

August 25, 2006

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE COMMISSION

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In the Matter of )

Proposed Amendment to 10 C.F.R. Part 51 )  
(Rescinding finding that environmental )  
impacts of pool storage of spent reactor )  
fuel are insignificant) )  
\_\_\_\_\_)

Docket No. PRM-\_\_\_\_

**MASSACHUSETTS ATTORNEY GENERAL'S  
PETITION FOR RULEMAKING  
TO AMEND 10 C.F.R. PART 51**

**I. INTRODUCTION**

Pursuant to the Administrative Procedure Act ("APA") [5 U.S.C. § 553(e)], the National Environmental Policy Act ("NEPA") [42 U.S.C. § 4332], and the U.S. Nuclear Regulatory Commission's ("NRC's" or "Commission's") regulations for implementation of the APA and NEPA, the Attorney General of Massachusetts petitions the NRC to: (a) consider new and significant information showing that the NRC's characterization of the environmental impacts of spent fuel storage as insignificant in the 1996 Generic Environmental Impact Statement for Renewal of Nuclear Power Plant Licenses ("License Renewal GEIS") is incorrect, (b) revoke the regulations which codify that incorrect conclusion and excuse consideration of spent fuel storage impacts in NEPA decision-making documents, (c) issue a generic determination that the environmental impacts of high-density pool storage of spent fuel are significant, and (d) order that any NRC licensing decision that approves high-density pool storage of spent fuel at a nuclear power plant or any other facility must be accompanied by an environmental impact statement ("EIS") that addresses (i) the environmental impacts of high-

density pool storage of spent fuel at that nuclear plant and (ii) a reasonable array of alternatives for avoiding or mitigating those impacts.

This petition for rulemaking is a companion to the contentions filed by the Attorney General in the license renewal proceedings for the Pilgrim and Vermont Yankee nuclear power plants and raises the same substantive concern as those contentions: that spent fuel stored in high-density fuel storage pools is much more vulnerable to fire than the License Renewal GEIS concludes.<sup>1</sup> Thus the petition relies on and incorporates by reference the legal and technical assertions made in the Attorney General's contentions.<sup>2</sup> It also supplements the contentions with information about the extent to which the environmental impacts of spent fuel pool storage can be addressed generically and the extent to which they should be considered on a case-by-case basis.<sup>3</sup>

As the Attorney General has demonstrated, the contentions he submitted in the Pilgrim and Vermont Yankee license renewal proceedings are admissible.<sup>4</sup> Entergy

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<sup>1</sup> Massachusetts Attorney General's Request for a Hearing and Petition to Intervene With Respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Pilgrim Nuclear Plant Operating License, etc. (May 26, 2006) ("Pilgrim Hearing Request"); Massachusetts Attorney General's Request for a Hearing and Petition to Intervene With Respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Vermont Yankee Nuclear Plant Operating License, etc. (May 26, 2006) ("Vermont Yankee Hearing Request").

<sup>2</sup> A copy of the Pilgrim Hearing Request is appended to the petition as Attachment 1. The Vermont Yankee Hearing Request is not attached to this petition because the content is virtually identical to the Pilgrim Hearing request and therefore its inclusion would be duplicative. The Vermont Yankee Hearing Request can be found in the NRC's ADAMS system at accession number ML 061640032.

<sup>3</sup> See Declaration of Dr. Gordon Thompson in Support of Rulemaking Petition (August 23, 2006) ("Thompson Declaration") (Attachment 2).

<sup>4</sup> See Massachusetts Attorney General's Reply to Entergy's and NRC Staff's Responses to Hearing Request and Petition to Intervene With Respect to Pilgrim License Renewal Proceeding (June 30, 2006); Massachusetts Attorney General's Reply to Entergy's and NRC Staff's Responses to Hearing Request and Petition to Intervene With Respect to Vermont Yankee License Renewal Proceeding (June 30, 2006), Transcript of

Nuclear Operations, Inc. (“Entergy”) and the NRC Staff have argued, however, that admission of the contentions is precluded by NRC regulations which excuse license renewal applicants from addressing the environmental impacts of spent fuel storage in their environmental reports (“ERs”).<sup>5</sup> While the Attorney General disagrees with their argument, he presents this rulemaking petition in the alternative, in order to ensure that before renewing the operating licenses for the Pilgrim and Vermont Yankee plants, the NRC will address the environmental issues the Attorney General has raised.

