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TO: LATF GIM Team

The latest draft of the GIM White Paper (re-titled "Licensing Issue Screening Process") is attached for your review and comment. The paper has matured to the point where it can be shared with NRC.

I would appreciate receiving comments by September 21, 2007, to allow me to prepare the next revision in time for the NEI Licensing Forum on October 15-16.

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NEI White Paper

Licensing Issue Screening Process

A Process for Screening Plant-Specific Inspection Findings and Licensing Actions to Bundle Related Issues into Consolidated Action Plans

July 2007

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NEI acknowledges the assistance of the Generic Issue Management (GIM) 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 operating decisions for current plants and business decisions for new plants. The interactions through which the NRC and the industry identify, debate, and resolve licensing issues are important contributors to either increasing or decreasing stability and predictability. The objective of this white paper is to discuss how NRC and industry can screen plant-specific inspection findings and licensing actions to improve the efficiency and effectiveness of issue resolution. Common definitions and expectations are essential for regulatory stability and predictability.

DRAFT

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1.0 INTRODUCTION

One of the most important factors in achieving a predictable, efficient licensing process is the concept of the “current licensing basis,” or CLB. The commercial nuclear industry relies on the stability of the plant-specific CLB to optimize plans and budgets for future operations and maintenance. Thus, the frequency and magnitude of challenges to the adequacy of the CLB, and the process for resolving challenges that do occur are important enablers of safe and efficient nuclear operations.

In recent years, licensees have seen an increasing number of NRC challenges to the adequacy of plant-specific CLBs during NRC inspections and licensing-action reviews (see Appendix A). Licensee evaluations of safety and compliance have not been sufficient to preclude NRC-initiated changes to the CLBs of affected plants. In most cases, the issues are not limited to one or two plants. When a significant number of operating plants are affected, NEI believes that NRC should bundle the set of plant-specific issues into one consolidated issue and, absent demonstrable safety significance, conduct a front-loaded technical review to establish standardized guidelines for implementation by affected plants.

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 review that produces a resolution path 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 NRC staff and the commercial nuclear industry about the need to implement a comprehensive regulatory process that can identify, manage, and document the resolution of consolidated issues that arise from plant-specific inspections and licensing-action reviews.

2.0 PROBLEM STATEMENT

The NRC and the nuclear industry do not have complementary processes for identifying, resolving, and implementing changes derived from inspection findings and licensing actions. As a result, there are variations in the way NRC and licensees treat open issues, which can detract from efforts to manage safety.

This paper 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 this section, with details in Appendix A.

2.1. Licensing actions:

- (1) Control room habitability.
- (2) Safety-related instrument setpoints.
- (3) Conditioning LAR approval for a plant with custom technical specifications on the adoption of Standard Technical Specifications for the structure, system, or component in question.
- (4) Using an LAR review to challenge previously accepted evaluation model assumptions.

- 2.2. Inspection Findings:
- (1) Challenging the design basis (e.g., tornado missiles).
 - (2) Repeat URIs from a series of team inspections (e.g., component design basis inspections).
 - (3) Using the significance determination process (SDP) to generate requests for information.
 - (4) Challenging definitions (e.g., RCPB leakage).
 - (5) Challenging industry evaluations (e.g., operability determinations).
- 2.3. Generic Communications:
- (1) Material control and accounting (Bulletin 2005-01).
 - (2) Fire protection manual actions.
 - (3) Scope of fitness for duty testing (RIS 2005-08).
 - (4) Steam generator CLIIP implementation date (GL 2006-01).
 - (5) Grid reliability.
- 2.4. Guidance vs. Requirements:
- (1) Operational leakage from ASME Class 2 and 3 components.
- 2.5. New or Different Interpretations:
- (1) 10 CFR 50.46 reporting (changes/errors in LOCA models).
 - (2) 10 CFR 50.59 threshold for prior NRC review of method changes.
 - (3) Applicability of the "single failure criterion" in Tech Spec action statements.
 - (4) 10 CFR 50.72 and 50.73 reportability requirements.
 - (5) Operability determinations for SSCs outside the scope of Tech Specs.
 - (6) Issues that emerge from plant-specific implementation of model safety evaluations for generic Tech Spec changes issued pursuant to the consolidated line item improvement process (CLIIP).
- 2.6. Missed Opportunities to Reduce Regulatory Burden:
- (1) Digital instrumentation and control.
 - (2) Use of risk techniques to evaluate inspection unresolved items (URIs).
 - (3) Review 10 CFR 50.55a to identify administrative requirements that do not have a safety benefit commensurate with their cost.
- 2.7. Conflicting Standards:
- (1) Risk management in the context of the maintenance rule (10 CFR 50.65(a)(4)).
 - (2) The regulatory treatment of RCS leakage.
 - (3) Spent fuel storage criticality requirements (RIS 2005-05).
- 2.8. Unilateral Changes:
- (1) Task Interface Agreement (TIA) process.
 - (2) Use of the Inspection Manual to redefine "performance deficiency."
 - (3) Rejecting NRC-approved TSTF Travelers as the basis for a plant-specific amendment.

