NUCLEAR ENERGY INSTITUTE

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Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
ATTN: Rulemakings and Adjudications Staff

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SUBJ: Nuclear Energy Institute Comments on Legal/Regulatory Issues Raised by Proposed Revisions to NRC *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* and 10 CFR Part 51, Subpart A, Appendix B, Table B-1; Project Number: 689

Dear Ms. Vietti-Cook:

The Nuclear Energy Institute (NEI)[1] appreciates the opportunity to submit these timely comments on the NRC's proposed revisions to the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants,* NUREG-1437 (the "GEIS"), and the NRC's related proposed rule amending provisions of Table B-1 in Appendix B to Subpart A of 10 CFR Part 51. The comments are submitted in response to NRC *Federal Register* notices published July 31, 2009, wherein the NRC made available several revised documents in connection with its proposal to revise the agency's environmental protection requirements.[2] The NRC subsequently extended the public comment period on the revised GEIS and the related proposed rule from October 14, 2009 until January 12, 2010.[3]

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1 NEI 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, architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

2 *See* "Notice of Availability of the Draft Revision to Generic Environmental Impact Statement for License Renewal of Nuclear Plants," Revision 1, NUREG-1437, 74 Fed. Reg. 38,239 (July 31, 2009). *See also* "Proposed rule, Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," setting forth proposed amendments to 10 CFR Part 51 by updating in Part 51, Subpart A, Appendix B, Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants," and related Part 51 provisions describing the requirements for a license renewal applicant's environmental report. 74 Fed. Reg. 38,117 (July 31, 2009).

3 *See* October 6, 2009, letter from Annette Vietti-Cook, Secretary, Nuclear Regulatory Commission, to Ellen C. Ginsberg, NEI Vice President, General Counsel and Secretary.

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These NEI comments, which focus on legal and regulatory issues raised by the proposed amendments, dovetail with and provide further support for the NEI "technical comments" on the GEIS, the NRC proposed rule, and Draft Regulatory Guide DG-4015, which NEI filed with the NRC under separate cover today. Each of the two sets of NEI comments is self-contained and should be reviewed independently given their differing content and areas of emphasis. However, the NEI technical comments (a cover letter plus 4 attachments) and the NEI legal comments (this cover letter and one enclosure) are intended to be complementary and each is intended to inform the other.

Concerning the need for the proposed revisions, NEI agrees with the NRC that the 1996 license renewal GEIS has improved the efficiency of the NRC license renewal process. 74 Fed. Reg. 38,118. We applaud the agency's efforts to ensure the continuing value of the GEIS by periodically re-examining the GEIS findings and modifying those findings (and associated NRC regulatory provisions) as needed. At the same time, the NRC's thorough, well-reasoned regulatory process for reviewing license renewal applications has now been applied extensively and successfully over many years. Accordingly, in updating the GEIS and related rules NRC should revise the license renewal regulatory framework only to the extent needed to enhance the efficiency, transparency and practicality of that framework.

In this rulemaking, the NRC is proposing to add a number of new Category 1 and Category 2 issues to the GEIS. No issues (environmental impacts) identified in Part 51, Subpart A, Appendix B, Table B-1 have been removed (74 Fed. Reg. 38,120), although NRC has combined some issues. Because the overall effect of the modifications is to add new Category 1 and Category 2 issues, which likely would result in increased burdens on license renewal applicants, NEI believes the NRC should carefully consider each addition. Thus, these comments emphasize the need for the NRC to provide a clear legal and regulatory basis for each proposed revision to the GEIS and associated NRC regulations.

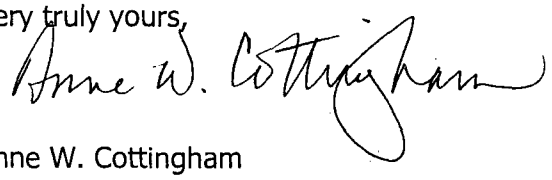
As discussed in the enclosed comments, NEI believes that a newly-identified environmental issue should be included in the GEIS only if it is within the scope of the National Environmental Policy Act: that is, the issue should be significant, reasonably foreseeable and environmental in nature. Additionally, the issue must fall within the scope of NRC license renewal. (It is well established that the nature of the NRC's licensing review and the scope of NRC licensing proceedings is limited by the licensing action in question.) The focus of NEI's legal comments is our concern that the proposed rule fails to demonstrate that many of the new Category 1 and Category 2 issues NRC intends to add to the GEIS satisfy these criteria. NEI therefore requests that NRC amend the proposed rule (and, as appropriate, the revised GEIS) to provide the agency's legal and regulatory basis for adding new issues to the GEIS. Absent such justification and rationale, we oppose the addition of new issues to the GEIS.

Regarding the implementation date for the revised GEIS and the Part 51 rulemaking changes, the changes being proposed to the NRC rule, regulatory guide, and GEIS (as well as concurrent proposed changes to the standard review plan for license renewal) are extensive and will likely affect significantly the preparation and review of future license renewal applications. For the industry, it is important that the effective date of the final rule, when issued, provide adequate time and flexibility to avoid adversely impacting licensees that have substantially completed the

research, reviews, and analyses necessary to develop a license renewal application under current requirements. NEI's comments therefore recommend that NRC give licensees that submit license renewal applications within 18 months following the effective date of the new rule the choice to proceed under the existing regulatory framework and the 1996 GEIS rather than complying with the new rule. Such NRC licensees should have the option of having their application docketed, reviewed and completed under the current regulations and 1996 GEIS.

If you have any questions regarding these NEI legal comments, please feel free to contact me at 202.739.8139 or awc@nei.org.

Very truly yours,



Anne W. Cottingham

AWC/mb
Enclosure

cc: Rulemaking and Directives Branch, Division of Administrative Services, NRC
Mr. Michael T. Lesar

NUCLEAR ENERGY INSTITUTE

ENCLOSURE

January 12, 2010

# NUCLEAR ENERGY INSTITUTE COMMENTS ON LEGAL ISSUES RAISED BY PROPOSED REVISIONS TO NRC *GENERIC ENVIRONMENTAL IMPACT STATEMENT FOR LICENSE RENEWAL OF NUCLEAR PLANTS* AND 10 CFR PART 51, SUBPART A, APPENDIX B, TABLE B-1

The Nuclear Energy Institute (NEI)[1] is pleased to provide the following timely comments on (i) the Nuclear Regulatory Commission's (NRC) proposed revision to the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (NUREG-1437) (GEIS) (74 Fed. Reg. 38,239 (July 31, 2009)) and (ii) the NRC proposed rule amending Table B-1 in Appendix B to Subpart A of 10 CFR Part 51 ("Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants"), and related Part 51 provisions that describe the requirements for a license renewal applicant's environmental report (74 Fed. Reg. 38,117 (July 31, 2009)). The draft revised GEIS is intended to provide the technical basis for the update of Part 51, Subpart A, Appendix B, Table B-1.[2]

These NEI comments focus on legal and regulatory issues raised by the draft revised GEIS and related proposed rule. These comments dovetail with, and provide further support for, the NEI technical comments concerning the GEIS and related license renewal regulations and guidance documents. Although those technical comments are being submitted to the NRC under separate cover, they are intended to be complementary.

NEI agrees with the NRC that the 1996 license renewal GEIS has improved the efficiency of the NRC license renewal process. We applaud the agency's efforts to ensure the continuing value of the GEIS by periodically re-examining the GEIS findings and modifying those findings (and associated NRC regulatory provisions) as needed. In this rulemaking, the NRC is proposing to add a number of new Category 1 and Category 2 issues to the GEIS. NRC does not propose to delete any issues identified in Part 51, Subpart A, Appendix B, Table B-1 but has combined some issues. (*See* 74 Fed. Reg. 38,120). Because the overall effect of adding new Category 1 and Category 2 issues would likely be an increased burden on license renewal applicants, NEI believes the NRC should carefully consider each addition. Thus, these comments emphasize the need for the NRC to provide a clear legal and regulatory basis for each proposed revision to the GEIS and associated NRC regulations.

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1 NEI 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, architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

2 NRC extended the comment period for these amendments from October 14, 2009, until January 12, 2010. *See* October 6, 2009, letter from Annette Vietti-Cook, Secretary of the Commission, to Ellen C. Ginsberg, NEI Vice President, Secretary and General Counsel.

