Nos. 07-1482; 07-1483

UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

COMMONWEALTH OF MASSACHUSETTS,
Petitioner,
v.
UNITED STATES; UNITED STATES NUCLEAR REGULATORY COMMISSION
Respondents,

ENTERGY NUCLEAR OPERATIONS, INC.; ENTERGY NUCLEAR VERMONT YANKEE LLC; ENTERGY NUCLEAR GENERATION COMPANY,
Intervenors.

ON PETITIONS FOR REVIEW OF ORDERS OF THE
U.S. NUCLEAR REGULATORY COMMISSION

BRIEF FOR PETITIONER COMMONWEALTH OF MASSACHUSETTS

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I. JURISDICTIONAL STATEMENT

These consolidated actions involve an appeal by the Commonwealth of Massachusetts of a final order by the U.S. Nuclear Regulatory Commission (NRC or Commission), refusing to grant the Commonwealth a hearing, or to consider the environmental impacts and risks, regarding the proposed twenty-year license extensions for the Pilgrim and Vermont Yankee nuclear power plants. *Entergy Nuclear Vermont Yankee LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), and *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-03, 65 NRC 13 (2007). Joint appendix (JA) 1.

This Court has jurisdiction pursuant to the Hobbs Act, 28 U.S.C. § 2342(4); the Administrative Procedure Act (APA), 5 U.S.C. § 702; and the Atomic Energy Act (AEA), 42 U.S.C. § 2239(b). The appeal was timely filed pursuant to 28 U.S.C. § 2344 because it was docketed on March 22, 2007, within sixty days after issuance of CLI-07-03 on January 22, 2007.

II. ISSUES PRESENTED FOR REVIEW

1. Did the NRC violate the National Environmental Policy Act (NEPA) and the APA by refusing to consider new and significant information in the Pilgrim and Vermont Yankee license renewal proceedings or to ensure that it would do so in an alternative generic proceeding?

2. Did the NRC violate the AEA by failing to grant the Commonwealth a hearing on the material licensing issue of whether the NRC must address new and significant information regarding the environmental impacts and risks of severe accidents from high density spent fuel storage?

III. STATEMENT OF THE CASE

In these consolidated actions, the Commonwealth of Massachusetts, requests this Court to reverse and remand CLI-07-03, in which the NRC refused, on purely procedural grounds, to consider the merits of the contention filed by the Commonwealth in both the Pilgrim and Vermont Yankee relicensing proceedings. The Commonwealth's contention challenges the adequacy of Entergy Nuclear Operations, Inc.'s, Entergy

Nuclear Vermont Yankee LLC's, and Entergy Nuclear Generation Company's (collectively Entergy) license renewal applications for failure to consider significant new information about the environmental impacts of extended high density storage of spent nuclear fuel at both plants. The Commonwealth contends that Entergy has failed to examine the risks of severe accidents caused by terrorist attack, natural phenomena, equipment failure, or operator error.

In a separate proceeding, the NRC is now considering a rulemaking petition submitted by the Commonwealth in August of 2006, at the NRC's own suggestion, which seeks generic consideration of the same environmental issue as did the Commonwealth's contentions in the individual licensing proceedings. The NRC has refused, however, to ensure that it will address the rulemaking petition in a timely way before the Pilgrim and Vermont Yankee plants are relicensed, and has failed to ensure that the results of the generic rulemaking will be considered and applied to the individual relicensing proceedings for Pilgrim and Vermont Yankee.

As a result of the Commission's ruling in CLI-07-03, the Commonwealth was denied status as a party to the license renewal proceedings and dismissed as a participant. The NRC has indicated that

whether the results of the generic rulemaking will be applied to the Pilgrim and Vermont Yankee relicensing proceedings is a matter of agency discretion, and that the Commonwealth, as a non-party to the individual proceedings, does not even have the right to request the NRC to exercise its discretion to address these issues prior to relicensing.

In view of the significant environmental and public health and safety concerns raised by the Commonwealth in both the individual relicensing proceedings and the generic rulemaking process, the Commonwealth requests the Court to order that the NRC consider these issues before relicensing Pilgrim and Vermont Yankee for another twenty years. Thus, the Commonwealth requests the Court to reverse and remand CLI-07-03 because (a) the NRC violated NEPA and the APA by failing to ensure that it will consider new and significant information about the environmental impacts of granting twenty year license extensions for the Pilgrim and Vermont Yankee nuclear power plants, and (b) the NRC violated the AEA by failing to provide the Commonwealth a hearing on a material licensing issue. The Commonwealth also asks this Court to order that the NRC withhold any final decision in the individual license renewal proceedings for Pilgrim and Vermont Yankee unless and until the Commission considers and

rules upon the Commonwealth's new and significant information in accordance with NEPA and the AEA and any further rulings by the Court, and the Commission applies those considerations and rulings to the individual Pilgrim and Vermont Yankee relicensing proceedings.