If the Commission accepts this petition for rulemaking, it should withhold any decision to renew the operating licenses for the Pilgrim and Vermont Yankee nuclear power plants until the requested rulemaking has been completed and until the NRC has completed the NEPA process for consideration of environmental impacts of high-density pool storage of spent fuel at the Pilgrim and Vermont Yankee nuclear plants. The Commission should also suspend the consideration of the Attorney General’s contentions in the individual license renewal proceedings for the Pilgrim and Vermont Yankee nuclear power plants.

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Pilgrim oral argument (July 6, 2006), transcript of Vermont Yankee oral argument (August 1, 2006).

<sup>5</sup> Entergy’s Answer to Massachusetts Attorney General’s Request for a Hearing, Petition to Intervene, and Petition for Backfit Order at 13-14 (June 22, 2006) (“Entergy Pilgrim Answer”); NRC Staff’s Answer Opposing Massachusetts Attorney General’s Request for Hearing and Petition to Intervene and Petition for Backfit at 8-9 (June 22, 2006) (“NRC Staff Pilgrim Answer”). Entergy’s Answer to Massachusetts Attorney General’s Request for a Hearing, Petition to Intervene, and Petition for Backfit Order at 13 (June 22, 2006) (“Entergy Vermont Yankee Answer”); NRC Staff’s Answer Opposing Massachusetts Attorney General’s Request for Hearing and Petition to Intervene and Petition for Backfit at 11-13 (June 22, 2006) (“NRC Staff Vermont Yankee Answer”).

## II. FACTUAL AND PROCEDURAL BACKGROUND

### A. Attorney General's Contentions

On May 26, 2006, the Attorney General submitted hearing requests and contentions in the license renewal proceedings for the Pilgrim and Vermont Yankee nuclear power plants. *See* note 1, *supra*. In each proceeding, the Attorney General submitted a virtually identical contention challenging the adequacy of Entergy's ER to comply with NEPA's requirement that it address significant new information bearing on the environmental impacts of operating the nuclear power plant during a license renewal term. The Pilgrim Contention reads as follows:

The Pilgrim ER does not satisfy the requirements of 10 C.F.R. § 51.53(c)(3)(iv) and NEPA, 42 U.S.C. § 4332 *et seq.*, because it fails to address new and significant information regarding the reasonably foreseeable potential for a severe accident involving nuclear fuel stored in high-density storage racks in the Pilgrim fuel pool. Although an NRC-sponsored study conducted as early as 1979 raised the potential for a severe accident in a high-density fuel storage pool if water is partially lost from the pool (NUREG/CR-0649, *Spent Fuel Heatup Following Loss of Water During Storage* (March 1979) ("1979 Sandia Report")), the NRC has failed to take that risk into account in every EIS it has prepared, including the 1979 GEIS on the environmental impacts of fuel storage; the 1990 Waste Confidence rulemaking (Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38,474, 38,481 (September 18, 1990) ("1990 Waste Confidence Rulemaking")); and the 1996 License Renewal GEIS on which the Pilgrim license renewal application relies. Moreover, the environmental impacts of a pool accident were not considered in the 1972 EIS issued in support of the original operating license for the Pilgrim nuclear power plant (Final Environmental Statement Related to Operation of Pilgrim Nuclear Power Station, Boston Edison Company, Docket No. 50-293 (May 1972) ("1972 Pilgrim EIS")).

Significant new information now firmly establishes that (a) if the water level in a fuel storage pool drops to the point where the tops of the fuel assemblies are uncovered, the fuel will burn, (b) the fuel will burn regardless of its age, (c) the fire will propagate to other assemblies in the pool, and (c) the fire may be catastrophic. *See* Thompson Report and Beyea Report. This new information has also been confirmed by the NRC Staff in NUREG-1738, *Final Technical Study of Spent Fuel Pool Accident Risk and Decommissioning Nuclear Power Plants* (January 2001) ("NUREG-1738"), and by the National Academies of Sciences. *See* NAS Committee on the Safety and Security of Commercial Spent

Nuclear Fuel Storage, *Safety and Security of Commercial Spent Nuclear Fuel Storage* at 53-54 (The National Academies Press: 2006) (“NAS Report”).

Moreover, significant new information, including the attacks of September 11, 2001 and the NRC’s response to those attacks, shows that the environmental impacts of intentional destructive acts against the Pilgrim fuel pool are reasonably foreseeable. Taken together, the potential for severe pool accidents caused by intentional malicious acts and by equipment failures and natural disasters such as earthquakes is not only reasonably foreseeable, but is likely enough to qualify as a “design-basis accident,” *i.e.*, an accident that must be designed against under NRC safety regulations. Thompson Report, §§ 6,7,9.