In our view, a newly-identified environmental issue should be included in the GEIS only if it is within the scope of the National Environmental Policy Act (NEPA) (that is, the issue should be significant, reasonably foreseeable and environmental in nature). Additionally, the issue must fall within the scope of NRC license renewal. As discussed below, it is not clear from the proposed rule that many of the issues newly proposed for inclusion in the GEIS revision satisfy these established standards. NEI therefore requests that, where appropriate, NRC revise the proposed rule to provide its rationale for adding new issues to the GEIS. Absent such justification, we oppose the addition of new issues to the GEIS.

## I. Background on NEPA

NEPA requires that federal agencies, such as NRC, prepare an Environmental Impact Statement (EIS) in conjunction with "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."[3] An EIS must discuss "the environmental impact of the proposed action" and consider "alternatives to the proposed action."[4] NRC regulations require that certain applicants, such as those seeking renewal of an operating license, submit an Environmental Report (ER) to assist the NRC in preparation of the required EIS.

As a general matter, NEPA imposes procedural restraints on agencies, requiring them to take a "hard look" at the environmental impacts of proposed major Federal actions and reasonable alternatives to that action.[5] This "hard look" is subject to a "rule of reason," however.[6] This means that "an agency's environmental review, rather than addressing every impact that could possibly result, need only account for those that have some likelihood of occurring or are reasonably foreseeable."[7] Consideration of "remote and speculative" or "inconsequentially small" impacts is not required.[8] As the Commission has explained, "NEPA does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts."[9]

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3 42 U.S.C. § 4332(C).

4 *Id.* § 4332(C)(i)-(ii).

5 *See La. Energy Servs., L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998).

6 *La. Energy Servs., L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 726 (2005) (citation omitted).

7 *La. Energy Servs., L.P.* (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006) (citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)).

8 *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989) (citing *Limerick Ecology Action v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989)).

9 *La. Energy Servs. L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005).

## II. NRC Environmental Reviews During License Renewal Proceedings

"The scope of a proceeding . . . is limited by the nature of the application and pertinent Commission regulations."[10] Broadly speaking, NRC license renewal proceedings consider requests to renew 40-year reactor operating licenses for up to an additional 20-year term. The NRC regulations governing license renewal are contained in 10 CFR Parts 51 and 54.

Pursuant to 10 CFR Part 54, the NRC Staff conducts a technical review of the license renewal application to assure that public health and safety requirements are satisfied. Pursuant to 10 CFR Part 51 (the NRC regulations that implement NEPA requirements), the NRC Staff performs an environmental review for license renewal applications to ensure that environmental requirements are satisfied. Both the safety review and the environmental review focus upon the potential impacts of up to an additional 20 years of nuclear power plant operation. As the Commission has observed, "[b]oth sets of agency regulations derive from years of extensive technical study, review, inter-agency input, and public comment."[11]

In its 2001 *Turkey Point* decision, the Commission explained in detail the established scope of its license renewal review process.[12] That decision, as well as other significant license renewal precedent, clearly affirms the *limited scope* of a license renewal review and adjudicatory proceeding. No *de novo* review of the adequacy of current term plant operations, current term licensing basis regulations, or NRC Staff oversight activities, is required. Additionally, the review of environmental issues is limited by rule and by the generic findings in the GEIS.[13]

In 1996, the Commission amended 10 CFR Part 51 to address the scope of its environmental review for license renewal applications.[14] These amendments were based on the analyses reported in the 1996 GEIS. 74 Fed. Reg. 38,119. To make Part 51 more efficient and

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10 *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

11 *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7 (2001). In sum, the NRC established its license renewal rules through extensive, transparent rulemakings, as a valid exercise of its statutory authority. *See* Nuclear Power Plant License Renewal: Final Rule, 56 Fed. Reg. 64,943 (Dec. 13, 1991). The resulting regulatory framework reflects reasoned determinations and policy judgments concerning the proper, limited scope of the NRC's safety and environmental reviews, particularly given the agency's ongoing regulatory oversight of commercial nuclear facilities. Notably, the federal courts have consistently upheld the Commission's regulatory framework for license renewal, whether the challenges stemmed from agency denial of rulemaking petitions or challenged NRC adjudicatory rulings in license renewal proceedings. *See Spano v. NRC*, 293 Fed. Appx. 91 (2d Cir. 2008); *New Jersey Dep't. of Envtl. Prot. v. NRC*, 561 F.3d 132 (3d Cir. 2009); *New York v. NRC*, No. 08-3903-ag, 2009 WL 4893625 (2d Cir. Dec. 21, 2009). In each such case, the reviewing courts rejected the petitioners' claims that the agency should revise and expand the scope of its license renewal regulations, and/or revise its license renewal GEIS generic findings on the environmental impacts of license renewal.

12 *See Turkey Point*, CLI-01-17, 54 NRC at 6-13.

13 *See* 10 CFR §§ 51.71(d), 51.95(c).

14 *See* Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (June 5, 1996), *amended by*, Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 66,537 (Dec. 18, 1996).

focused—yet sufficiently comprehensive in scope—the Staff prepared the GEIS to evaluate and document those generic environmental impacts of license renewal that are well-understood, based on the experience (already extensive at that time and much more so today) gained from the operation of the existing fleet of U.S. nuclear power plants.[15] The GEIS "summarizes the findings of a systematic inquiry into the environmental impacts of continued operations and refurbishment activities associated with license renewal." 74 Fed. Reg. 38,119.

### A. Category 1 and Category 2 License Renewal Environmental Issues

In developing the 1996 GEIS, the NRC properly divided the environmental requirements for license renewal into generic and plant-specific components. Generic environmental issues are identified in the GEIS as "Category 1" impacts.[16] These are issues for which the Commission found that it reasonably could draw "generic conclusions applicable to all existing nuclear power plants, or to a specific subgroup of plants."[17] The NRC concluded that Category 1 issues involve "environmental effects that are essentially similar for all plants," and thus they "need not be assessed repeatedly on a site-specific basis."[18] In contrast, Category 2 issues "are those issues that cannot be generically dispositioned and would require a plant-specific analysis to determine the level of impact." 74 Fed. Reg. 38,119. The NRC has codified its generic findings in Table B-1, Appendix B to Subpart A of 10 CFR Part 51. For the 1996 GEIS, NRC identified 92 environmental issues, of which 69 were resolved generically as Category 1 issues, 21 were classified as Category 2 (site-specific) environmental impacts, and the remaining 2 issues were uncategorized.[19]

Thus, consistent with NEPA, the availability of the GEIS has improved the NRC license renewal process by limiting the scope of the potential environmental impacts that must be analyzed in connection with each reactor license renewal application. NEI concurs with the NRC's observation that the GEIS "has been effective in focusing NRC resources on important environmental issues and increased the efficiency of the environmental review process." 74 Fed. Reg. 38,119.

Under 10 CFR § 51.53(c)(3)(i), a license renewal applicant may, in its site-specific ER,[20] refer to and, in the absence of new and significant information, adopt the generic

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15 *See* NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Final Report, Vols. 1 & 2 (May 1996) ("GEIS"), *available at* ADAMS Accession Numbers ML040690705 and ML040690738.

16 GEIS, Vol. 1, at 1-5 to 1-6.

17 *Turkey Point*, CLI-01-17, 54 NRC at 11 (citing 10 CFR Part 51, Subpart A, App. B).

18 *Id.*

19 The GEIS assigns one of three impact levels (small, moderate, or large) to an environmental resource. The meaning of these terms is discussed at 74 Fed. Reg. 38,119, col. 3.