3.0 PROPOSED REGULATORY PROCESS

3.1 Overview

This section describes NEI's proposed process for identifying and managing plant-specific licensing and compliance issues that have implications for other licensees. It defines several key terms and concepts, discusses alternative ways to manage licensing issues, and describes the relationship between plant-specific issues and generic issues.

Absent an immediate plant-specific safety or compliance concern, the process is one acceptable way to resolve plant-specific open issues. Criteria, thresholds, and documentation guidelines would be developed to describe the consolidation of information from multiple inspections and licensing actions.

NEI recommends that the NRC/NEI LATF interface be used to prepare guidelines that address the following key attributes of a licensing issue screening process:

- (1) Establishing a safety threshold as a first step.
- (2) Participation by all stakeholders.
- (3) Identification of sources of new information (e.g., operating experience, research).
- (4) Identification of relevant underlying regulatory requirements.
- (5) Prompt coordination of NRC and industry activities.
- (6) Information quality guidelines.
- (7) Rigorous definition of key terms and concepts.
- (8) Working meetings to establish timely consensus positions.
- (9) Milestone scheduling.
- (10) Management oversight.
- (11) Accessible documentation of precedent.
- (12) Maximize process efficiency and effectiveness.
- (13) Recognition of the CLB as the plant-specific regulatory baseline.
- (14) One issue – One review – One resolution

3.2 Key Terms and Concepts

The precise definition of the following key terms and concepts is central to the success of the proposed GIM process.

3.2.1 Current Licensing Basis

The term "current licensing basis" (CLB) is defined in 10 CFR 54.3¹ as 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."

¹ U.S. NRC, Code of Federal Regulations, Title 10, Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," Section 54.3, "Definitions."

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.

3.2.2 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.

With respect to generic compliance compared to plant-specific compliance, the NRC should not impose resolution of an emergent generic issue on an individual licensee unless there is an immediate safety issue. The matter should be resolved through the generic issue process, not the LAR process. No LARs should be delayed and no licensee should be obliged to adopt unusual conditions (i.e., conditions inconsistent with the CLB and precedents established by other licensees) to obtain regulatory approval of a proposed LAR. Resolution should be the same for all licensees to which the issue applies.

3.2.3 Operating Authority

The Perry decision² describes a threshold for regulatory approval based on whether, in the staff's opinion, a licensee's actions "exceed the operating authority already granted under the licensee's license." A too-narrow interpretation of "operating authority" pre-empts licensees from using the 10 CFR 50.59 change-control process to make changes without prior NRC approval. Both industry and the NRC would benefit from additional guidance on the concept of operating authority.

3.2.4 Precedent

Licensees use the concept of precedent (e.g., LARs, RAIs, and NRC safety evaluations for plants of the same or similar design) to reduce the time needed to prepare an LAR, to minimize the likelihood of RAIs, and to achieve a more predictable regulatory review schedule. NEI 06-02³ contains NEI guidance on the identification and use of precedent.

There is no regulatory process for determining whether a licensing document will be accepted as precedent by the NRC staff, nor is there a repository of precedent-setting documents that licensees could use as a resource when preparing submittals or that NRC could use to standardize reviews.

² U.S. NRC, Memorandum and Order, CLI-96-13, December 6, 1999.

³ Nuclear Energy Institute, NEI 06-02, "License Amendment Request Guidelines," December 2006.

3.2.5 Reviewer's Finding

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.

