



NUCLEAR ENERGY INSTITUTE

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June 16, 2006

Mr. Frank Gillespie  
Director, License Renewal  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

**SUBJECT:** NRC Sufficiency Standards for Docketing License Renewal  
Applications (LRAs)

**PROJECT: 690**

Dear Mr. Gillespie:

In 2005, the NRC issued NUREG-1800 Rev. 1, "*Standard Review Plan for License Renewal*" (SRP-LR) containing staff guidance for the "sufficiency" review of an LRA. NRC has also issued Reg. Guide 1.188, Rev.1, which defines the format and content requirements for an application and endorses NEI 95-10 Rev. 6.<sup>1</sup> In addition to these guidance documents, the NRC issued a letter to the Nuclear Energy Institute (NEI)<sup>2</sup> dated April 29, 2005, containing a checklist of items for NRC reviewers to use as an aid in judging the "sufficiency" of an LRA.<sup>3</sup>

The NRC's April 29, 2005, letter does not fully align with the approved regulatory guidance documents (NUREG 1800, RG 1.188) or with NEI 95-10, Rev.6, regarding what constitutes "sufficiency" for an LRA. The NRC's April 29 letter includes valuable lessons-learned from technical reviews of LRAs that are useful to the industry in enhancing its future LRAs. However, the industry believes that the NRC's April 29, 2005 letter introduces criteria for "technical adequacy" determinations into the sufficiency review process.

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1 NEI 95-10, Rev.6, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule," January 2005, and NRC Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," Rev. 1, September 2005.

2 The Nuclear Energy Institute is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel fabrication facilities, nuclear materials licensees, and other organizations and individuals involved in the nuclear energy industry.

3 Letter, "Information to Aid in Sufficiency Review of License Renewal Applications," PT Kuo (NRC) to A. Marion (NEI), April 29, 2005.

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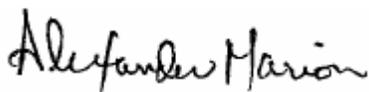
NEI raised this issue at the November 8, 2005, meeting with NRC and proposed that NEI draft clarifying guidance for “sufficiency” reviews using the SRP-LR, examples from the NRC letters to NEI (dated April 29) and to BVPS (dated March 24), as well as other recent LRA acceptance reviews. The attached NEI White Paper provides the industry’s comments on the NRC’s April 29 letter and offers initial recommendations to help clarify and differentiate “sufficiency” criteria from “technical adequacy” review criteria.

While we recognize that the Staff’s expectations regarding the quality and technical content of LRA have increased. These increasing Staff expectations arguably have advanced beyond a sufficiency determination of whether LRA contains “reasonably complete” information to satisfy regulatory requirements in 10 CFR Parts 51 and 54.

NEI believes that sufficiency features of an LRA and optional features that improve review efficiency are separate issues that should be distinct from each other. The distinction between these two areas, however, has become blurred. NUREG 1800, Table 1.1-1 provides the staff-approved criteria for sufficiency. Imposing Staff expectations couched as additional sufficiency requirements that force an applicant to adopt a particular technical position is inappropriate because it circumvents the NRC’s established technical review process. We favor a close working relationship between the license renewal applicant and the Staff to eliminate bona fide sufficiency shortcomings and avoid disagreement over what constitutes sufficiency criteria. It is our hope that through dialog we can agree on process improvements that will eliminate confusion in the sufficiency process as well as have these improvements endorsed in a future guidance document revision.

If you have any questions, please contact me at 202.739.8080; [am@nei.org](mailto:am@nei.org) or James Ross at 202.739.8101; [jr@nei.org](mailto:jr@nei.org).