20 NRC regulations require that a license renewal application include an ER describing the environmental impacts of the proposed action and alternatives. *See* 10 CFR §§ 51.53(c), 54.23. The ER is intended to assist the NRC Staff prepare the agency's independent EIS. *See Curators of the Univ. of Mo.*, CLI-95-8, 41 NRC 386, 396 (1995) (citing NRC regulations). The NRC Staff ultimately prepares a

environmental impact findings found in Appendix B, Table B-1, for all Category 1 issues. An applicant must address on a plant-specific basis relevant environmental issues for which the Commission was not able to make generic environmental findings.[21] Specifically, an ER must "contain analyses of the environmental impacts of the proposed action, including the impacts of refurbishment activities, if any, associated with license renewal and the impacts of operation during the renewal term," for those issues listed in Section 51.53(c)(3)(ii) and identified as "Category 2," or "plant specific," issues in Table B-1.[22]

### B. New and Significant Information

As noted above, an applicant must include in its ER "any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware," even if a matter would normally be considered a Category 1 issue.[23] Based on the content of the ER, as well as the Staff's independent review, public comments, consultations, and analyses, the Staff prepares a site-specific supplement to the GEIS. This supplement to the GEIS similarly must include evaluations of site-specific Category 2 impacts and any "new and significant information" regarding generic Category 1 impacts.[24] NRC regulatory guidance defines "new and significant information" as follows:

> (1) information that identifies a significant environmental issue that was not considered in NUREG-1437 and, consequently, not codified in Appendix B to Subpart A of 10 CFR Part 51, or (2) information that was not considered in the analyses summarized in NUREG-1437 and that leads to an impact finding different from that codified in 10 CFR Part 51.[25]

When first proposed, the NRC's Part 51 license renewal environmental regulations did not include the current provision, 10 CFR § 51.53(c)(3)(iv), regarding "new and significant information."[26] The NRC added that provision in response to suggestions by the Environmental

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draft and final site-specific supplement to the GEIS for each plant, using the ER and other independent sources of information. *See* 10 CFR §§ 51.71(d), 51.95(c).

21 10 CFR § 51.53(c)(3)(ii).

22 The Commission has described those issues as involving environmental impact severity levels that "might differ significantly from one plant to another," or impacts for which additional plant-specific mitigation measures should be considered. *Turkey Point*, CLI-01-17, 54 NRC at 11.

23 10 CFR § 51.53(c)(3)(iv); *see also Turkey Point*, CLI-01-17, 54 NRC at 11; *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 290 (2002).

24 10 CFR § 51.53(c)(3)(ii), (iv).

25 RG 4.2, Supp. 1, Preparation of Supplemental Environmental Reports for Application to Renew Nuclear Power Plant Operating Licenses, 4.2-S-4 (Sept. 2000), *available at* ADAMS Accession Number ML003710495. *See also Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323, 1330 (D.C. Cir. 2004) (referring to "new information [regarding the action which] shows that the remaining action will affect the quality of the environment 'in a significant manner or to a significant extent not already considered'") (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 374 (1989)).

26 *See* Proposed Rule, Environmental Review for Renewal of Operating Licenses, 56 Fed. Reg. 47,016, 47,027-28 (Sept. 17, 1991).

Protection Agency (EPA) and the Council on Environmental Quality (CEQ) that the NRC expand "the framework for consideration of significant new information."[27] At that time, the NRC Staff had explained in SECY-93-032 that adding Section 51.53(c)(3)(iv) would not affect license renewal adjudications because "[l]itigation of environmental issues in a hearing will be limited to unbounded category 2 and category 3 issues unless the rule is suspended or waived."[28] In a public briefing concerning SECY-93-032, as well as the EPA and CEQ comments, NRC confirmed that a successful petition for rulemaking (if the new information was generic), or a petition for a rule waiver (if the new information was plant-specific), would be necessary to litigate previously-determined generic findings at NRC adjudicatory hearings on license renewal applications.[29] The Commission ultimately approved the changes to the proposed rule and specifically endorsed SECY-93-032.[30]

In *Turkey Point*, the Commission reaffirmed the foregoing conclusions in a formal adjudicatory decision[31] and summarized the appropriate procedural vehicles for "revisiting" generic environmental determinations relevant to license renewal as follows:

> Our rules thus provide a number of opportunities for individuals to alert the Commission to *new and significant information* that might render a generic finding invalid, either with respect to all nuclear power plants or for one plant in particular. In the hearing process, for example, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule. *See* 10 C.F.R. § [2.335] [internal citation omitted]. Petitioners with evidence that a generic finding is incorrect for all plants may petition the Commission to initiate a fresh rulemaking. *See* 10 C.F.R. § 2.802. Such petitioners may also use the SEIS notice-and-comment process to ask the NRC to forgo use of the suspect generic finding and to suspend license renewal proceedings, pending a rulemaking or updating of the GEIS. *See* 61 Fed. Reg. at 28,470; GEIS at 1-10 to 1-11.[32]

Accordingly, the Commission has held—such as in the *Vermont Yankee* license renewal proceeding—that because the generic environmental analyses of the GEIS have been

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[27] Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,470.

[28] SECY-93-032, Memorandum from James M. Taylor, Executive Director of Operations (EDO), to the Commissioners, Subject: 10 CFR Part 51 Rulemaking on Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, at 4 (Feb. 9, 1993), *available at* ADAMS Accession No. ML072260444 (Category 2 and 3 issues were eventually combined into Category 2).

[29] *See* Pub. Meeting Tr., Briefing on Status of Issues and Approach to GEIS Rulemaking for Part 51, at 20-22 (Feb. 19, 1993), *available at* ADAMS Accession No. ML072070193.

[30] *See* Memorandum from Samuel J. Chilk, Secretary, to James M. Taylor, EDO (Apr. 22, 1993), *available at* ADAMS Accession No. ML003760802; Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,474.

[31] *Turkey Point*, CLI-01-17, 54 NRC at 12, 22-23.

[32] *Id.* at 12 (emphasis added).

incorporated into NRC regulations, "the conclusions of [those] analys[es] may not be challenged in litigation unless the rule [10 CFR § 51.53(c)(3)(i)] is waived by the Commission for a particular proceeding or the rule itself is suspended or altered in a rulemaking proceeding."[33] The Commission emphasized that "[a]djudicating Category 1 issues site by site based merely on a claim of 'new and significant information,' would defeat the purpose of resolving generic issues in a GEIS."[34] In fact, the U.S. Supreme Court has specifically upheld the Commission's authority to discharge its responsibilities under NEPA through generic rulemaking.[35]

## III. Standard for Justifying a New or Changed Issue Categorization in the GEIS

As discussed above, NEPA and Commission case law place important limitations on what issues must be considered within the scope of an environmental review for license renewal. These limitations, combined with extensive experience involving the renewal of at least half of U.S. commercial reactor operating licenses, impact what issues are considered to be appropriate Category 1 or 2 issues for license renewal. Given this wide-reaching experience base and these longstanding legal limitations, any changes to the categorization of an environmental impact in the GEIS or the inclusion of a new issue in the GEIS must be considered carefully and fully justified. The threshold legal standards that should apply to this categorization process are discussed below.

### A. Standard for Adding a New Category 1 or 2 Issue to the GEIS

A *new* environmental issue—as opposed to the re-categorization of an existing issue—should be included in the revised GEIS and the related NRC proposed rule only if it falls within the scope of NEPA and within the scope of NRC license renewal. As a preliminary matter, a new issue must be an environmental issue—not an operational or design issue—that can properly be included in the GEIS under NEPA. NEPA only requires consideration of an issue by the NRC of "actions significantly affecting the quality of the human *environment*."[36] Thus, if an issue is not related to the environment (*e.g.*, seismic safety issues), then it should not be addressed in the GEIS. Similarly, if an issue does not fall within the scope of license renewal (*e.g.*, programs properly governed and regulated by the Occupational Safety and Health Administration),[37] then it should not be part of the GEIS.[38]

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33 *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-03, 65 NRC 13, 17-18 (2007), *aff'd*, *Massachusetts v. NRC*, 522 F.3d 115 (1st Cir. 2008); *see also Turkey Point*, CLI-01-17, 54 NRC at 12.

34 *Vermont Yankee*, CLI-07-03, 65 NRC at 21.

35 *See Balt. Gas & Elec. v. NRDC*, 462 U.S. 87, 100-01 (1983) ("Administrative efficiency and consistency of decision are both furthered by a generic determination of [environmental impacts] without needless repetition of the litigation in individual proceedings."); *see also Tribune Co. v. FCC*, 133 F.3d 61, 68 (D.C. Cir. 1998) (citations omitted) ("[I]t is hornbook administrative law that an agency need not – indeed should not – entertain a challenge to a regulation, adopted pursuant to notice and comment, in an adjudication or licensing proceeding.").

36 42 U.S.C. § 4332(C) (emphasis added).