The ER also fails to satisfy 10 C.F.R. § 51.53(c)(3)(iii) because it does not consider reasonable alternatives for avoiding or reducing the environmental impacts of a severe spent fuel accident, *i.e.*, SAMAs. Alternatives that should be considered include re-racking the fuel pool with low-density fuel storage racks and transferring a portion of the fuel to dry storage.<sup>6</sup>

Each of the contentions was supported by the expert declarations and reports of Drs. Gordon Thompson and Jan Beyea regarding the likelihood and consequences of spent fuel pool accidents at the Pilgrim and Vermont Yankee nuclear power plants.<sup>7</sup>

The basis for each contention also provided a detailed discussion of the history of NRC’s NEPA consideration of environmental impacts of spent fuel storage, and the nature and the significance of the new information the Attorney General presented in support of his contention.<sup>8</sup> In addition, a discussion of the statutory and regulatory requirements of NEPA and NRC regulations for consideration of new and significant information in the NEPA decision-making process prefaced each contention.<sup>9</sup>

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<sup>6</sup> Pilgrim Contention at 21-23 (footnote omitted).

<sup>7</sup> Thompson, *Risks and Risk-Reducing Options Associated with Pool Storage of Spent Nuclear Fuel at the Pilgrim and Vermont Yankee Nuclear Power Plants* (May 25, 2006) (“Thompson Report”); Jan Beyea, *Report to the Massachusetts Attorney General on the Potential Consequences of a Spent-fuel Pool Fire at the Pilgrim or Vermont Yankee Nuclear Plant* (May 25, 2006) (“Beyea Report”).

<sup>8</sup> Pilgrim Contention at 21-47, Vermont Yankee Contention at 23-47.

<sup>9</sup> Pilgrim Contention at 5-16, Vermont Yankee Contention at 5-16.

## B. Procedural Arguments in Opposition to Contentions

In each case, both Entergy and the NRC Staff opposed the admission of the Attorney General's contention. In addition to claiming that the information presented by the Attorney General is not new or significant, they argued that the Commission has designated the environmental impacts of spent fuel storage as a generic "Category 1" issue that is exempted from consideration in any individual license renewal proceeding.<sup>10</sup> Citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 12-16, 21-23 (2001) ("*Turkey Point*"), they argued that the only means by which the Attorney General could obtain a hearing on the environmental impacts of spent fuel storage would be a petition for rulemaking or a waiver petition. *Id.*

In his reply briefs and in oral arguments regarding the admissibility of the contentions, counsel for the Attorney General defended the admissibility of the contentions.<sup>11</sup> He also stated that, in the alternative, he planned to submit a rulemaking petition to the Commission.<sup>12</sup> The Attorney General did not, however, request either of

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<sup>10</sup> Entergy's Pilgrim Answer at 11-14, Entergy's Vermont Yankee Answer at 10-12, NRC Staff's Pilgrim Answer at 11-13, NRC Staff's Vermont Yankee Answer at 11-13, citing 10 C.F.R. §§ 51.53(c)(2), 51.95(c), Table B-1 of Appendix A to 10 C.F.R. Part 51, *Turkey Point*.

<sup>11</sup> See note 4, *supra*. In the Pilgrim proceeding, the ASLB also conducted an additional briefing in which the parties addressed the question of whether the Attorney General had brought his concern regarding the environmental impacts of fuel pool accidents to the correct forum. See Order (Regarding Need for Further Briefing on Definition of "New and Significant Information," etc.) (July 14, 2006); Massachusetts Attorney General's Brief Regarding Relevance to This Proceeding of Regulatory Guide's Definition of "New and Significant Information" at 7 (July 21, 2006); Entergy's Brief on New and Significant Information in Response to Licensing Board Order of July 14, 2006 at 4-6 (July 21, 2006); NRC Staff's Response to July 14, 2006 Licensing Board Order at 2 (July 21, 2006); Massachusetts Attorney General's Reply Brief Regarding Relevance to This Proceeding of Regulatory Guide's Definition of "New and Significant Information" at 6-7 (July 21, 2006).

<sup>12</sup> Transcript of Pilgrim oral argument at 89, transcript of Vermont Yankee oral argument at 79-81.

the ASLB panels to suspend or otherwise delay a ruling on the admissibility of his contention pending submission of a rulemaking petition. The Attorney General now awaits the issuance of decisions by the Pilgrim and Vermont Yankee ASLB panels regarding the admissibility of his contentions.<sup>13</sup>

### III. STANDARD FOR RULEMAKING PETITIONS

NRC regulation 10 C.F.R. § 2.802(a) provides that “[a]ny interested person may petition the Commission to issue, amend or rescind any regulation.” The petitioner must describe:

The specific issues involved, the petitioner’s views or arguments with respect to those issues, relevant technical, scientific or other data involved which is reasonably available to the petitioner, and such other pertinent information as the petitioner deems necessary to support the action sought.