3.2.6 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.

3.2.7 Backfitting Rule

The Commission recognized the importance of backfitting controls in 1985 when it approved a change to 10 CFR 50.109 that established administrative standards for NRC imposition of new regulations or new interpretations of existing regulations. The 1985 rule defined the term "backfitting" as the "modification of or addition to systems, structures, 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 rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previously applicable staff position ..."

The concept of backfitting is closely related to the concept of the CLB. For example, it is NEI's position that the use by NRC inspectors and reviewers of new information or new interpretations to seek an expanded scope for licensee commitments and submittals that are based on the CLB should be subject to backfitting controls. Similarly, NRC should not use generic communications, requests-for-additional-information (RAIs), or inspection activities to solicit commitments that go beyond the CLB.

The 10 CFR 50.90 license amendment process requires that NRC assure technical compatibility of the proposed change with the licensing and design bases. If there is no incompatibility, i.e., no unacceptable inconsistency between a license amendment request and the licensing or design basis, NRC should not impose additional requirements that are based on new generic information without first performing a regulatory analysis. Further, the incompatibility must be "unacceptable," i.e., more than just a good idea or just "related to" the LAR. The imposition of more restrictive requirements should be limited to proposed license amendments that cannot be sustained without conditioning approval on related

changes to the licensing basis and/or the design basis. The burden to justify imposing requirements that are more restrictive falls on the NRC, not the licensee.⁴

3.3 Implementation Alternatives

A concerted effort by all stakeholders is needed to address the concerns described in this white paper. NEI proposes that NRC and the commercial nuclear licensing community hold a series of public meetings and workshops to develop a licensing issue screening process that would guide the NRC staff and licensees in identifying, evaluating, and documenting the appropriate use of information derived from plant-specific inspections and licensing-action reviews.

One or more of the following options could be used to document and communicate process improvements derived from the dialogue:

- (1) NRC Office Instructions or Management Directives
- (2) NRC Inspection Manual changes
- (3) NRC policy statements
- (4) NRC generic communication (Bulletin, Generic Letter, RIS)
- (5) Licensee procedures
- (6) Industry white papers, guidelines, and initiatives

3.3.1 Generic Safety Issues (GSI)

If the data are insufficient to establish an issue that requires action and there is no immediate safety concern, the issue should be considered for resolution by means of the process described in NUREG-0933 (*A Prioritization of Generic Safety Issues*). Open issues should be revisited periodically to confirm there is no immediate safety concern as new data and information are developed. Final resolution of a generic safety issue would be similar to the other options in this Section 3.3.

3.3.2 Generic Communications

Generic communications may be used to communicate information and gather information. Generic communications should not be used to impose backfits unless a backfit is justified by a cost benefit analysis and safety/risk considerations indicate that the backfit is needed. Generic communications should not imply that the current licensing basis is not acceptable or that compliance with new guidance is required without completing the backfit analysis. When gathering data, the NRC must confirm that the burden imposed on the industry to gather the data is justified (i.e., by estimating the extent of the burden to at least qualitatively justify imposing it).

3.3.3 Voluntary Industry Initiatives

When appropriate based on projected risk and safety considerations, the industry may choose to take action to address an issue. The action may be in the form of a formal NEI Initiative or an informal agreement among a set of licensees to pursue a course of action.

⁴ U.S. NRC, Atomic Safety and Licensing Board, Memorandum and Order, ASLBP No. 04-832-02-OLA, November 22, 2004.

3.3.4 Risk-Informed, Performance-Based Solution

The resolution of an open issue can be deterministic if it satisfies safety considerations and the costs are justified. If deterministic resolutions are not cost justified, a risk-informed and performance-based resolution can be pursued in accordance with applicable regulations and guidance.

3.3.5 Rulemaking

When compliance with current regulatory requirements is not achievable, but safety and risk considerations indicate that the current licensing bases is acceptable, NRC should initiate rulemaking should to revise the regulations to facilitate licensee compliance without further plant-specific action.

3.3.6 Backfitting

Backfits should not be imposed unless necessary for adequate protection or to restore compliance. All backfits must be supported by a documented regulatory analysis that shows that the cost is commensurate with the safety benefit. When a backfit is not justified, rulemaking may be considered. If a licensee volunteers to adopt a backfit, the regulatory analysis may not be necessary.