37 Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 74 Fed. Reg. at 38,127 (adding a new Category 1 issue for occupational safety and health hazards); GEIS Revision, Appendix B, at B-31.

NEPA places further restraints on what issues should be included in the GEIS. An environmental review under NEPA requires a "hard look" at the environmental impacts of a proposed action,[39] but this hard look is subject to a "rule of reason." This means that "an agency's environmental review, rather than addressing every impact that could possibly result, need only account for those that have some likelihood of occurring or are reasonably foreseeable."[40] Consideration of "remote and speculative" or "inconsequentially small" impacts is not required.[41] "NEPA does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts."[42] Accordingly, the GEIS should only include issues that are significant, meaning that they are "reasonably foreseeable," but not "remote and speculative," "inconsequentially small," or "unduly speculative."

Finally, only certain issues fall within the scope of license renewal and are therefore appropriate to include within the GEIS. On this point, Section S.2 of the GEIS revision states:

> The environmental consequences of license renewal include (1) impacts associated with continued operations and refurbishment activities similar to those that have occurred during the current license term; (2) impacts of various alternatives to the proposed action; (3) impacts from the termination of nuclear power plant operations and decommissioning after the license renewal term (with emphasis on the incremental effect caused by an additional 20 years of operation); (4) impacts associated with the uranium fuel cycle; (5) impacts of postulated accidents (design basis accidents and severe accidents); (6) cumulative impacts of the proposed action; and (7) resource commitments associated with the proposed action, including unavoidable adverse impacts, the relationship between short-term use and long-term productivity, and irreversible and irretrievable commitment of resources.

In summary, a newly-identified issue should only be included in the GEIS if it is both within the scope of NEPA (*i.e.*, significant, reasonably foreseeable, and environmental in nature) and within the scope of license renewal. As discussed below, it is not clear from the proposed rule that many of the issues newly proposed for inclusion in the GEIS revision and in Part 51, Subpart A, Appendix B, Table B-1 satisfy these standards. In particular, the NRC discussion in the proposed rule does not provide an adequate basis to demonstrate that these "new" environmental issues fall within the scope of NEPA, fall within the scope of NRC license renewal,

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38 On a related point, some matters relating to nuclear reactor facilities are regulated by more than one Federal agency. In this regard, we believe the NRC should examine the extent to which consideration of such topics as new Category 1 or, especially, Category 2 issues in the revised GEIS and related NRC regulations could impose duplicative, unduly burdensome environmental review requirements on license renewal applicants with no commensurate benefit to public health and safety or the environment.

39 *See Claiborne*, CLI-98-3, 47 NRC at 87-88.

40 *National Enrichment Facility*, LBP-06-8, 63 NRC at 258-59.

41 *See Vermont Yankee*, ALAB-919, 30 NRC at 44.

42 *National Enrichment Facility*, CLI-05-20, 62 NRC at 536.

and are newly identified as significant, reasonably foreseeable environmental impacts of license renewal. Absent such a showing, NEI opposes NRC's proposed addition of new issues to the GEIS. Although we particularly oppose the inclusion of new Category 2 issues without an adequate legal/regulatory basis, NEI believes that the Commission also should provide a clear rationale for adding new Category 1 issues to the GEIS, given the standard discussed above.[43]

### B. Standard for Modifying Categorization of an Existing Issue

In addition to considering the standard for adding a new issue to the GEIS, it is important to consider the basis upon which the NRC should change an existing issue categorization for purposes of the GEIS; *i.e.*, from Category 1 to Category 2, or *vice versa*. As a threshold matter, an existing Category 1 or Category 2 issue should be modified only if the NRC Staff has an adequate and reasonable basis upon which to do so. Such re-categorization cannot be based upon mere speculation.

In addition, the currently-codified definitions of Category 1 and 2 issues should be controlling as well. In this regard, Section S.3 of the GEIS revision states:

> Category 1 issues are those that meet all of the following criteria:
>
> (1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics;
>
> (2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective offsite radiological impacts from the fuel cycle and from high-level waste and spent fuel);
>
> (3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures would probably not be sufficiently beneficial to warrant implementation.
>
> For issues that meet the three Category 1 criteria, no additional plant-specific analysis is required in future SEISs unless new and significant information is identified.
>
> Category 2 issues are those that do not meet one or more of the criteria of Category 1, and, therefore, require additional plant-specific review.

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[43] The proposed rule also combines several existing Category 1 and 2 issues to form a new, combined issue, which is classified as a Category 1 issue in some cases and a Category 2 issue in other places. *See* 74 Fed. Reg. 38,124. Optimally, the sum effect for license renewal applicants should be to make the environmental review for the new, combined issue more efficient. The proposed rule should provide greater clarity on this point.

The revised GEIS retains the 1996 GEIS definitions of a Category 1 and Category 2 issue. 74 Fed. Reg. 38,120. Therefore, any changes in the revised GEIS that convert a prior Category 1 issue into a Category 2 issue, either in its entirety or partially, must comply with the above definitions.

## IV. Discussion of Specific Proposed Changes to the GEIS

NRC's re-evaluation of the GEIS findings and conclusions is based on the agency's 10-year review and extensive experience base. 74 Fed. Reg. 38, 118. On this point, the NRC states that "lessons learned and knowledge gained during previous license renewal reviews" provide a significant source of information for the GEIS revision. Additionally, notes the NRC, it analyzed "public comments on previous plant-specific license renewal reviews . . . to assess the existing environmental issues and identify new ones." *Id.* at 38,119. In this regard, the NRC describes in the proposed rule the process it followed to develop the revised GEIS. *Id.* at 38,120, col. 1. As discussed below, it is not clear that this entire process was followed in selecting all of the proposed new Category 1 and Category 2 environmental issues; or, in any event, the discussion in the proposed rule does not always reflect such a deliberate, multi-step selection approach.

Based on its evaluation, the Staff is proposing to carry forward 78 environmental impacts or issues for consideration in the revised GEIS. No environmental issues identified in Part 51, Subpart A, Appendix B, Table B-1 or the GEIS have been eliminated, but a number of impacts have been combined or re-grouped. Of these 78 issues, NRC has determined that 58 issues are Category 1 issues that would not require plant-specific analysis, absent new and significant information. Of the remaining 20 issues, 19 were found to be Category 2 issues and one issue remained uncharacterized. The proposed reorganization of the GEIS would create new Category 1 and Category 2 issues, as well as revise the classification of a number of current issues or impacts. 74 Fed. Reg. 38,119-120.

Given the importance of the GEIS in bounding license renewal applicants' obligations to analyze potential environmental impacts, any proposed changes to the categorization of issues are potentially significant. In general, a newly-identified Category 1 or (even more importantly) Category 2 issue should be included in the revised GEIS and proposed rule only if it is within the scope of NEPA (*i.e.*, an issue that is significant, reasonably foreseeable and environmental in nature) and within the scope of license renewal. As drafted, the proposed rule does not address these criteria and otherwise fails in most instances to provide a clear legal or regulatory basis for adding the new issues to the revised GEIS. Accordingly, NEI requests that NRC revise the proposed rule (and, where appropriate, the draft revised GEIS) to include such an explanation or otherwise not make the change. NRC clarification on these points will benefit future NRC license renewal applicants by providing agency guidance on compliance with NRC environmental review requirements. It also will benefit all stakeholders by documenting the reasoned and transparent process that the Commission followed in revising the GEIS.

### A. Proposed New Category 1 Environmental Issues

The revised GEIS and proposed rule include a number of additional Category 1 (generic) issues beyond those identified in the 1996 GEIS. NEI's comments on these new or changed Category 1 issues are set forth in this section.

***Issue 8: Geology and Soils***

The proposed rule would add to the GEIS a new Category 1 generic issue, "Impacts of nuclear plants on geology and soils," that calls for an assessment of this issue's impacts on both continued power plant operations and refurbishment activities. This new Category 1 issue also directs applicants to "determine if there is new or significant information in regard to regional or local seismology." 74 Fed. Reg. 38,121. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states:

> New seismological conditions are limited to the identification of previously unknown geologic faults and are expected to be rare. Geology and soil conditions at all nuclear power plants and associated transmission lines have been well established during the current licensing term and are expected to remain unchanged during the 20-year license renewal term. The impact of continued operations and refurbishment activities during the license renewal term on geologic and soil resources would consist of soil disturbance for construction or renovation projects. Implementing best management practices would reduce soil erosion and subsequent impacts on surface water quality. Best management practices include: (1) Minimizing the amount of disturbed land, (2) stockpiling topsoil before ground disturbance, (3) mulching and seeding in disturbed areas, (4) covering loose materials with geotextiles, (5) using silt fences to reduce sediment loading to surface water, (6) using check dams to minimize the erosive power of drainages, and (7) installing proper culvert outlets to direct flows in streams or drainages.
>
> No information in any plant-specific SEIS prepared to date, or in the referenced documents, has identified these impacts as being significant.