10 C.F.R. § 2.802(c)(3). The rule also requires that the petitioner “should note any specific cases of which petitioner is aware where the current rule is unduly burdensome, deficient, or needs to be strengthened.” *Id.* Revocation of 10 C.F.R. §§ 51.53(c)(2) and 51.95(c) and Table B-1 of Appendix A to 10 C.F.R. Part 51 will be necessary to ensure NEPA compliance in the Pilgrim and Vermont Yankee license renewal cases if the ASLB or the Commission interprets those regulations to bar the consideration of significant new information presented by the Attorney General’s contentions regarding the environmental impacts of high-density pool storage of spent fuel.

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<sup>13</sup> Given the close similarity of the issues raised by the contentions, the Attorney General anticipates that he will seek a consolidated hearing if the contentions are admitted in both proceedings.

**IV. THE COMMISSION MUST CONSIDER NEW AND SIGNIFICANT INFORMATION BEARING ON THE ENVIRONMENTAL IMPACTS OF HIGH-DENSITY POOL STORAGE OF SPENT FUEL.**

**A. NEPA Requires the NRC to Take a Hard Look at New and Significant Information Regarding Environmental Impacts of Spent Fuel Storage.**

NEPA requires that before taking major federal action, an agency must take a “hard look” at new and significant information bearing on the environmental impacts of the action. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989) (“*Marsh*”). As required by 10 C.F.R. § 51.92(a), if an EIS has been prepared but the proposed action has not been taken, the NRC Staff must supplement the EIS if, *inter alia*, “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” In addition, 10 C.F.R. §§ 51.59(c)(3) and (c)(4) require the supplemental EIS prepared at the license renewal stage to address “significant new information.” NRC regulations for the preparation of ERs by license renewal applicants also require that an ER must address “new and significant information regarding the environmental impacts of license renewal of which the licensee is aware.” 10 C.F.R. § 52.53(c)(3)(iv). *See also* Pilgrim Hearing Request at 10, 15.

**B. New and Significant Information Shows That Fuel Stored in High-Density Fuel Storage Pools Is More Vulnerable to Fire Than NRC Concludes in its NEPA Analyses.**

As discussed in the Attorney General’s contentions, new and significant information regarding the behavior of spent fuel in high-density storage pools under accident conditions shows that the fuel is much more vulnerable to fire than stated in the License Renewal GEIS or other NEPA decision documents such as NUREG-0757, the GEIS for Handling and Storage of Spent Light Water Reactor Fuel (1979) (“1979 Spent

Fuel Storage GEIS”), or the Waste Confidence Rule.<sup>14</sup> This significant new information, not considered in any previous EIS, now firmly establishes that, across a broad range of scenarios, (a) if the water level in a fuel storage pool drops to the point where the tops of the fuel assemblies are uncovered, the fuel will burn, (b) the fuel will burn regardless of its age, (c) and the fire will propagate to other assemblies in the pool. This new information has been confirmed by Dr. Thompson in his report, by the NRC Staff in NUREG-1738, and by the National Academy of Sciences in the NAS Report. Pilgrim Hearing Request at 21-32, Vermont Yankee Hearing Request at 21-32. In contrast, all of the NRC’s previous NEPA analyses were based on the faulty assumptions that (a) total instantaneous drainage is a more severe case than partial drainage and (b) aged fuel will not burn. *Id.*

A severe pool accident could be caused by a range of events normally addressed by the NRC in its EISs for the licensing of nuclear power plants. Pilgrim Hearing Request at 32-33, Vermont Yankee Hearing Request at 32-33. A severe accident caused by an intentional attack on a nuclear power plant fuel pool is also reasonably foreseeable and therefore should be considered. Pilgrim Hearing Request at 33-47, Vermont Yankee Hearing Request at 33-47. Recently, the Ninth Circuit of the U.S. Court of Appeals overturned the Commission’s rationale for categorically refusing to consider the impacts of intentional attacks in any EIS. *San Luis Obispo Mothers for Peace v. NRC*, No. 93-74628 (June 2, 2006).<sup>15</sup>

New and significant information also shows that the consequences of a severe pool accident could be grave, and that the consequences of pool accidents differ in

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<sup>14</sup> Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38,474 (September 18, 1990).

significant respects from the consequences of reactor accidents. Pilgrim Hearing Request at 40-41, 47; Vermont Yankee Hearing Request at 40-41, 47, citing Beyea Report.