3.3.7 No Further Action

The final resolution of an open issue can be "no further action" if a regulatory analysis cannot justify a backfit and compliance is not in question.

Appendix A - Examples

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Appendix A - Examples

1. TSTF Travelers

The licensee filed a license amendment request (LAR) to remove certain technical specification (TS) requirements. The LAR was consistent with an NRC-approved Tech Spec Task Force (TSTF) Traveler. Contrary to the intent of the Traveler, the licensee was obliged to relocate (rather than remove) some of the affected TS requirements to the "technical requirements manual" (TRM) to obtain NRC approval of the LAR. This implies that approved Travelers are not accepted as precedent by NRR technical review branches.

2. EQ of Backup Equipment

An NRR request for additional information (RAI) questioned the environmental qualification (EQ) of backup radiation monitors. However, backup equipment normally is not subject to EQ requirements. The RAI did not include any commentary on why the information was necessary. NEI believes that RAIs should be screened by a technical branch supervisor and the NRC Project Manager to confirm that requested information is necessary to enable a regulatory finding of reasonable assurance of safety and compliance with applicable regulations.

3. Placeholder for a future example.

4. Criteria for Technical Specifications

During the review of an Alternative Source Term (AST) LAR, the licensee was obliged to retain an administrative TS that requires containment hatch closure capability within 30 minutes of a fuel handling accident. The licensee disagreed with the staff position and believes it is a re-interpretation of the criteria in 10 CFR 50.36 that establish the scope of TS.

5. RAI Process (methods of evaluation)

A steam generator replacement led to the reanalysis of certain postulated accidents and an LAR to revise the licensing basis. The NRC staff took the opportunity to use the RAI process to open previously approved licensing basis methods for re-review. NEI believes that the NRC should document the reason for re-reviewing previously approved methods that comply with 10 CFR 50.46 and are commonly used in the industry.

6. EDG AOT (use of precedent)

The licensee's LAR proposed to extend the emergency diesel generator (EDG) allowed outage time (AOT) from seven to 14 days based on precedent, i.e., previous NRC approval of a combination of deterministic and probabilistic evaluations. However, RAIs from the NRC review branch went beyond the questions asked during the precedent review. NEI recommends that NRC and Industry establish joint guidance for setting and revising LAR precedent.

7. EDG AOT (use of precedent)

During a routine public meeting to discuss risk-informed TS, NRC reported that a pending Regulatory Issue Summary (RIS) would "harden the process" for reviews of EDG AOTs to require an alternate power source as a defense-in-depth measure. NEI recommends that NRC obtain industry input early in the process of drafting new or revised guidance that will have a significant operational or cost impact.

Appendix A - Examples

8. Steam Generator Tube Integrity

Generic Letter 2006-01, *Steam Generator Tube Integrity and Associated Technical Specifications*, gave PWRs two options: (1) confirm within 30 days that an LAR consistent with TSTF-449 had been submitted or commit to its submittal, or (2) provide within 60 days a detailed description of the tube integrity program. The only realistic option was Option (1) because Option (2) involved an extensive submittal within a relatively short period of time. Most licensees were in the process of planning and budgeting for TSTF-449 implementation, and the GL was a material perturbation of those efforts.

The Industry perceived the GL as NRC's way of expediting industry implementation of TSTF-449, but believed that NRC should have performed a regulatory analysis in support of its issuance. NRC took the position that a regulatory analysis was not necessary because the requested actions were "voluntary."

The point of this example is to revisit the NRC regulatory analysis process, which is described in NUREG/BR-0058. It is an extensive, time consuming, and rarely used process. NEI believes that NRC and all its stakeholders would be better served by a streamlined process that included Industry participation. NEI recommends further NRC/Industry dialogue on this topic.

9. ODP for Class 2&3 Components

RIS 2005-20 (operability determination process) replaced Generic Letter 91-18 (resolution of degraded and nonconforming conditions). NEI believes that the RIS reinterprets previous NRC guidance on operability determinations for ASME Class 2 and 3 components that exhibit operational leakage. [Note: this example is being resolved through public interactions between the NRC staff and the NEI Licensing Action Task Force. For interim guidance, refer to NRC internal memorandum dated June 22, 2007, from the NRR Director, Division of Inspection and Regional Support, to the four Region Directors, Division of Reactor Projects.]