74 Fed. Reg. 38,121. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental impact to the GEIS, and should revise the proposed rule to include such an explanation. The NRC recognizes that it has no new and significant information identifying an environmental impact of continued operations or refurbishment activities on geology and soils. Moreover, seismology—while within the scope of NRC statutory jurisdiction—falls outside the scope of NEPA itself. NRC regulations promulgated pursuant to the Atomic Energy Act, such as those found in 10 CFR Parts 50 and 100, properly and adequately address any issues related to seismology. The NRC cites no statutory, regulatory, or adjudicatory basis for now including seismologic considerations under NEPA and in the GEIS.

To the extent that this issue is meant to address non-seismologic issues, such as impacts of continued operation and refurbishment activities on "soil resources," those issues are adequately addressed through the consideration of other Category 1 and 2 terrestrial impacts (*e.g.*, Issue 29, "Impacts of Continued Plant Operations on Terrestrial Ecosystems"). 74 Fed. Reg. 38,123. NEI recommends that proposed Issue 8 be removed from the proposed rule and GEIS revision. (See Attachment 1 to NEI technical comments on the GEIS, pp. 12-13, which states that including seismic consideration as one of the criteria in the geology and soils Category 1 issue is unnecessary.)

### *Issue 18: Effects of Dredging on Water Quality*

The proposed rule would add to the GEIS a new Category 1 issue, "Effects of dredging on water quality," to evaluate the impacts of dredging to maintain intake and discharge structures at nuclear power plants. 74 Fed. Reg. 38,122. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states that the impact of dredging on surface water quality was not evaluated in the 1996 GEIS, that most plants have intake and discharge structures that must be maintained by periodic dredging of sediment accumulated in or on the structures, and that such periodic dredging may temporarily increase turbidity but "has been shown to have little effect on water quality." Additionally, the proposed rule states that the impacts of dredging "have been shown to be small." Moreover, the dredging performed to keep barge slips and channels open "usually contains no hazardous materials." Dredging activity is performed under a permit issued by the U.S. Army Corps of Engineers and "consequently, each dredging action would be subject to a site-specific environmental review conducted by the Corps." *Id.*

In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental impact to the GEIS, and should revise the proposed rule to include such an explanation. On the threshold matter of jurisdiction, dredging activity is performed under a U.S. Army Corps of Engineers permit and, as NRC acknowledges, each dredging action would be subject to a site-specific environmental review *conducted by the Corps.* 74 Fed. Reg. 38,122. In terms of the issue's significance, the proposed rule does not indicate why the potential impact of dredging on water quality was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue in the revised GEIS.[44] For all of these reasons, this issue need not and should not be included as a new issue in the GEIS absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

### *Issue 30: Exposure of Terrestrial Organisms to Radionuclides*

The proposed rule would add to the GEIS a new Category 1 generic issue, "Exposure of terrestrial organisms to radionuclides," to "evaluate the issue of the potential impact of radionuclides on terrestrial organisms resulting from normal operations of a nuclear power plant during the license renewal term." 74 Fed. Reg. 38,123. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states that this issue was not evaluated in the 1996 GEIS but that "the impact of radionuclides on terrestrial organisms has been raised by members of the public as well as Federal and State agencies during previous license renewal reviews." *Id.* Further, the proposed rule states:

> The revised GEIS evaluates the potential impact of radionuclides on terrestrial biota at nuclear power plants from continued operations during the license renewal term. Site-specific radionuclide concentrations in water, sediment, and soils were obtained

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[44] Regarding Issue 18 (effects of dredging on water quality), it also can be argued that this new issue falls outside the scope of NEPA, which only requires consideration of "actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). NEPA does not require consideration of "inconsequentially small" impacts.[44] This argument should be addressed as the NRC determines whether to include this new Category 1 issue in the GEIS.

> from Radiological Environmental Monitoring Operating Reports from 15 nuclear power plants. These 15 plants were selected to represent sites with a range of radionuclide concentrations in the media, including plants with high annual worker dose exposure values for both boiling water reactors and pressurized water reactors. The calculated radiation dose rates to terrestrial biota were compared against radiation-acceptable radiation safety guidelines issued by the U.S. Department of Energy, the International Atomic Energy Agency, the National Council of Radiation Protection and Measurement, and the International Commission on Radiological Protection. The NRC concludes that the impact of radionuclides on terrestrial biota from past and current operations would be small for all nuclear power plants and would not be expected to change appreciably during the license renewal term.

74 Fed. Reg. 38, 123. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental issue to the GEIS, and should revise the proposed rule to include such an explanation. In terms of the issue's significance, the proposed rule does not indicate why the potential impact of the exposure of terrestrial organisms to radionuclides was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue now. (In this regard, NRC concludes that the impact of radionuclides on terrestrial biota from past and current operations would be small for all nuclear power plants and would not be expected to change appreciably during the license renewal term. *Id.*)

In sum, the only rationale offered for adding the new issue to the GEIS is that an unknown number of members of the public and unspecified Federal and State agencies have raised the issue in some license renewal review(s), but this does not provide adequate support for including it as a new issue in the GEIS. As discussed above, the standard for including a new issue in the GEIS is whether it is within the scope of both NEPA and license renewal, including whether it is significant and reasonably foreseeable. If the standard were whether the issue has been raised during previous reviews, then there really would be no standard at all. For all of these reasons, this issue need not and should not be included as a new issue in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

### *Issue 43: Exposure of Aquatic Organisms to Radionuclides*

The proposed rule would add to the GEIS a new Category 1 generic issue, "Exposure of Aquatic Organisms to Radionuclides," to "evaluate the potential impact of radionuclide discharges upon aquatic organisms." 74 Fed. Reg. 38,124. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states only that: "This issue has been raised by members of the public as well as Federal and State agencies during the license renewal process for various plants." *Id.*

In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental issue to the GEIS, and should revise the proposed rule to include such an explanation. In terms of the issue's significance, the proposed rule does not indicate why the potential impact of the exposure of aquatic organisms to radionuclides was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue now. (In this regard, NRC concludes that the impact of radionuclides on aquatic biota from past and current

operations would be small for all nuclear power plants and would not be expected to change appreciably during the license renewal term. 74 Fed. Reg. 38,125.) In sum, the only rationale offered for adding the new issue to the GEIS is that an unknown number of members of the public and unspecified Federal and State agencies have raised the issue in some license renewal review(s), but this does not provide adequate support for including it as a new issue in the GEIS. As discussed above, the standard for including a new issue in the GEIS is whether it is within the scope of NEPA, the NRC's jurisdiction, and license renewal, including whether it is significant and reasonably foreseeable. If the standard were to be whether the issue has been raised during previous reviews, then there really would be no standard at all.

For all of these reasons, this issue need not and should not be included as a new issue in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

***Issue 44: Effects of Dredging on Aquatic Organisms***

The proposed rule would add to the GEIS a new Category 1 generic issue, "Effects of dredging on aquatic organisms," to "evaluate the impacts of dredging on aquatic organisms." 74 Fed. Reg. 38,125. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states:

> Licensees conduct dredging to maintain intake and discharge structures at nuclear power plant facilities and in some cases, to maintain barge slips. Dredging may disturb or remove benthic communities. In general, maintenance dredging for nuclear power plant operations would occur infrequently, would be of relatively short duration, and would affect relatively small areas. Dredging is performed under a permit issued by the U.S. Army Corps of Engineers and consequently, each dredging action would be subject to a site-specific environmental review conducted by the Corps.