IV. STATEMENT OF FACTS

A. The Storage of Spent Nuclear Fuel at the Pilgrim and Vermont Yankee Nuclear Power Plants

In 1972, the NRC issued operating licenses for the Pilgrim nuclear power plant, located on the Massachusetts coast in Plymouth, and the Vermont Yankee nuclear power plant, located about ten miles from the Massachusetts border in Vernon, Vermont. JA 350. Entergy currently holds the operating licenses for both Pilgrim and Vermont Yankee. JA 67.

At the Pilgrim and Vermont Yankee nuclear power plants, electricity is generated from the heat released by fission reactions in radioactive "fuel rods" in the plants' reactors. Fuel rods are grouped together in "assemblies." After a fuel assembly can no longer be used to generate power, it is discharged from the reactor, but the "spent" fuel continues to emit significant heat and high levels of radiation. JA 366.

When the NRC originally licensed the Pilgrim and Vermont Yankee plants in 1972, the NRC expected that a relatively small amount of spent

fuel would have to be stored in nuclear plant storage pools, because spent fuel from nuclear power plants would be reprocessed. JA 429. After reprocessing was abandoned in the late 1970s, the federal government proposed to create a central repository for the disposal of spent nuclear fuel. *Id.* However, three decades later the United States still has not established a central repository for nuclear waste, and the prospects remain uncertain. As a result, nuclear plants, including Pilgrim and Vermont Yankee, continue to store their waste on site. JA 366-367, 429-430.

To accommodate the increasing inventory of spent fuel at the two plants, Pilgrim and Vermont Yankee have changed the way spent fuel is stored. Initially, the plants used "low-density" racks to store spent fuel under water (in "pools"). The open construction of these low-density racks allowed cooling fluid to flow freely around and over the spent fuel assemblies stored in the pools. Under several license amendments, however, the NRC has allowed spent fuel at Pilgrim and Vermont Yankee to be packed more densely into the pools, using "high-density" storage racks that restrict this flow. JA 367, 387.

B. Developments in the Understanding of Spent Fuel Storage Impacts

Low-density pool storage of spent fuel, as used at Pilgrim and Vermont Yankee during their early days of operation, posed limited risk of a severe nuclear accident. Therefore, the environmental impact statements (EISs) prepared by the NRC in that era concluded that the environmental impacts of spent fuel storage were insignificant. JA 366, 423-424.

Subsequently, as spent fuel continued to accumulate at the plants, licensees began to substitute high-density storage racks for low-density racks. Some scientists began to warn of the severe fire hazard posed by the high-density storage if water is lost from a pool. JA 424. However, the NRC did not credit these concerns. JA 426. In 1996, the NRC issued a generic EIS (License Renewal GEIS or GEIS) that concluded the environmental impacts of extended high-density spent fuel storage were insignificant.[1]

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[1]NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants at 6-70 - 6-86 (1996). *See also* JA 3. The NRC also concluded that impacts of sabotage against nuclear plants are insignificant because (a) NRC security regulations provide reasonable assurance that the risk from sabotage is small; (b) acts of sabotage are "not reasonably expected"; and (c) even if such an event were to occur, resultant core damage and radiological releases would be "no worse than those expected from internally initiated events." *Id.* at 5-18. The License Renewal GEIS can be found on the NRC's computerized data base - Agencywide Documents Access and Management System (ADAMS) under Accession Number ML040690705, *see* nrc.gov/reading-rm/adams.html.

In 2001, however, prompted by public comments and the Commission's independent advisory body, the Advisory Committee on Reactor Safeguards (ACRS), the NRC technical staff reconsidered the issue and concluded, in the publicly issued report (NUREG 1738 or NRC Staff's 2001 Report), that high-density fuel storage pools are vulnerable to fire. JA 524, 532-533.[2]

Later that year, terrorists attacked the Pentagon and the World Trade Center, raising new and grave questions about the vulnerability of nuclear power plants and their fuel storage pools to catastrophic intentional attack. Nevertheless, despite the report of its own technical staff and the 9/11 catastrophe, the Commission announced that it still would decline to consider the environmental impacts of terrorist attacks on nuclear facilities.[3]

In 2003, Dr. Gordon Thompson and seven other scientists issued a technical report on the hazards of high-density pool storage of spent fuel, concluding that if water is lost from a high-density storage pool, the spent fuel assemblies in the pool are vulnerable to spontaneous ignition and

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[2]NUREG 1738 was originally released in October, 2000 but formally published in 2001. JA 427.