10. Fitness-for-Duty Testing

RIS 2005-28 (for-cause FFD testing) could have a negative impact on worker safety. It contains an arbitrary threshold of "for cause" testing that could have a chilling effect on employee willingness to report for OSHA recordable injuries.

11. ODP and Commitments

NRC Staff can use ODP guidance as leverage for obtaining licensee commitments. For example, following a repeat event in which axial offset exceeded the predicted value by more than +/- 3%, NRC questioned the licensee's corrective action on the grounds that it was outside the scope of the methodology in an approved topical report. The licensee noted that interim use of new methods to demonstrate compliance is consistent with the ODP guidance for addressing a degraded or nonconforming condition. However, the NRC claimed that the ODP guidance did not apply in this case because "FQ is not a structure, system, or component." The licensee committed to supplement its corrective action with steps to preclude recurrence of the finding.

12. Core Operating Limits Report (methods of evaluation)

NRC challenged the inclusion of LOCA models in the core operating limits report (COLR), claiming that the 10 CFR 50.46 change process has precedence over the 10 CFR 50.59 change process when evaluating the need for prior NRC approval of changes to LOCA models. NEI believes this is a reinterpretation of the regulations that should be subject to a formal regulatory analysis.

Appendix A - Examples

13. Topical Report (digital I&C)

The licensee's LAR proposed a digital upgrade of the reactor protection system based on a topical report (TR) that was approved several years earlier. The NRC safety evaluation for the TR had concluded that it met the requirements of several GDC (1, 2, 4, 13, 19-24, and 29), IEEE-603, Regulatory Guide 1.152, and supporting industry standards for the design of digital systems. However, RAIs from the NRC review branch went beyond the questions asked during the precedent review of the TR. NEI recommends that NRC and Industry establish joint guidance for setting and revising LAR precedent.

14. 10 CFR 50.55a Relief Requests

Incorporation by reference of specific editions of selected IEEE standards into 10 CFR 50.55a inhibits the use of subsequent editions of the referenced standards or other newer IEEE standards. Licensees incur schedule delays and cost increases because they are obliged to obtain NRC approval of relief requests to use industry standards that have already been approved through a consensus process in which the NRC staff participates. NEI recommends further NRC/Industry dialogue on this topic.

15. Component Design Basis Inspections

An NRC CDBI identified an EDG surveillance issue. CDBIs at several plants have identified the same issue. The typical TS surveillance criterion for 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. Typically, the extremes of the frequency range are not analyzed for steady state operation. The industry position is (1) the use of nominal values within a standard tolerance is typical, accepted practice in electrical engineering, and (2) plants do not operate at the extremes for extended periods of time. However, the NRC CDBIs conclude that either a plant-specific analysis should be performed to support steady state operation at the extremes, or the TS surveillance should be changed to limit such operation. NEI believes this represents a new or different staff position that should be subject to a regulatory analysis.

16. EDG Surveillance

A licensee withdrew a proposed change to EDG surveillance requirements that would have permitted a planned modification to remove the anticipatory (idle-speed) EDG start signals to allow only full speed DG starting on an under voltage condition. The proposed modification was consistent with industry precedent. However, the NRC reviewer(s) noted that the proposed Tech Spec was inconsistent with the Standard Technical Specifications (the plant in question has custom TS) and stated that the LAR could not be approved unless the licensee adopted the STS surveillance requirements.

17. 10 CFR 50.59 Process

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

18. Placeholder for a future example

19. Placeholder for a future example

Appendix A - Examples

20. ROP (interpretations)

The ROP is a potential source of new or different staff positions and interpretations that is not subject to the backfitting rule (10 CFR 50.109).

21. Radiation Monitor Sensitivity

NRC inspectors questioned the licensee's treatment of gaseous radiation monitor sensitivity. There is precedent that gaseous monitors that cannot detect 1 gpm in 1 hour at normal RCS radioactivity levels are acceptable because (1) there are three independent means of detection (sump level and flow, airborne particulate activity, and condensate flow from air coolers) and (2) the monitors can detect 1 gpm in 1 hour when the RCS activity is equivalent to that assumed in the environmental report (equivalent to 0.1 percent failed fuel). The issue is one of inspection consistency across NRC Regions and over time.