74 Fed. Reg. 38,125. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental issue to the GEIS, and should revise the proposed rule to include such an explanation. In terms of the issue's significance, the proposed rule does not indicate why the potential impact of dredging on aquatic organisms was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue in the revised GEIS. Additionally, NRC acknowledges that dredging activity is performed under a U.S. Army Corps of Engineers permit and would be the subject of an Army Corps site-specific environmental review. For all of these reasons, this issue need not and should not be included as a new issue in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

***Issue 47: Impacts of Transmission Line Right-of-Way (ROW) Management on Aquatic Resources***

The proposed rule would add to the GEIS a new Category 1 generic issue, "Impacts of transmission line ROW management on aquatic resources." 74 Fed. Reg. 38,125. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states:

> Impacts on aquatic resources from transmission line ROW maintenance could occur as a result of the direct disturbance of aquatic habitats, soil erosion, changes in water quality (from sedimentation and thermal effects), or inadvertent releases of chemical contaminants from herbicide use. As described in the revised GEIS, any impact on aquatic resources resulting from transmission line ROW management is expected to be small, short term, and localized for all plants.

74 Fed. Reg. 38,125. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental impact to the GEIS, and should revise the proposed rule to include such an explanation. The proposed rule does not indicate why this potential impact was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue in the revised GEIS. In addition, the proposed rule discussion merely states that impacts on aquatic resources from transmission line ROW maintenance "could occur," which may indicate that this potential impact is remote and speculative and therefore need not be evaluated under NEPA. Finally, NRC should clarify the extent of its jurisdiction over the issue of transmission line ROW, to provide useful guidance to NRC applicants on environmental review requirements. For all of these reasons, this issue need not and should not be included as a new issue in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

***Issue 63: Physical Occupational Hazards***

The proposed rule would add to the GEIS a new Category 1 generic issue, "Physical Occupational Hazards," to evaluate the potential impact of physical occupational hazards on human health resulting from normal nuclear power plant operations during the license renewal term. 74 Fed. Reg. 38,126. Regarding the agency's basis for adding this new Category 1 issue, the proposed rule states:

> The impact of physical occupational hazards on human health has been raised by members of the public as well as Federal and State agencies during the license renewal process. Occupational hazards can be minimized when workers adhere to safety standards and use appropriate protective equipment; however, fatalities and injuries from accidents can still occur. Data for occupational injuries in 2005 obtained from the U.S. Bureau of Labor Statistics indicate that the rate of fatal injuries in the utility sector is less than the rate for many sectors (*e.g.,* construction, transportation and warehousing, agriculture, forestry, fishing and hunting, wholesale trade, and mining) and that the incidence rate for nonfatal occupational injuries and illnesses is the least for electric power generation, followed by electric power transmission control and distribution. It is expected that over the license renewal term, workers would continue to adhere to safety standards and use protective equipment, so adverse occupational impacts would be of small significance at all sites. No mitigation measures beyond those implemented during the current license term would be warranted.

74 Fed. Reg. 38,126-127. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for adding this environmental issue to the GEIS, and should revise the proposed rule to include such an explanation. The proposed rule does not indicate why the potential impacts of physical occupational hazards were not evaluated in the 1996 GEIS and

what events have prompted NRC to propose inclusion of the issue in the revised GEIS. Nor does the discussion clearly establish "physical occupational hazards" as a NEPA issue or an issue within the scope of license renewal.

The fact that the impact of physical occupational hazards on human health has been "raised by members of the public as well as Federal and State agencies during the license renewal process" does not, in itself, establish this topic as within the scope of license renewal. Rather, the standard for including a new issue in the GEIS is whether it is within the scope of NEPA and license renewal, including whether it is significant and reasonably foreseeable. If the standard were whether the issue has been raised during previous reviews, then there really would be no standard at all. Additionally, in terms of jurisdiction this issue would appear to be regulated by the U.S. Labor Department. For all of these reasons, this issue need not and should not be included as a new issue in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to provide its rationale for adding this new issue or omit it from the revised GEIS.

### B. Proposed New Category 2 Environmental Issues

The revised GEIS and proposed rule include a number of additional Category 2 issues beyond those identified in the 1996 GEIS, for which NRC would require site-specific consideration (or expanded site-specific consideration) as part of license renewal environmental reviews. As with the discussion of Category 1 issues, NEI believes that the proposed rule is largely deficient in failing to provide a viable basis for adding the new Category 2 issues. NEI therefore requests that the NRC revise the proposed rule to include such an explanation or otherwise not make the proposed change. NEI's comments on these new or changed Category 2 issues are set forth below.

#### *Issue 27: Groundwater and Soil Contamination*

The proposed rule would add to the GEIS a new Category 2 issue, "Groundwater and Soil Contamination," to evaluate the impacts of the industrial use of solvents, hydrocarbons, heavy metals, or other chemicals on groundwater, soil, and subsoil at nuclear power plant sites during the license renewal term. 74 Fed. Reg. 38,122. Regarding the agency's basis for adding this new Category 2 issue, the proposed rule states:

> Review of license renewal applications has shown the existence of these non-radionuclide contaminants at some plants. This contamination is usually regulated by State environmental regulatory authorities or the Environmental Protection Agency (EPA). In addition, this new Category 2 issue has been added because each specific site has its own program for handling waste and hazardous materials, and no generic evaluation would apply to all nuclear power plants.
>
> Industrial practices at all plants have the potential to contaminate site groundwater and soil through the use and spillage of solvents, hydrocarbons, heavy metals, or other chemicals, especially on sites with unlined wastewater lagoons and storm water lagoons. Any contamination by these substances is subject to characterization and clean-up by State and EPA regulated remediation and monitoring programs.

In our view, NRC's discussion fails to provide a clear legal or regulatory basis for adding this new Category 2 issue. NRC licensees already monitor groundwater and soil contamination pursuant to existing regulations, regardless of which Federal or state agencies have jurisdiction. Additionally, the proposed rule does not indicate why the potential impact of groundwater and soil contamination was not evaluated in the 1996 GEIS and what events have prompted NRC to propose inclusion of the issue in the revised GEIS. Nor does NRC demonstrate that the issue is sufficiently significant to warrant inclusion.

In addition, the proposed revised 10 CFR 51.53(c)(3)(ii)(O) states:

> If the applicant's plant conducts industrial practices involving the use of solvents, hydrocarbons, heavy metals, or other chemicals *and has unlined wastewater lagoons*, the applicant shall assess the potential for contamination of site groundwater, soil, and subsoil. The applicant shall provide an assessment of dissolved chemical and suspended sediment discharge to the plant's wastewater lagoons in addition to National Pollutant Discharge Elimination System (NPDES) compliance data collected for submittal to the U.S. Environmental Protection Agency (EPA) or designated State agency. A summary of existing reports describing site groundwater and soil contamination should also be included.

74 Fed. Reg. 38,133 (emphasis added). The proposed rule text limits applicability of 10 CFR 51.53(c)(3)(ii)(O) to plants conducting certain industrial practices *and* utilizing unlined wastewater lagoons. But the discussion in the proposed section-by-section analysis does not seem to limit application of Section 51.53(c)(3)(ii)(O) to plants using unlined wastewater lagoons. *See* 74 Fed. Reg. 38,129.[45] The NRC should modify the supplementary information in the *Federal Register*, including the section-by-section analysis for Section 51.53(c)(3)(ii)(O), to be consistent with the more limited scope of the proposed rule language.

For all of these reasons, this issue need not and should not be included as a new Category 2 issue in the GEIS, absent sufficient justification. NEI requests that NRC clarify its rationale for adding this new issue, re-classify groundwater and soil contamination as a Category 1 impact, or omit the issue from the revised GEIS. (See Attachment 1 to NEI technical comments on the GEIS, pp. 10-11.)

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[45] Specifically, the section-by-section analysis states:

> Industrial practices at all plants have the potential to contaminate site groundwater and soil through the use and spillage of solvents, hydrocarbons, heavy metals, or other chemicals, *especially on sites with unlined wastewater lagoons and storm water lagoons*. Any contamination by these substances is subject to characterization and clean-up by EPA and State remediation and monitoring programs. NRC requires the assistance of applicants to assess the impact of the industrial practices involving the use of solvents, hydrocarbons, heavy metals, or other chemicals where there is a potential for contamination of site groundwater, soil, and subsoil. 74 Fed. Reg. 38,129 (emphasis added).