[3] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation, CLI-02-25, 56 NRC 340 (2002); *Pacific Gas & Electric Company* (Diablo Canyon ISFSI), CLI-03-01, 57 NRC 1 (2003).

catastrophic fire. JA 430.[4] Concerned about the implications of this report and the NRC Staff's 2001 Report, Congress asked the National Academy of Sciences (NAS) to provide independent technical advice on the safety and security of commercial spent nuclear fuel storage in the United States. JA 536, 554. In response, the NAS confirmed the potential for a pool fire that could result in the release of a substantial portion of a fuel pool's radioactive inventory of cesium. JA 550. The NAS also concluded that spent fuel pools are vulnerable to terrorist attacks. JA 550.

C. Entergy's Applications to the NRC to Extend the Operating Licenses for Pilgrim and Vermont Yankee for an Additional Twenty Years

The Pilgrim and Vermont Yankee operating licenses will expire in June, 2012. In January, 2006, Entergy submitted license renewal applications to the NRC, seeking to extend the Pilgrim and Vermont Yankee operating licenses for another 20 years, or until 2032. In accordance with NRC regulation 10 C.F.R. § 51.53(c)(3)(iv), Entergy was required to include in each application any "new and significant information" regarding the environmental impacts of license renewal of which the applicant is aware.

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[4] The Commonwealth subsequently retained Dr. Thompson who prepared an expert report for these proceedings. JA 402.

For each plant, Entergy claimed that there is no new and significant information bearing on the environmental impacts of license renewal.[5]

D. The Commonwealth's Hearing Request and Contentions Regarding New and Significant Information

On May 26, 2006, the Commonwealth of Massachusetts, through its Attorney General, submitted hearing requests and "contentions" in the separate license renewal proceedings for the Pilgrim and Vermont Yankee nuclear power plants. JA 339, 659.[6] In each proceeding, the Commonwealth filed a virtually identical contention claiming that Entergy's relicensing applications violated NEPA, 42 U.S.C. 4321-4370(f), and NRC implementing regulation 10 C.F.R. § 51.53(c)(3)(iv), because Entergy did not address significant new information about the environmental risks of operating the Pilgrim and Vermont Yankee nuclear power plants for an additional twenty years. JA 369-398, 689-718. This new and significant

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[5]Entergy License Renewal Application, Appendix E, Environmental Report, Pilgrim Nuclear Power Station at 5-1 - 5-2 (January 25, 2006)(ADAMS Accession Number ML060830611); Entergy License Renewal Application, Appendix E, Environmental Report, Vermont Yankee Nuclear Power Station at 5-1 - 5-2 (January 25, 2006)(ADAMS Accession Number ML060300086). *See also* JA 369.

[6] At the same time in each case, the Commonwealth also submitted a Petition for a Backfit Order Requiring New Design Features to Protect Against Spent Fuel Pool Accidents. Those petitions are not on appeal here.

information, set forth in the NRC Staff's 2001 Report, the NAS Report, and the expert report prepared by Dr. Thompson, showed that if a fuel pool were to suffer even a partial loss of cooling water, whether caused by terrorist attack, natural phenomena, equipment failure, or operator error, the high-density racks would, over a wide range of scenarios, inhibit the flow of water, air or steam over the exposed portion of the fuel assemblies, causing some of the fuel to ignite within hours. The fire could then propagate within the pool and lead to a large atmospheric release of radioactive isotopes extending beyond Massachusetts borders (Pilgrim) or across the border into Massachusetts communities (Vermont Yankee). In a separate expert report submitted by the Commonwealth in support of the contentions, Dr. Jan Beyea concluded that such a large atmospheric release could cause thousands of cases of cancer and billions of dollars in economic damage. JA 492-512.