Because this new and significant information was not previously considered in the License Renewal GEIS or any other EIS for a nuclear power plant license or spent fuel storage, and because it would significantly affect the NRC's conclusions regarding the likelihood of severe spent fuel accidents, it must be considered in an EIS or supplemental EIS for any NRC licensing decision that involves high-density pool storage of spent fuel. *Marsh*, 490 U.S. at 374. The Commission also should apply the Ninth Circuit's decision by considering the environmental impacts of intentional attacks on nuclear power plant fuel storage pools in all prospective licensing decisions. Moreover, the EIS must be prepared *prior* to the licensing decisions. *Robertson v. Methow Valley Citizens Council (Robertson)*, 490 U.S. 332, 349 (1989).

**C. NRC Regulations Precluding Consideration of Spent Fuel Storage Impacts Do Not Bar Consideration of New and Significant Information Regarding Spent Fuel Storage Impacts in Individual License Renewal Cases.**

In the Pilgrim and Vermont Yankee license renewal cases, Entergy and the NRC Staff have opposed the admission of the Attorney General's contentions on the ground that environmental impacts of spent fuel storage constitute "Category 1" impacts that are beyond the scope of individual license renewal proceedings by virtue of Table B-1 of Part 51 and 10 C.F.R. §§ 51.53(c)(2) and 51.95(c). *See* note 5, *supra*. But their argument is not consistent with the NRC's procedural regulations governing the admissibility of contentions to a proceeding, NRC regulations for implementation of NEPA, or Supreme Court precedent with respect to the consideration of new information

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<sup>15</sup> The mandate in that case is due to issue August 31, 2006.

in NEPA reviews. The NRC's regulatory and statutory scheme requires Entergy to identify any new and significant information of which it is aware regarding the environmental impacts of renewing the Pilgrim and Vermont Yankee operating licenses, including Category 1 issues; it also allows the Attorney General to challenge Entergy's failure to do so.

**1. NRC regulations require the Attorney General to submit a contention challenging Entergy's environmental report.**

In order to raise NEPA environmental issues in this license renewal adjudication, NRC regulations require a petitioner to submit contentions establishing "genuine" and "material" disputes with the applicants regarding the adequacy of its ER. 10 C.F.R. § 2.309(f)(2)(vi). *See also* Final Rule, Rules of Practice for Domestic Licensing Proceeding – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,172 (August 11, 1989) ("1989 Final Procedural Rule") ("The rule makes clear that to the extent an environmental issue is raised in the applicant's ER, an intervenor must file contentions on that document.")<sup>16</sup> An intervenor may not skip this threshold pleading requirement and wait for an EIS to be issued by the NRC Staff. *Id.* Here, the Attorney General properly raised the "environmental issue" of whether Entergy's ERs for Pilgrim and Vermont Yankee comply with 10 C.F.R. § 51.53(c)(3)(iv) by taking into account "new and significant information" regarding the environmental impacts of pool fires.

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<sup>16</sup> When it was originally promulgated in 1989, the regulation governing admission of NEPA contentions was codified as 10 C.F.R. § 2.714(b)(2)(iii). In 2004,

**2. 10 C.F.R. § 51.53(c)(3)(iv) requires Entergy to discuss significant new information regarding severe pool accidents in its ER for Pilgrim and Vermont Yankee license renewal.**

Both a plain reading and the regulatory and statutory context of 10 C.F.R. § 51.53(c)(3)(iv) show that § 51.53(c)(3)(iv) requires Entergy to discuss new and significant information relating to Category 1 impacts in its ERs for renewal of the Pilgrim and Vermont Yankee operating licenses. First, the plain language of 10 C.F.R. § 51.53(c)(3)(iv) requires a license renewal applicant to address “any” new information of which it is aware.<sup>17</sup> The NRC’s use of the word “any” plainly shows that it did not intend to limit the scope of the required discussion of significant new information to information that relates only to Category 2 and 3 impacts. *Wrangler Laboratories, et al.*, ALAB-951, 33 NRC 505, 513-14 (1991) (“*Wrangler*”), quoting *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288 (1988) (“*Long Island Lighting*”) (“As is the case with statutory construction, interpretation of any regulation must begin with the language and structure of the provision itself.”)