### *Issue 28: Radionuclides Released to Groundwater*

The proposed rule would add to the GEIS a new Category 2 issue, "Radionuclides released to groundwater," to evaluate the potential impact of discharges of radionuclides, such as tritium, from plant systems into groundwater. 74 Fed. Reg. 38,122. Regarding the agency's basis for adding this new Category 2 issue, the proposed rule states:

> The issue is relevant to license renewal because virtually all commercial nuclear power plants routinely release radioactive gaseous and liquid materials into the environment. A September 2006 NRC report, "Liquid Radioactive Release Lessons Learned Task Force Report," documented instances of inadvertent releases of radionuclides into groundwater from nuclear power plants (ADAMS Accession No. ML062650312).
>
> NRC regulations in Parts 20 and 50 limit the amount of radioactivity released into the environment to be "As Low As is Reasonably Achievable" (ALARA) to ensure that the impact on public health is very low. Most of the inadvertent liquid release events involved tritium, which is a radioactive isotope of hydrogen. However, other radioactive isotopes have been inadvertently released into the environment. An example is leakage from spent fuel pools, where leakage from the stored fuel would allow fission products to be released into the pool water.
>
> The most significant conclusion of the NRC report regards public health impacts. Although there have been a number of events where radionuclides were released inadvertently into groundwater, based on the data available, the NRC did not identify any instances where the health of the public was impacted. The NRC did identify that under the existing regulatory requirements, the potential exists for inadvertent radionuclide releases to migrate offsite into groundwater.
>
> Another factor in adding this new Category 2 issue is the level of public concern associated with such inadvertent releases of radionuclides into groundwater. The NRC concludes that the impact of radionuclide releases to groundwater quality could be small or moderate, depending on the occurrence and frequency of leaks and the ability to respond to leaks in a timely fashion.

In our view, NRC's discussion fails to provide a clear legal or regulatory basis for adding this new Category 2 issue to the GEIS. At a minimum, we urge NRC to revise the proposed rule to include such an explanation. Significantly, the Commission recently addressed this same issue in its proposed update to the Waste Confidence Decision and Rule.[46] In both the Proposed Update and SECY-09-0090, NRC identified several incidents of groundwater contamination originating from spent fuel pools. But after an analysis of the actions taken by the NRC Staff in response to these incidents, the NRC appropriately concluded:

> While unmonitored unplanned releases continue to require the NRC's and licensees' attention, the NRC is confident that this issue will be adequately addressed through

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[46] *See* Final Update of the Commission's Waste Confidence Decision, SECY-09-0090, Encl. 1, at 110-b13 (June 15, 2009) (SECY-09-0090); Waste Confidence Decision Update, 73 Fed. Reg. 59,551, 59,565-59,566 (Oct. 9, 2008) (Proposed Update).

> continued regulatory oversight of operating and new nuclear reactors and enhanced through the NRC's continued implementation of the Task Force recommendations. *Therefore, the NRC continues to have assurance that no significant environmental impacts or safety concerns will result from extended storage in spent fuel pools.*

SECY-09-0090, Encl. 1, at 113; 73 Fed. Reg. 59,565-566 (emphasis added).[47]

NEI recognizes that operation of a nuclear power plant during the license renewal period may involve sources of inadvertent releases other than spent fuel pool storage, which was the exclusive topic of the waste confidence update. Thus, consideration of inadvertent releases as a Category 1 issue resulting in a "small" generic impact may be appropriate. But, given the conclusions in the Proposed Update and SECY-09-0090, NEI believes that the NRC has not adequately explained why any such additional sources of inadvertent releases (other than spent fuel pool storage) warrant inclusion of this issue in the GEIS and the proposed rule. Indeed, the only source of such releases specifically discussed in the *Federal Register* notice is spent fuel pools. NRC should clearly explain its basis for including this issue in the GEIS, in light of the conclusions drawn in the Proposed Update and SECY-09-0090.[48]

Further, NEI believes that requiring consideration of this issue on a site-specific basis (*i.e.*, Category 2), as well as NRC's conclusion that impacts of inadvertent releases may be "moderate," are inconsistent with the NRC's treatment of this issue in the Proposed Update and SECY-09-0090. Specifically, it is inconsistent to conclude that unmonitored and unplanned releases will not affect the NRC's generic NEPA finding that no significant environmental impacts will result from extended storage of spent fuel during the post-operation period, while here concluding that these same unmonitored and unplanned releases require site-specific evaluation during operation (*i.e.*, during the license renewal period) and may result in "moderate" impacts.

If the NRC decides to consider this issue in the GEIS, then NEI recommends that it be designated as a Category 1 issue with a "small" impact finding. The technical basis for this conclusion is included in NEI's technical comments, and is consistent with the NRC's treatment of this issue in the Proposed Update and SECY-09-0090. (See Attachment 1, NEI technical comments, pp. 8-9.) Moreover, we believe the NRC should provide a clear explanation of why the issue warrants inclusion at all, given the agency's conclusions regarding inadvertent releases in the Proposed Update and SECY-09-0090. In sum, NEI requests that NRC clarify its rationale for adding this new issue, designate it as a Category 1 issue with a "small" impact finding, or omit it from the revised GEIS.

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[47] Although the Commission votes on SECY-09-0090 call for the waste confidence update to be re-noticed, the Commissioners did not take issue with the NRC Staff's conclusions regarding inadvertent releases in their publicly available vote sheets.

[48] One might surmise that public opinion may have played a significant role in the decision to classify this as a Category 2 issue. The NRC states: "Another factor in adding this new Category 2 issue is the level of public concern associated with such inadvertent releases of radionuclides into groundwater." NRC speculates that the impacts could be small or moderate. 74 Fed. Reg. 38,123. As discussed above, the standard for including a new issue in the GEIS is whether it is within the scope of NEPA and NRC license renewal, including whether it is significant and reasonably foreseeable, not whether there is public interest regarding the issue.

***Issue 34:*** ***Water Use Conflicts with Terrestrial Resources***
***and***
***Issue 45:*** ***Water Use Conflicts with Aquatic Resources (Plants with Cooling Ponds or Cooling Towers using Make-Up Water from a River with Low Flow)***

The proposed rule would add to the GEIS two new Category 2 issues: "Water use conflicts with terrestrial resources (plants with cooling ponds or cooling towers using make-up water from a river with low flow)" to evaluate water use conflict impacts with terrestrial resources in riparian communities (74 Fed. Reg. 38,123), and "Water use conflicts with aquatic resources (plants with cooling ponds or cooling towers using make-up water from a river with low flow)" to evaluate water use conflict impacts with aquatic resources in instream communities. 74 Fed. Reg. 38,125. In the proposed rule, the NRC's stated basis for adding each of these new Category 2 issues is as follows:

> Such impacts could occur when water that supports these resources is diminished either because of decreased availability due to droughts; increased water demand for agricultural, municipal, or industrial usage; or a combination of these factors. The potential range of impact levels at plants, subject to license renewal, with cooling ponds or cooling towers using makeup water from a small river with low flow cannot be generically determined at this time.

74 Fed. Reg. 38,123; 74 Fed. Reg. 38,125. In NEI's view, NRC's discussion fails to provide a clear legal or regulatory basis for adding either of these new Category 2 issues to the revised GEIS, and we request that the NRC revise the proposed rule to include such an explanation. The proposed rule does not indicate why the potential impacts of water use conflicts with terrestrial resources (or water use conflicts with aquatic resources) were not evaluated in the 1996 GEIS and what events have prompted NRC to now propose inclusion of these two issues in the revised GEIS. Additionally, both of these new issues are couched in remote and speculative terms, since NRC states: "Such impacts <u>could</u> occur. . . ." *See* 74 Fed. Reg. 38,123; 74 Fed. Reg. 38,125. For all of these reasons, this issue need not and should not be included as a new Category 2 issue in the GEIS, absent sufficient justification. For all of these reasons, neither of these issues should be included as new Category 2 issues in the GEIS, absent sufficient justification. NEI requests that NRC either revise the proposed rule to clarify its rationale for adding each new issue or omit the issues from the revised GEIS.