Sincerely,



Alexander Marion

Enclosure

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## NEI White Paper

### Industry Comment on Supplemental Guidance Regarding LRA Sufficiency

#### Issue

NRC's April 29, 2005<sup>1</sup> letter to the Nuclear Energy Institute (NEI) does not fully align with regulatory guidance provided in the current revisions of NUREG 1800, RG 1.188 or the industry guidance in NEI 95-10 Rev.6<sup>2</sup>, regarding what constitutes "sufficiency" for an LRA. The NRC's April 29 letter includes valuable lessons-learned from technical reviews of LRAs that are useful to the industry in enhancing its future LRAs. However, the industry believes that the "sufficiency" criteria should be clearly differentiated from "technical adequacy" criteria, both of which are described in the Standard Review Plan for License Renewal (SRP-LR). Therefore, at a meeting with the Staff on November 8, 2005 meeting, NEI raised this issue and proposed that NEI draft clarifying guidance for "sufficiency" reviews using the SRP-LR and the examples from the NRC letters to NEI April 29, 2005 and BVPS March 24, 2005 and other recent LRA acceptance reviews. This white paper contains NEI's comments and proposed clarifications.

#### Introduction

NUREG-1800 Rev. 1, "*Standard Review Plan for License Renewal*" (SRP-LR) contains the official "sufficiency" review standards for an LRA. NRC has also issued Reg. Guide 1.188, Rev.1 which defines the format and content of an LRA and endorses NEI 95-10 Rev. 6. NEI 95-10 provides standard format and content guidance for the minimum content for an LRA. Prior to issuing the above guidance documents, the NRC issued a letter in March 2005, which determined that the Beaver Valler Power Station (BVPS) LRA was not acceptable for docketing.<sup>3</sup> That letter described deficiencies that were categorized as sufficiency issues. Also during a March 2005 meeting with the industry, NRC Staff indicated that its sufficiency review also would ensure that LRAs contain information responsive to RAIs issued

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<sup>1</sup> NRC Letter, "Information to Aid in Sufficiency Review of License Renewal Applications," PT Kuo (NRC) to A. Marion (NEI), April 29, 2005.

<sup>2</sup> NEI 95-10, Rev. 6, "Industry Guideline for Implementing The Requirements of 10 CFR Part 54 – The License Renewal Rule," September 2005, and the Generic Aging Lessons Learned (GALL) Report, NRC, NUREG-1801, Rev. 1, September 2005.

<sup>3</sup> NRC letter, "Beaver Valley Power Station Units 1&2 – Results of Acceptance Review for License Renewal.," from P-T Kuo (NRC) to FENOC, March 24, 2005.

to other license renewal applicants, thereby addressing issues repeatedly raised by the Staff and conserving its resources.<sup>4</sup>

Thereafter, in response to an industry request for a written record of the NRC's new sufficiency expectations, the NRC issued a letter to the NEI containing a checklist of additional "sufficiency" review criteria and examples (NRC April 29, 2005 letter). In that letter, the NRC set forth a "list of items" to aid the Staff in their review and "to focus applicant attention on lessons learned during prior reviews." Rather than supplant the NUREG-1800 checklist, the NRC chose to advise that the new list of items "be considered while performing the checklist outlined in the SRP-LR." This letter appears to include specific requirements for the technical content of the LRA that should be determined during the Integrated Plant Assessment performed by the licensee. If the SRP-LR or other NRC license renewal guidance documents need to be more explicit, then the Staff should follow a formal process to revise or supplement approved regulatory guidance documents.

### **Definition of Sufficiency**

There is no definition of the term "sufficiency" in the NRC regulations or guidance documents. However, the NRC is required by 10CFR2.101 to review the LRA to determine acceptability for docketing.

The term "sufficiency" has its origins in 10CFR 2.109(b) and NUREG 1800, Rev.1, Section 1.1, "Docketing of Timely and Sufficient Renewal Application" which provide as follows:

- 10 CFR § 2.109(b) states: "If the licensee of a nuclear power plant licensed under 10 CFR 50.21(b) or 50.22 files a *sufficient* application for renewal of an operating license at least 5 years prior to the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined."
- While the regulations do not define explicit criteria by which an LRA is deemed to be "sufficient," relevant regulatory guidance is set forth in NUREG-1800, Rev. 1. As for the acceptance criteria governing the NRC's sufficiency review, the SRP-LR explains that the NRC determines "acceptance for docketing and sufficiency on the basis of the required contents of an application, established in 10 CFR 2.101, 10 CFR 51.53(c), 54.17, 54.19, 54.21, 54.22, 54.23, and 54.4. A license renewal application