Second, the regulatory history of § 51.53(c)(3)(iv) confirms that the Commission intended the scope of the regulation to include Category 1 impacts. *Wrangler*, 33 NRC at 513-14 (“[A]dministrative history and other available guidance may be consulted for background information and the resolution of ambiguities”). In the proposed rule, the NRC had required applicants to address new information only with respect to Category 2 and 3 issues. Proposed 10 C.F.R. § 51.35(c)(4) would have provided that:

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the same regulation was re-codified as 10 C.F.R. § 2.309(f)(2). Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2,218, 2,240 (January 14, 2004).

<sup>17</sup> Entergy has not asserted that it is unaware of the information presented in the Attorney General’s contention.

The supplemental [environmental] report must contain an analysis of whether the assessment required by paragraphs (c)(3)(ii)-(iii) of this section changes the findings documented in Table B-1 of appendix B of subpart A of this part that the renewal of any operating license for up to 20 years will have accrued benefits that outweigh the economic, environmental, and social costs of license renewal.

Proposed Rule, Environmental Review for Renewal of Operating Licenses, 56 Fed. Reg. 47,016, 47,028 (September 17, 1991). The assessment required by proposed paragraph (c)(3)(ii) related to Category 2 impacts, and the assessment required by proposed paragraph (c)(3)(iii) related to Category 3 impacts. *Id.*

In the Final Rule, the Commission changed the numbering of the provision to 10 C.F.R. § 51.53(c)(3)(iv) and broadened its language to require consideration of “any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.” 61 Fed. Reg. 28,467, 28,488 (June 5, 1996) (“Final Rule for Environmental Review”). The changed provision also eliminated the previous cross-reference to Category 2 and 3 impacts. *Id.*

The intent of this change is discussed in the preamble to the Final Rule. One of the comments on the proposed rule had included the criticism that: “the rigidity of the proposed rule hampers the NRC’s ability to respond to new information or to different environmental issues not listed in the proposed rule.” 61 Fed. Reg. at 28,470. The Commission responded that: “the framework for consideration of significant new information has been revised and expanded.” *Id.* Thus, the Commission explained that it was revising its regulations to require the NRC Staff to prepare a Supplemental EIS rather than an environmental assessment (“EA”) for license renewal, and to require that the Supplemental EIS take into account “new and significant information not considered in the GEIS analysis.” *Id.* The Commission also explained that although its regulations excused license applicants from addressing Category 1 impacts in the ERs, that exception

only applied in the absence of “new and significant information” calling the Category 1 determination into question:

In this final rule, the regulatory requirements for performing a NEPA review for a license renewal application are similar to the NEPA review requirements for other major plant licensing actions. Consistent with the current NEPA practice for major plant licensing actions, this amendment to 10 CFR Part 51 requires the applicant to submit an environmental report that analyzes the environmental impacts associated with the proposed action, considers alternatives to the proposed action, and evaluates any alternatives for reducing adverse environmental effects. Additionally, the amendment requires the NRC staff to prepare a supplemental environmental impact statement for the proposed action, issue the statement in draft for public comment, and issue a final statement after considering public comments on the draft.

The amendment deviates from NRC’s current NEPA review practice in some areas. First, the amendment codifies certain environmental impacts associated with license renewal that were analyzed in NUREG-1437, “Generic Environmental Impact Statement for License Renewal at Nuclear Plants” (xxx 1996). Accordingly, absent new and significant information, the analyses for certain impacts codified by this rulemaking need only be incorporated by reference in an applicant’s environmental report for license renewal and in the Commission’s (including NRC staff, adjudicatory officers, and the Commission itself) draft and final SEIS and other environmental documents developed for the proceeding.

61 Fed. Reg. at 28,483 (emphasis added). This language clearly establishes that Category 1 impacts are included in the scope of new and significant impacts that must be discussed in an ER pursuant to 10 C.F.R. § 51.53(c)(3)(iv).<sup>18</sup>

Finally, Entergy’s and the NRC Staff’s interpretation of the regulations should be rejected because it is inconsistent with NEPA and the NRC’s regulatory scheme for

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<sup>18</sup> In support of its position, Entergy cites a statement in a 1993 memorandum from the NRC Staff to the Commissioners in which the NRC Staff proposed to make a number of changes to the 1991 proposed rule, including the provision that “[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.” Entergy’s Pilgrim Answer at 13-14, quoting SECY-93-032, Memorandum to the Commissioners from James M. Taylor, Executive Director for Operations, re: 10 CFF Part 51 Rulemaking on Environmental Review for Renewal of Nuclear Power Plant Operating Licenses at 4 (February 9, 1993).