***Issue 39:*** ***Thermal Impacts on Aquatic Organisms (Plants with Once-Through Cooling Systems or Cooling Ponds)***

The revised GEIS combines four Category 1 issues (cold shock for all plants, thermal plume barrier to migrating fish for all plants, distribution of aquatic organisms for all plants, and premature emergence of aquatic insects for all plants) and one Category 2 issue (heat shock for plants with once-through and cooling pond heat dissipation systems) from the 1996 GEIS, to form a single issue (thermal impacts on aquatic organisms for plants with once-through cooling systems or cooling ponds) to be added. The revised GEIS classifies the combined new issue as a Category 2 issue. 74 Fed. Reg. 38,124. Regarding the agency's basis for adding this new Category 2 impact, the proposed rule states:

> The five issues are combined given their similar nature and to simplify and streamline the review process. With the exception of heat shock, previous license renewal reviews conducted by the NRC have shown that the thermal effects of once-through cooling and cooling pond systems have not been a problem at operating nuclear power plants and would not change during the license renewal term, so future impacts are not anticipated. However, it is difficult to differentiate the various thermal effects of once-through cooling and cooling pond systems in the field. Different populations may react differently due to changes in water temperature. For example, if a resident population avoided a heated effluent, the 1996 GEIS would have identified this issue as "distribution of aquatic organisms;" however, had this population been migrating, the issue would have been considered under "thermal plume barrier to migrating fish." If individuals had remained in the heated effluent too long, the issue would have been considered under "heat shock;" or, if the individuals then left the warm water, the issue would have been considered under "cold shock." Using the resource-based approach in the revised GEIS, each of these issues would be considered a thermal impact from once-through and cooling pond systems. Environmental conditions are different at each nuclear plant site and impacts cannot be determined generically. The proposed rule revises the finding column of Table B–1 for this issue accordingly.

74 Fed. Reg. 38,124. In NEI's view, the NRC has failed to provide a clear legal or regulatory basis for classifying the new combined issue as a Category 2 issue in the revised GEIS and proposed rule. At a minimum, the NRC should revise the proposed rule to include such an explanation. Moreover, in this instance, where the overall effect of the change appears to be to create a broader site-specific Category 2 issue that will require a site-specific analysis by license renewal applicants, we believe thermal impacts on aquatic organisms should be treated as a Category 1 issue. (See Attachment 1 to NEI's technical comments on the GEIS, pp. 4-7.)

***Issue 67: Minority and Low-Income Populations***

The proposed rule would add to the GEIS a new Category 2 issue, "Minority and low-income populations," to evaluate the impacts of nuclear plant operations and refurbishment during the license renewal term on minority and low-income populations living in the vicinity of the plant. 74 Fed. Reg. 38,127. Notably, the "environmental justice" issue is currently listed in Table B-1 but was not evaluated in the 1996 GEIS. The discussion of this issue in the proposed rule recites the goals of Executive Order 12898 and the NRC 2004 Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 Fed. Reg. 52,040), and then states:

> To accomplish these goals, NRC requires the assistance of applicants in identifying minority and low-income populations and communities residing in the vicinity of the nuclear power plant and determining whether there would be any disproportionately high and adverse human health and environmental impacts on these populations from continued power plant operations and refurbishment activities during the license renewal term.

74 Fed. Reg. 38,127. NEI concurs that the existing Executive Order and the Commission's interpretation of that Executive Order in its Policy Statement require an impacts

analysis in this area. In NEI's view, however, the discussion of environmental justice in the proposed rule should be expanded and clarified to better define the scope of the necessary analysis and indicate whether demographic data alone are sufficient. For example, will this proposed change expand or otherwise modify the scope of the analysis required? If so, how will it change applicants' obligations, and what is the legal and regulatory basis for doing so? In particular, the language in the proposed rule suggests that the NRC proposes to impose more burdensome requirements on license renewal applicants in this area, by requiring them to not only "identify" minority and low-income populations and communities in the vicinity of the plant, but also to "determine" the presence of "disproportionately high and adverse human health and environmental impacts on these populations from continued power plant operations and refurbishment activities during the license renewal term." *Id.* at 38,127. (If the applicant determines that overall impacts of LR are not significant, then how can there be a disproportionate impact on low income or minority populations?) For all of these reasons, clarification is needed regarding this issue.

***Issue 73: Cumulative Impacts***

The proposed rule would add to the GEIS a new Category 2 issue, "Cumulative impacts," to evaluate "the potential cumulative impacts of license renewal." 74 Fed. Reg. 38,127. The discussion recites the NEPA requirement and the Council on Environmental Quality (CEQ) and NRC regulations relating to cumulative impacts analyses, which are not new. Notably, we understand that the NRC has not previously used these requirements as a basis for requiring that license renewal environmental reports include assessments of the cumulative impacts of license renewal with other reasonably foreseeable projects in the vicinity of the nuclear power plant. Rather, the NRC has required only that the applicant's ER identify past, present, and reasonably foreseeable future projects so that the NRC itself could evaluate the cumulative impacts in the GEIS Supplement, as it is required to do by 40 CFR 1508.7.

The discussion in the proposed rule provides no information as to why the NRC has now decided to require license renewal applicants to assess cumulative impacts. We note that an applicant for license renewal of a nuclear power plant would not have access to all information necessary about other projects (over which the applicant has no control) in the vicinity of its nuclear plant to support an assessment of cumulative impacts of license renewal.

At a minimum, NRC should explain the purpose of adding cumulative impacts as a new Category 2 issue to the GEIS and proposed rule. This explanation should discuss how this proposed change expands or otherwise modifies the scope of the cumulative impacts analysis required for license renewal and the legal and regulatory basis for adding this new Category 2 issue. The proposed rule states only that: "The NRC requires the assistance of applicants in identifying other past, present, and reasonably foreseeable future actions, such as the construction and operation of other power plants and other industrial and commercial facilities in the vicinity of the nuclear power plant." 74 Fed. Reg. 38,127. This does not explain how this new obligation compares with pre-existing analyses of cumulative impacts prepared by both NRC Staff and prior license renewal applicants. For all of these reasons, clarification is needed for this issue.

We note that applicants for license renewal have always provided this type of information in environmental reports, but have not typically extended the environmental reports

to include analyses of cumulative impacts because, unless a nearby project is controlled by the applicant (e.g., new nuclear generating units to be owned by the same applicant and placed on or near the site of the unit[s] for which license renewal is being sought), the applicant is unlikely to have access to enough information about the project to assess cumulative impacts. As a federal agency, the NRC is better positioned to obtain the information necessary for such assessments. For all of these reasons, clarification is needed as to the basis for the apparent change in the Commission's position on this issue.

## V. Effective Date of the GEIS Revision

Given the significant changes contemplated by the GEIS revision and in the corresponding rulemaking, the impact to future license renewal applications could be wide-reaching, making the effective date of the GEIS revision very important. NEI requests that the Supplementary Information for the final rule regarding "Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses" clarify that license renewal applications filed sooner than 18 months after the effective date of the final rule are not required to comply with the revised requirements.

Such a clarification is needed because the final rule, if implemented as currently drafted, would redefine the number and scope of Category 1 and Category 2 environmental impact issues identified in Appendix B to Subpart A of 10 C.F.R. Part 51. This redefinition of issues, as well as other revisions to 10 CFR Part 51, will change the amount, organization, and analyses of information that must be presented in license renewal Environmental Reports (ER). NRC licensees filing license renewal applications within 18 months after the effective date of the final rule would incur significant hardship in complying with the new provisions because their ER already would have been substantially prepared, and the changes necessary to address the redefined issues could be extensive.

To support filing of a license renewal application, applicants must complete a final version of the Environmental Report approximately three months prior to submitting the application to the NRC. The three-month lead time is needed to allow for incorporation of any changes to the Environmental Report (and other application components). Considering the three-month lead time for a final version, information collection, impacts analyses, and writing for the initial draft ER must be substantially complete by approximately eight months prior to application submittal. To support this schedule, applicants typically begin the process of preparing an Environmental Report between 18 and 24 months before the license renewal application is scheduled for submittal. Accordingly, to assure that applicants can identify, collect, evaluate, and present the information necessary to sufficiently support determinations of both the existence of new and significant information (Category 1 issues) and impacts (Category 2 issues), applicants need to know the issue definitions by no later than 18 months before application submittal. Otherwise, such applicants would need to completely reorganize their Environmental Reports in order to address the redefined issues. NEI appreciates the NRC's consideration of this position.