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<sup>4</sup> See Transcript of Proceedings, Workshop on Revised License Renewal Guidance Documents, March 2, 2005, at 80 (Dr. PT Kuo explained that, "[W]e have learned there are several issues that always came up. We highlighted those issues and we are looking for information in those areas.")

is sufficient if it contains the reports, analyses, and other documents required in such an application.”<sup>5</sup> (emphasis added)

- The SRP-LR also draws a distinction between the criteria for acceptance of an LRA for docketing and that for substantive review. “The docketing and subsequent finding of a timely and sufficient renewal application does not preclude the NRC reviewers from requesting additional information as the review proceeds, nor does it predict the NRC’s final determination regarding the approval or denial of the renewal application.”<sup>6</sup> Rather, after receiving an LRA – but before docketing it – the NRC Staff reviews it “for acceptability for docketing as a sufficient application in accordance with 10 CFR 2.101, 10 CFR Part 51, and 10 CFR Part 54.”<sup>7</sup>

### Discussion of NRC SRP-LR and Guidance Letters

- SRP-LR guidance in section 1.1 and Table 1.1-1 defines the minimum requirements for the Staff to begin its review: “A license renewal application is sufficient if it contains the reports, analyses, and other documents required in such an application.”
  - Table 1.1-1, “Acceptance Review Checklist for Docketing of Timely and Sufficient Renewal Application” in NUREG-1800 Section 1.1, contains a checklist of administrative, technical, and environmental information the Staff expects to be included in a sufficient LRA. In applying the checklist, the Staff determines whether the applicant has made “a reasonable effort” to provide the required information.<sup>8</sup>
  - The SRP-LR, section 1.1.2.1, states that the required contents of an application are “established in 10 CFR 2.101, 10 CFR 51.53(c), 54.17, 54.19, 54.21, 54.22, 54.23, and 54.4.” The guidance for meeting these requirements are set forth in NEI 95-10.
  - Regarding use of the checklist in Table 1.1-1, the SRP-LR, Section 1.1.3.1, states, “If the information in the application for a checklist item is either not provided or not reasonably complete and no justification is provided, the reviewer should check the “NO” column for that checklist item.” (emphasis added)

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<sup>5</sup> NUREG 1800 Section 1.1.2.1.

<sup>6</sup> *Id.* at Section 1.1.1.

<sup>7</sup> *Id.* at Section 1.1.1.1.

<sup>8</sup> *Id.* at Section 1.1.3.1.

Thus a failure to address any of the required elements of the LRA by not providing the requisite information or an appropriate justification would lead to a finding of insufficiency to one degree or another, and NRC may elect to not accept the LRA for review.

NRC's April 29 Letter describes "*Information to Aid Staff in Sufficiency Review*" also as "*Expectations for Document Quality.*" Considering the Staff's expectations regarding the quality and technical content of an LRA, the industry recognizes that the bar has been raised on both fronts. The NRC's April 29 letter clearly indicates that the Staff is expecting additional information in certain sections of the LRAs as compared with the 2003-2004 license renewal submittals. The letter specifies – to a greater level of detail than in the SRP-LR and other license renewal guidance documents – Staff expectations regarding equipment scoping and screening methodology and results, aging management review and program content, time limited aging analysis (TLAA) content, as well as a host of "general" expectations applicable to the environmental report (ER). These ad hoc changes in acceptance standards had not been communicated previously to prospective applicants, and have not had the benefit of a public review and comment period. NEI offers the following comments:

- Tests for sufficiency should not encompass a review of technical adequacy of the LRA or supporting documents. In view of the SRP-LR guidance, the NRC Staff's acceptance reviews of LRAs are not meant to confirm the adequacy of required license renewal technical and environmental analyses. Indeed, technical conclusions at the acceptance stage would be presumptive, rather than being based on an objective technical review with an informed understanding of the plant's actual design.
- The purpose of the acceptance review is for the Staff to confirm that an LRA contains "reasonably complete" information to satisfy applicable regulatory requirements in 10 CFR Parts 51 and 54.<sup>9</sup> Once it is determined that an application is sufficient, it is docketed and the Staff initiates a substantive review of its content – requesting additional information from the applicant in areas where the staff has questions or requires additional data or analyses to support the findings the Commission ultimately must make pursuant to 10 CFR § 54.29.