implementing that statute. *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), LBP-05-10, 61 NRC 241, 299 (2005), *rev'd on other grounds*, CLI-05-14, 61 NRC 359 (2005) (finding that a proposed interpretation of a regulation was inconsistent with both its plain meaning and the “broader context” of the regulatory scheme.) As discussed in *Marsh*, NEPA is an “action-forcing” statute that requires federal agencies to continue to take a “hard look” at the effects of their proposed actions, even after they have been approved. 490 U.S. at 372-73. NRC’s regulatory scheme assigns license applicants broad responsibility to conduct what amounts to a first draft of the NRC’s NEPA analysis in its ERs. It would be inconsistent with NEPA for the NRC to excuse licensees from identifying an entire category of new and significant information bearing on the environmental impacts of a proposed nuclear operation, when licensees have a high level of access to that information and when the regulatory scheme places so much reliance on applicants to address environmental issues.

Accordingly, the plain language of 10 C.F.R. § 51.53(c)(3)(iv), its regulatory history, and the statutory framework of NEPA require Entergy to address new and significant information bearing on the environmental impacts of pool fires in its ERs for renewal of the Pilgrim and Vermont Yankee licenses. Moreover, the Attorney General was entitled to challenge the adequacy of the ERs’ discussion of the issue.

**3. The alternative procedures suggested in *Turkey Point* are inconsistent with NEPA.**

Both Entergy and the NRC Staff have cited the Commission’s decision in *Turkey Point* for the proposition that the Attorney General should have filed a rulemaking petition with the Commission instead of filing a contention with the ASLB. Entergy’s

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But such a provision was never codified in the final rule, nor is it mentioned in the

Pilgrim Answer at 13, NRC Staff's Pilgrim Answer at 11, citing 54 NRC at 12. In *Turkey Point*, the Commission affirmed the denial of a contention seeking consideration of fuel pool accidents, in part on the ground that spent fuel storage impacts constitute Category 1 impacts that are excused from consideration, and that the petitioner had not filed a waiver petition pursuant to 10 C.F.R. § 2.335(b). 54 NRC at 21-23. *Turkey Point* is inapposite, however, because it does not address the license renewal applicant's obligation to discuss new and significant information bearing on the impacts of license renewal in its ER.

Under NRC regulations for the admissibility of NEPA contentions, the Attorney General was required to raise his NEPA concerns about the Pilgrim and Vermont Yankee license renewal reviews by raising a dispute with Entergy regarding Entergy's satisfaction of NRC requirements for the consideration of significant new information. Because he properly submitted his contention to the ASLB, no rulemaking petition should be required in order to gain its admission.

The Attorney General recognizes that while the Commission's duty under NEPA to consider new and significant information is non-discretionary, the choice of means by which it will carry out that duty ultimately lies within the Commission's discretion. See *Turkey Point*, 54 NRC at 14, citing *Baltimore Gas & Electric v. Natural Resources Defense Council*, 462 U.S. 87, 100-01 (1983). Therefore, in Section IV.D below, the Attorney General presents an alternative argument that the Commission should institute a rulemaking to revoke the regulations that arguably bar consideration of spent fuel storage impacts in individual licensing cases.

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preamble to the final rule.

**D. Assuming For Purposes of Argument That NRC Regulations Do Bar the Attorney General's Contentions, Revocation of 10 C.F.R. §§ 51.23 and 51.95(C) and Table B-1 of Appendix A To 10 C.F.R. Part 51 is Necessary to Ensure Compliance With NEPA in the Pilgrim and Vermont Yankee License Renewal Cases.**

Assuming for purposes of argument that NRC regulations do bar the admission of the Attorney General's contentions, revocation of 10 C.F.R. § 51.53(c)(2), § 51.95(c) and Table B-1 of Appendix A to 10 C.F.R. Part 51 is necessary to ensure compliance with NEPA in the Pilgrim and Vermont Yankee license renewal cases. In addition, the Commission should revoke 10 C.F.R. §§ 51.23(a) and (b), 51.30(b), 51.53, 51.61, and 51.80(b) to the extent that they state, imply, or assume that environmental impacts of high-density pool storage are insignificant and therefore need not be considered in any NEPA analysis. These regulations cannot stand in the face of significant new information which shows that in fact, the environmental impacts of high-density pool storage of spent fuel are significant. *Marsh*, 490 U.S. at 374.