22. Topical Reports (methods of evaluation)

A plant-specific LAR was used as a means to initiate re-review of an NRC-approved NSSS topical report (TR) on a method of evaluation. NEI believes this is contradictory to the NRC guidance in LIC-101 and LIC-500. The NEI LATF is preparing a white paper to address this and other topics related to the review, approval, and plant-specific use of generic TRs.

23. RCS Leakage

A flaw in an incore detector thimble tube led to leakage into the seal table area in containment. The leaking thimble tube was isolated by a local manual isolation valve. Subsequently, a small (four drops per minute) leak developed in a fitting upstream of the valve. The licensee treated valve leakage as identified leakage, not reactor coolant pressure boundary leakage, because it was not caused by the initial fault and was not a "non-isolable fault in an RCS component body, pipe wall, or vessel wall" as defined in the TS Definition for LEAKAGE. NRC accepted the licensee's classification (i.e., not RCS pressure boundary leakage), but considered issuing a violation for not reporting the event as a "serious degradation of a principle safety barrier." The licensee considered this to be a re-interpretation of NUREG-1022 that should be pursued on a generic basis.

24. Current Licensing Basis

During review of the licensee's EPU LAR, NRC determined that a fuel enthalpy value for core coolability was slightly nonconservative, even though it meets current regulatory guidance. NRC is considering revising the guidance. NEI believes that NRC should process the LAR in accordance with the plant's current licensing basis. Absent a demonstrable safety or compliance concern, LAR reviews should not be delayed pending revised generic guidance.

25. Tornado Missile Protection

The licensee identified apparent discrepancies between the as-built plant and the current licensing basis. The discrepancies involved exposed exhaust ductwork or piping that is not protected against tornado missiles. The options for corrective action are (1) plant-specific use of the EPRI TORMIS code (or some other methodology) to exclude the components from the design basis for tornado missile protection, or (2) modify the plant to either eliminate or protect the components. Option (1) is preferred because of the high cost of Option (2). NEI recommends that NRC and Industry resolve the issue by means of plant-specific risk-informed evaluations to verify near-term operability followed by a generic resolution developed through use of the consolidated line item improvement process (CLIIP)

Appendix A - Examples

26. Maintenance Rule

The licensee believes that additional NRC guidance is needed to ensure consistency between the maintenance rule and the NRC inspection manual chapter on operability determinations. For example, it is not clear whether NRC shares the Industry position that an operability determination or modification of the plant PRA model is not required if a plant exceeds maintenance rule performance criteria.

27. ROP (resource burden)

The NRC staff conducted a safety culture assessment and recommended followup corrective action. Later, the staff judged the licensee's failure to enter the assessment results in the Corrective Action Program as a "more than minor" performance deficiency. The ROP classification was Green (very low safety significance) with a PI&R (problem identification & resolution) cross-cutting aspect. There was no violation of regulatory requirements. This is an example of a subjective assessment that leads first to a performance deficiency and then to a cross-cutting issue, with no direct safety or compliance implications. NEI recommends that the ROP be modified to control the cascading resource burden of events of this type.

28. ROP (Appendix B Criterion XVI)

An NRC noncited violation (10 CFR 50, Appendix B, Criterion XVI, "Corrective Action") concluded that the licensee's failure to evaluate main steam valve leakage to determine its effect on the radiological consequences of a postulated steam generator tube rupture was a "more than minor" performance deficiency. The ROP classification was Green (very low safety significance) with a PI&R cross-cutting aspect. However, the inspection report did not include any commentary to help the licensee understand how they had violated Criterion XVI.

29. ROP (fitness-for-duty)

The NRC Staff concluded that a situation during which control room operators were unaware of fitness-for-duty (FFD) procedures associated with an inattentive shift manager was a "more than minor" performance deficiency (10 CFR 26). The ROP classification was Green (very low safety significance) with a PI&R cross-cutting aspect. However, the inspection report did not include any commentary to help the licensee understand the source of the finding.