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<sup>9</sup> NUREG-1800, Section 1.1.

- Areas where the LRA presents a position that is different from a prior NRC accepted position should be judged on the basis of technical merits. The LRA may require a more extensive review but it should not be determined to be “incomplete or insufficient for docketing” just because it presents a new or different position.
- The “new” Staff sufficiency criteria reflected in the April 29, 2005 letter to NEI arguably have advanced beyond a determination of whether an LRA contains “reasonably complete” information to satisfy regulatory requirements in 10 CFR Parts 51 and 54. The industry recognizes the value in NRC’s efforts to communicate lessons-learned from prior technical reviews and will use this input to help enhance the LRAs under development to improve the efficiency of the Staff’s technical review.
- The NRC’s April 29, 2005 letter reflects heightened NRC expectations on the substantive content of LRAs. For example, in certain areas, both the manner by which license renewal applicants are expected to demonstrate compliance with regulatory requirements and the technical content of their LRAs are specified in that letter.<sup>10</sup> Although the applicant may be called on to provide clarification or information needed by the Staff to make a final determination of adequacy, the LRA should nevertheless be accepted and docketed.
- The specific results of the Integrated Plant Assessment described in LRA sections 2 - 4 should not be a basis for rejection provided that the requisite subject matter is contained in the LRA. The “*Information to Aid Staff in Sufficiency Review*” on Scoping, AMRs, AMPs and TLAAs provided in the attachment to the NRC’s April 29 letter includes specific results that are more appropriately evaluated as part of the technical adequacy review. For example, checklist item 13 specifies that an AMR is required for un-insulated ground conductors which may not even be in scope (and therefore not subject to an AMR) for some plants.

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<sup>10</sup> See for example, checklist items 2, 3, 13, 16 and 31 all require a technical review and evaluation of the specific IPA results that is normally performed after the LRA is accepted and docketed. Also, consistency with GALL has taken on heightened level of importance in sufficiency review space to the extent that it now appears that the technical content of an LRA is, to some degree, part of the acceptance review process.

## Conclusion

In summary, NEI holds the position that sufficiency features of an LRA and optional features that improve review efficiency are separate issues that should be distinct from each other. The lines between these two areas, however, have become blurred.

NUREG 1800, Table 1.1-1 provides the staff approved criteria for sufficiency. Imposing additional Staff expectations couched as sufficiency requirements that force an applicant to adopt a particular technical position is inappropriate because it circumvents the technical review process. When presented in the context of sufficiency standards, these items become (or may be read as) de facto regulatory requirements that expand or modify the documented and approved sufficiency review and docketing process set forth in NUREG 1800, Table 1.1-1. Also, the ad hoc changes included in the NRC's April 29 letter, although useful to know, did not have the benefit of public review and comment. While we welcome and value the staff's suggestions for enhancements that make the review and approval process more efficient, we believe that changes to "sufficiency" criteria should be promulgated via a formal change.

The industry acknowledges the importance of quality applications and recognizes that standardization and consistency in addressing license renewal issues assist staff reviewers in determining the technical merit of a license renewal application and improve the Staff's review efficiency. In this regard, the items listed in the Staff's letter of April 29, 2005, are useful.

Suggestions for a more constructive process for improving review efficiencies, including communication of changes in LRA sufficiency criteria, follow.

## Suggestions for Process Improvements

- Sufficiency Review Criteria – We recommend joint industry and staff development of amplifying instructions for each item on NUREG 1800, Table 1.1-1, or before adding additional items to the list. Changes to "sufficiency" criteria should be promulgated via a formal change process.
  - The industry recommends that the "sufficiency" criteria be clearly differentiated from "technical adequacy" criteria in an annotated "ACCEPTANCE REVIEW" checklist to communicate the basis for sufficiency decisions. Revisions to sufficiency criteria should allow for industry review and input to its development. Licensees will be able to

use both the “sufficiency criteria” and the lessons-learned enhancements to develop and assess future LRAs prior to submittal.