The Commonwealth contended that in light of this new and significant information, the NRC must revisit the conclusion of its License Renewal GEIS that spent fuel storage poses no significant environmental impacts. JA 369-371, 689-691. The Commonwealth also requested the NRC to reverse its policy of refusing to consider the environmental impacts of intentional

attacks on nuclear facilities, consistent with the U.S. Court of Appeals for the Ninth Circuit's recent decision in *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006), *cert. denied*, 127 S.Ct. 1124 (2007). JA 335, 337, 381-395, 701-715. In *San Luis Obispo Mothers for Peace*, the Ninth Circuit held that "none of the four factors upon which the NRC relies to eschew consideration of the environmental effects of a terrorist attack satisfies the standard of reasonableness," and remanded the case to the agency to fulfill its responsibilities under NEPA. 449 F. 3d at 1035.[7]

E. Atomic Safety and Licensing Board Decisions Rejecting the Commonwealth's Contentions

In each relicensing proceeding for Pilgrim and Vermont Yankee, a separate panel of the NRC's Atomic Safety and Licensing Board (ASLB) rejected the Commonwealth's contention on the procedural ground that the contention impermissibly challenged NRC regulation 10 C.F.R. Part 51, Appendix B. JA 10, 62. That regulation precludes consideration of the

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[7] Subsequent to issuing CLI-07-03, the NRC reaffirmed its refusal to consider the environmental impacts of terrorist events under NEPA in all Circuits beyond the reach of the Ninth Circuit. *Amergen Energy Company, L.L.C.* (Oyster Creek Nuclear Generating Station), CLI-07-08, 65, NRC 124, 128 (2007) ("Respectfully, however, we disagree with the Ninth Circuit's view."). This is so even though the NRC has indicated it may reconsider its position in the pending generic rulemaking initiated by the Commonwealth. *See* section IV.F.3, *infra.*

environmental impacts of spent fuel storage in NRC license renewal proceedings. JA 26. Appendix B is based on the 1996 License Renewal GEIS, which concluded that spent fuel storage impacts are insignificant. JA 21.

In each case, the ASLB also ruled that Appendix B precludes the Commonwealth from seeking consideration of new and significant information regarding the environmental impacts of terrorist attacks on the Pilgrim and Vermont Yankee spent fuel pools. JA 26, 74-78. The ASLBs concluded that, in order to challenge the Pilgrim or Vermont Yankee license renewal application's failure to address this new and significant information, the Commonwealth must first petition the NRC to change its rules or seek a waiver of the regulations prohibiting consideration of these impacts in license renewal hearings. JA 26, 76. Because the Commonwealth submitted only one contention in each of the license renewal cases, and each was rejected by the NRC, the Commonwealth was denied party status in both proceedings. JA 9, 56, 101.

F. The Commonwealth's Rulemaking Petition and Administrative Appeal of ASLB Rulings

1. Rulemaking petition

While disagreeing with the ASLBs' procedural rulings that the contentions were inadmissible under NRC regulations, the Commonwealth submitted a rulemaking petition to the NRC in the summer of 2006 to address the alternative rulemaking process.[8] The rulemaking petition sought revocation of the regulation prohibiting consideration of the environmental impacts of spent fuel storage in individual license renewal cases, based on the new and significant information set forth in the Pilgrim and Vermont Yankee contentions. *Id.* The Commonwealth also asserted that NEPA requires the NRC to withhold any final decision in the Pilgrim and Vermont Yankee license renewal cases until the generic rulemaking petition is resolved and applied to the individual licensing proceedings. *Id.*

2. Administrative appeals of ASLB decisions

To protect its rights to ensure that the NRC complies with NEPA for the license extensions at the specific plants of concern – Pilgrim and

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[8] Massachusetts Attorney General's Petition for Rulemaking to Amend 10 C.F.R. Part 51 (August 25, 2006)(ADAMS Accession Number ML062640409). The NRC published the petition for public comment at 71 Fed.Reg. 64, 169 (November 1, 2006). *See also* JA 3.

Vermont Yankee – the Commonwealth also appealed LBP-06-20 and LBP-06-23 to the NRC Commissioners, claiming that the ASLBs erred in refusing to admit the Commonwealth's contentions.[9] In the alternative, the Commonwealth asserted that if the NRC intended to use the rulemaking process to address the Commonwealth's substantive concerns regarding the environmental impacts of high-density spent fuel storage at the Pilgrim and Vermont Yankee nuclear power plants, NEPA requires the NRC to apply the results of the rulemaking in the individual license renewal proceedings before the licenses can be extended. JA 195-196.