30. Definition of Performance Deficiency

The NRC Staff has re-defined the term "performance deficiency" (PD) to mean a deficiency that results from a licensee not meeting a requirement or standard where the cause was reasonably within the licensee's ability to foresee and correct, and that should have been prevented (e.g., failure to meet a self-imposed standard or a standard required by regulation). The term "self-imposed standard" means a standard that has been incorporated in plant procedures or work practices, or a written commitment to NRC or a third party (e.g., Owners Group, NEI, etc.). Issues associated with problem identification and resolution (PI&R), human performance, and safety-conscious work environment (SCWE) cannot by themselves be used as the basis for a PD. NEI recommends that NRC obtain industry input early in the process of drafting new or revised guidance that will have a significant operational or cost impact.

Appendix A - Examples

31. Shutdown Initiatives

The NRC staff has issued an Inspection Manual Temporary Instruction (*TI 2515/167, Assurance of Industry Implementation of Key Shutdown Voluntary Initiatives*) to confirm continued industry implementation of voluntary shutdown initiatives described in NUMARC 91-06 (*Guidelines for Industry Actions to Assess Shutdown Management*) and Generic Letter 88-17 (*Loss of Decay Heat Removal*). 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. NEI believes this represents a use of the inspection process to bypass the rulemaking process and establish non-mandatory guidance as de facto requirements.

32. Criticality Requirements

The holder of a Certificate of Compliance (CoC) for a spent fuel storage or transportation cask is required to perform a criticality analysis for the bounding (most reactive) evolution. Typically, this is a cask fully loaded with spent fuel in the spent fuel pool. The NRC NMSS Division of Spent Fuel Storage and Transportation (SFST) reviews criticality analyses and issues safety evaluation reports (SER) for certificates that approve the use of cask systems by the owners of spent fuel in dry storage (i.e., the companies that operate commercial nuclear power plants).

The criticality requirements for production and utilization facilities (10 CFR 50.68) are more restrictive than the criticality requirements for special nuclear material in general (10 CFR 70.24). Until March of 2005, the operational difficulty caused by the difference between the regulations was mitigated by NRC exemptions from the requirements of Subpart 50.68(b). However, RIS 2005-05 removed the exemption option, and Part 50 licensees were obliged to obtain license amendments to established technical specifications for cask loading operations. In response to public criticism, NRC resolved the discrepancy by rulemaking in 2007.

NRC is responsible for resolving conflicts between regulations. Generic correspondence should not be used to shift the burden to licensees.

33. Setpoints (instrument uncertainty)

The NRC staff cited a licensee for failure to demonstrate conservative acceptance criteria for uncertainties in ultimate heat sink (UHS) temperature instrumentation. NEI disagrees with the staff's use of the inspection process to impose a new generic position during plant-specific inspections without benefit of a comment and resolution period or a regulatory analysis.

34. Setpoints (LSSS)

Since approximately 2003, the NRC staff has used the RAI process to re-interpret the surveillance requirements for limiting safety system settings (LSSS) and to extend the re-interpretation beyond the set of LSSS instruments. Industry has submitted two technical reports in defense of its opposing position, but NRC has declined to formally review and comment on them. Industry has submitted a compromise proposal for operating plants in Tech Spec Task Force Traveler TSTF-493 (Revision 2), which currently is under review by NRC Staff. NRC's June 2007 publication of BTP 7-12 has extended the issue to new plants (see NEI comment letter dated July 5, 2007).

Appendix A - Examples

35. Station Blackout

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.

36. ISG-11 (dry storage)

10 CFR 72 does not contain a fuel cladding temperature limit. The NRC Staff establishes limits by means of review guidance in NUREG-1536 (Standard Review Plan for dry storage casks). Interim Staff Guidance (ISG) 11 pertains to spent fuel cladding temperature limits during dry storage and transportation. ISG-11, Revision 2 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 of 1058F. A lower cladding temperature limit for vacuum drying conditions obliges CoC holders to require licensees to use new cooling procedures and equipment to meet the revised temperature limit. The new requirements were imposed through CoCs without a regulatory analysis to demonstrate that the additional cost was justified by a commensurate increase in safety.

37. ISG-22 (fuel oxidation)

Interim Staff Guidance (ISG) 22 established new guidance for Certificates of Compliance (CoCs). It stipulates how CoC holders must address the issue of fuel oxidation in an air environment. The ISG was published without benefit of a regulatory analysis to demonstrate that the additional cost is justified by a commensurate increase in safety.