The Commission should also commence a new rulemaking which proposes to treat the environmental impacts of high-density pool accidents as significant.<sup>19</sup> In addition, the Commission should amend its regulations to require that the body of severe accident mitigation alternatives ("SAMAs") that must be discussed in ERs and supplemental EISs for individual plants pursuant to 10 C.F.R. §§ 51.53(c)(3)(ii)(L) and Table B-1 of Appendix A to 10 C.F.R. Part 51 ("Postulated Accidents: severe accidents") must include alternatives to avoid or mitigate the impacts of pool fires. Finally, the NRC should not approve high-density pool

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<sup>19</sup> The risk of a pool fire is significant for all plant designs, and is particularly serious for plants employing boiling water reactors ("BWRs") with the Mark 1 or Mark 2 containments, such as the Pilgrim and Vermont Yankee plants. The increased risk for

storage of spent fuel at any nuclear power plant or spent fuel storage facility unless and until it has evaluated the environmental impacts of the proposal in an EIS.

**D. A Rulemaking Is Desirable Because It Would Achieve a Greater and More Consistent Level of Environmental Protection.**

Although the Attorney General's primary concern in bringing this rulemaking petition is to ensure adequate consideration of the environmental impacts of renewing the Pilgrim and Vermont Yankee operating licenses, he believes that a generic rulemaking would be the most effective means to ensure broad protection of public health and the environment. The NRC's incorrect conclusion regarding the alleged insignificance of high-density pool storage of spent fuel is contained in numerous NEPA and other licensing documents, and affects many licensing decisions.<sup>20</sup> It should be revoked across the board in order to ensure that future NRC licensing decisions are not based on inadequate consideration of environmental risks or measures for avoiding or reducing those risks. Moreover, the Attorney General has an interest in seeking generic treatment of spent fuel pool hazards because a pool accident at any one of the operating nuclear power plants in the New England and Mid-Atlantic states could have a significant effect on the health, environmental, and economic well-being of the Commonwealth of Massachusetts. *See* Beyea Report, attached to Pilgrim Contention.

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those plants is attributable to two design features: the elevation of the pool and its location within the reactor building. Thompson Declaration, par. VII-1.

<sup>20</sup> For instance, *see* the Waste Confidence Rule and the 1979 Spent Fuel Storage GEIS.

**V. THE RULEMAKING MUST BE COMPLETED BEFORE THE NRC TAKES ANY LICENSING ACTION THAT WOULD ALLOW THE CONTINUED HIGH-DENSITY POOL STORAGE OF SPENT FUEL.**

NEPA requires federal agencies to examine the environmental consequences of their actions *before* taking those actions, in order to ensure “that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.” *Robertson*, 490 U.S. at 349. Therefore the Attorney General requests that if the Commission accepts this petition for rulemaking, it defer any decision to license the continued high-density pool storage of spent fuel at any nuclear power plant, including the Pilgrim and Vermont Yankee plants, until the requested rulemaking has been completed, including preparation and circulation of a draft Supplemental GEIS, consideration of public comments on the draft Supplemental GEIS, and issuance of a final Supplemental GEIS with respect to the environmental impacts of high-density pool storage of spent fuel.

**VI. THE COMMISSION SHOULD SUSPEND THE CONSIDERATION OF THE ATTORNEY GENERAL’S CONTENTIONS IN THE PILGRIM AND VERMONT YANKEE PROCEEDINGS PENDING GENERIC RESOLUTION OF THE ISSUES RAISED BY THIS PETITION FOR RULEMAKING.**

If the Commission accepts this petition for rulemaking, the Attorney General requests the Commission to suspend the litigation of the Attorney General’s contentions in the individual license renewal proceedings for the Pilgrim and Vermont Yankee nuclear power plants.

**VII. CONCLUSION**

For the foregoing reasons, the Commission should:

(a) consider new and significant information showing that the NRC's characterization of the environmental impacts of spent fuel storage as insignificant in the License Renewal GEIS is incorrect,

(b) revoke the regulations which codify that incorrect conclusion and excuse consideration of spent fuel storage impacts in NEPA decision-making documents,

(c) issue a generic determination that the environmental impacts of high-density pool storage of spent fuel are significant, and

(d) order that any NRC licensing decision that approves high-density pool storage of spent fuel at a nuclear power plant or any other facility must be accompanied by an EIS that addresses (i) the environmental impacts of high-density pool storage of spent fuel at that nuclear plant and (ii) a reasonable array of alternatives for avoiding or mitigating those impacts.

Respectfully submitted,

Respectfully submitted,  
COMMONWEALTH OF MASSACHUSETTS

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