3. Commission rulings on Commonwealth appeals

In CLI-07-03, the Commission affirmed LBP-06-20 and LBP-06-23 on procedural grounds, holding that the ASLBs had correctly concluded that the Commonwealth's contentions were inadmissible because they challenged an NRC regulation. JA 5. The Commission also found that the Commonwealth's rulemaking petition was the "appropriate way" to address the Commonwealth's substantive concerns about the environmental risks

[9] The Commonwealth's brief on appeal of LBP-06-20 is attached at JA 189. *See also* Massachusetts Attorney General's Brief on Appeal of LBP-06-23 (October 31, 2006).

posed by the Pilgrim and Vermont Yankee spent fuel pools, including the risks posed by terrorist attacks.[10]

However, claiming it was "premature," the Commission refused the Commonwealth's request that the NRC confirm it will apply the results of the rulemaking to the individual licensing proceedings, so that the Commonwealth's concerns regarding severe accidents at Pilgrim and Vermont Yankee can be considered in those cases prior to relicensing.

> The Mass AG's rulemaking petition (at p. 3) asked the NRC to withhold final decisions in the Vermont Yankee and Pilgrim license renewal proceedings until the rulemaking petition is resolved. But final decisions in those proceedings are not expected for another year or more. Those proceedings involve many issues unrelated to the Mass AG's rulemaking petition. It is therefore premature to consider suspending proceedings or delaying final decisions. NRC regulations provide that a petitioner who has filed a petition for rulemaking "may request the Commission to suspend all or any part of any licensing proceeding *to which the petitioner is a party* pending disposition of the petition for rulemaking." 10 C.F.R. § 2.802 (emphasis added).

JA 6.

Since the NRC dismissed the Commonwealth from the individual licensing proceedings, it is not a "party" to them and cannot rely on Section

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[10] *Id.* ("It makes more sense for the NRC to study whether, as a technical matter, the agency should modify its requirements related to spent fuel storage for all plants across the board than to litigate in particular adjudications whether generic findings in the GEIS are impeached by the Mass AG's claims of new information.")

2.802 to preserve its rights to request the Commission to stay the licensing proceedings pending disposition of the rulemaking. JA 9. Thus, while the Commission stated in CLI-07-03 that the generic rulemaking is the "appropriate way" to address the Commonwealth's concerns about the environmental risks of severe accidents at the Pilgrim and Vermont Yankee nuclear plants, the Commission then declined to commit to utilize that "appropriate way" in a timely manner, i.e., before making its decisions to relicense Pilgrim and Vermont Yankee. The Commission also reserved to itself the discretion, upon appropriate "request," whether or not to do so in the future.

4. Commonwealth's motion for reconsideration

On February 1, 2007, the Commonwealth moved for clarification and reconsideration. JA 212. On March 15, 2007, the Commission ruled that, notwithstanding the NRC's prior suggestion that the Commonwealth could request the Commission, as a matter of discretion, to suspend the individual relicensing proceedings for Pilgrim and Vermont Yankee in the future so that the results of the rulemaking could be applied to those proceedings, the Commonwealth has no such right. CLI-07-13, 65 NRC 211 (2007), JA 7. As the Commission explained:

> To clarify an additional point, under NRC regulations, the Mass AG currently has no right to request that the final decisions in Pilgrim and Vermont Yankee license renewal proceedings be stayed until the rulemaking is resolved. As we indicated in CLI-07-3, only a "party" to the proceedings, or an interested governmental entity participating under 10 C.F.R. § 2.315, may file a request to stay proceedings (pending a rulemaking) under 10 C.F.R. § 2.802. The Mass AG is neither. Because she did not offer an admissible contention, she was never admitted to either of the two proceedings as a "party."

JA 9.[11]

The NRC also determined that the Commonwealth must now appeal to this Court the Commission's rulings in the individual relicensing proceedings that rejected her contentions on procedural grounds even though no one at the NRC – the Commission or its Licensing Boards – has yet considered the merits of the Commonwealth's new and significant information about severe accidents at Pilgrim and Vermont Yankee and the generic rulemaking petition remains pending. *Id.*

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[11] The Commission explained that the Commonwealth could obtain the alternative status as an "interested governmental entity" only if it abandons its own contentions and waives its right to judicial review. JA 9. ("A state may participate *either* as an interested governmental entity *or* as a party with its own contentions, but not both.") (emphasis Commission). Thus, according to the NRC, by proceeding with this appeal, the Commonwealth lost its alternative right as an "interested governmental entity" to seek a stay of the individual proceedings pending a final rulemaking.

G. The Commonwealth's Petitions to This Court

On March 22, 2007, the Commonwealth submitted petitions for review to this Court, seeking review of the NRC's decisions in both the Pilgrim and Vermont Yankee license renewal cases. The Court consolidated the cases by order of March 26, 2007.