- Communications of Sufficiency Issues (Prior to Submittal) - Establish routine, pre-application meetings between the upcoming license renewal applicants and the NRC Staff to discuss issues that may impact LRA sufficiency in order to prevent avoidable situations in which an LRA may be found unacceptable for docketing (i.e., insufficient). The applicants and the NRC should undertake efforts to enhance communications and ensure that areas that may be questioned by NRC staff for “sufficiency” are identified and discussed in advance of submittal. In this context, licensee should consider each of the following avenues for prior communication with the NRC LR project manager as permitted and encouraged by 10CFR2.101.
  - Conduct pre-application conference(s) which allow the applicant to outline unique positions or methods applied that may require a relatively detailed explanation or justification in the LRA. Such a conference would also provide an opportunity for the Staff to communicate recent evolutions in Staff positions or experience from review or audit of other applicants’ recent LRAs. These conferences would be most useful if held early in the LRA preparation process, to allow an applicant time to make necessary adjustments in the LRA.
  - If significant issues emerge that are viewed as affecting sufficiency standards, the NRC should immediately and deliberately communicate those issues to prospective applicants and NEI. The current monthly teleconferences and quarterly meetings with the NEI LRTF would be the preferred Fora for such changes to be initially discussed. Note that prior to actually being used in a sufficiency determination, changes to “sufficiency” criteria should be promulgated via a formal change process.
- Communications During Sufficiency Review – We recommend routine communication between the applicant and the staff during the sufficiency review process to resolve issues, if possible, prior to a final sufficiency determination.
  - If the Staff preliminarily identifies deficiencies in an LRA during the acceptance review that could result in a finding of insufficiency, the NRC should confer with the applicant prior to rejecting the application. The applicant should be given the opportunity to explain why the results being challenged are appropriate or describe the extent of the

condition. The potential for providing supplemental information to address the deficiency for the sufficiency review should be explored.

- LRA Quality and Completeness - Maintaining a lessons learned list of what the staff considers enhancements to LRAs that would make the review process more efficient. This would include technical positions found generally acceptable, recurring issues leading to RAIs, and other lessons learned from the staff's technical reviews.
- Additional Actions for Applicants to Enhance LRA Quality and Completeness
  - A prospective applicant in the process of developing an LRA should monitor closely the issues raised with LRAs under review at the time of the LRA preparation, and attempt to address new issues and staff positions. NEI working groups are useful in this regard.
  - Many applicants have used Peer reviews of the LRA as a final step of the review process. It may be appropriate for the applicant to perform more detailed pre-submittal reviews and assessments using experienced peers and industry experts to help ensure sufficiency criteria will be satisfied once the LRA is submitted. These reviews should occur several months prior to submission to permit time to resolve peer comments.
  - Use of a publicly available reviewers guide or roadmap could improve consistency, reduce surprises and improve the review process.
  - Discussion of recent precedent and RAI reviews by both applicants and Staff during status updates with the NRC LR-PM.

## List of References Used

1. NUREG 1800, Rev.1, “Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants.” Section 1.1, “Docketing of Timely and Sufficient Renewal Application”
2. Regulatory Guide 1.188, Rev.1, “Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses.”
3. Regulatory Guide 4.2, “Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses,” dated Sept 2000.
4. NEI 95-10, Rev.6, “Industry Guideline for Implementing the Requirements of 10CFR54-The License Renewal Rule”, Appendix C-30 to 39, Appendix D “Standard License Renewal Application.”
5. 10CFR 2.101, 2.109(b), 10CFR51.33(c), 54.17, 54.19, 54.21, 54.22, 54.23, and 54.4.
6. NRC letter from P.T Kuo to FENOC, “Subject: Beaver Valley Power Station Units 1&2 – Results of Acceptance Review for License Renewal.”, dated March 24, 2005
7. NRC letter from P.T Kuo to Alex Marion, NEI, “Subject: Information to Aid Staff in Sufficiency Review of License Renewal Applications”, dated April 29, 2005.
8. RIS-2005-05, “Guidance on Submitting Documents to the TRC by Electronic Information Exchange or on CD-ROM.”