse Crossflow Ultrasonic Flow Meter for Power Uprate or Power Recovery," September 27, 2007.
- <sup>18</sup> U.S. Nuclear Regulatory Commission, Information Notice, [IN 2007-09](#), "Equipment Operability under Degraded Voltage Conditions," March 26, 2007.
- <sup>19</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.46](#), "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors."
- <sup>20</sup> Code of Federal Regulations, Title 10, Nuclear Energy, [10 CFR 50.63](#), "Loss of all alternating current power."
- <sup>21</sup> See reference 8.
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