On April 24, 2007, the Commonwealth moved this Court to hold in abeyance the Petitions for Review until the Commission either addresses the Commonwealth's substantive claims in the pending rulemaking or issues a final decision to relicense the Pilgrim or Vermont Yankee plants. On June 22, 2007, the Court denied the Motion.

V. SUMMARY OF THE ARGUMENT

In these consolidated actions, the Commonwealth presented new and significant information, including the NRC Staff's 2001 Report, the National Academy of Sciences study, and expert reports, about the potentially catastrophic environmental impacts of severe accidents in the Pilgrim and Vermont Yankee nuclear power plants' high-density spent fuel storage pools caused by terrorist attack, natural phenomena, equipment failure, or operator error. Nevertheless, the Commission denied the Commonwealth's hearing request in CLI-07-03 to consider this new and significant information on the

procedural ground that the Commonwealth should raise its concerns in a generic rulemaking petition. After the Commonwealth filed the separate generic rulemaking petition, however, the Commission then refused to ensure that it would address the Commonwealth's new and significant information in a timely way through that rulemaking process, i.e., before renewing the Pilgrim and Vermont Yankee licenses for an additional twenty years. The Commission also refused to confirm that it would apply the results of the rulemaking to the individual license renewal decisions.

By dismissing the Commonwealth's contentions from the individual license renewal proceedings, without committing to comply with NEPA through the alternative generic process, the NRC violated its nondiscretionary duties under NEPA and acted arbitrarily and capriciously. By these procedural maneuvers, the NRC failed to meet NEPA's requirement to ensure it will take a "hard look" at the "new and significant information" that bears on the environmental impacts of the proposed action. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371-72 (1989). Although the NRC has the discretion to take a "hard look" at the new and significant information in either an individual or a generic proceeding, it still must utilize one of them to meet NEPA's basic requirement to consider the

environmental concerns in a timely way, i.e., before taking the major federal action that is proposed. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 349 (1989). Where the agency elects to proceed generically, it also must ensure that the generic decision-making is considered and "plugged in" to the individual proceedings from which the issue arose. *Baltimore Gas and Elec. Co. v. Natural Resources Defense Council, Inc.* , 462 U.S. at 101 (1983). In violation of NEPA, the NRC in this case has refused to ensure it will consider the new and significant information in a timely way or have it "plugged in" to the individual Pilgrim and Vermont Yankee proceedings.

Similarly, under the AEA, interested members of the public also have the right to be heard on all material licensing issues, including the question of whether the NRC has complied with its NEPA duties. 42 U.S.C. § 2239(a), *Union of Concerned Scientists v. NRC,* 735 F.2d 1437, 1439 (D.C. Cir.1984), *cert. denied,* 469 U.S. 1132 (1985). In this case, the Commission violated the AEA's nondiscretionary hearing requirement by failing to either (a) grant the Commonwealth's hearing requests in the individual license renewal proceedings for Pilgrim and Vermont Yankee or (b) ensure that it would hear the Commonwealth's concerns in the alternative rulemaking

proceeding, and apply its results before making relicensing decisions for the Pilgrim and Vermont Yankee plants.

VI. STANDARD OF REVIEW

Under the APA, a reviewing court must "hold unlawful and set aside agency action, findings and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Dubois v. U.S. Dept. of Agriculture,* 102 F.3d 1273, 1284 (1st Cir. 1996), citing 5 U.S.C. § 706(2)(A). Errors of law are reviewed "*de novo,*" with the court deciding "relevant questions of law." *Id.,* citing *Howard v. FAA*, 17 F.3d 1213, 1215 (9th Cir. 1994). Legal conclusions are judged under a standard of reasonableness. *Sierra Club v. Marsh*, 769 F.2d 868, 873 (1st Cir. 1985); *San Luis Obispo Mothers for Peace*, 449 F.3d at 1028.

While courts defer to agency factual decisions, the degree of deference owed by the court depends on the extent to which the agency's decision involves exercise of the agency's scientific expertise. *Puerto Rico Aqueduct & Sewer Author. v. EPA,* 35 F.3d 600, 604 (1st Cir. 1994). The more a factual decision depends on legal determinations, the less deference is required. *Id.*; *see also Dubois*, 102 F.3d at 1285, citing *Citizens Awareness Network*, 59 F.3d 284, 290 (1st Cir. 1995)(Court must conduct a

"searching and careful" inquiry, satisfying itself that the agency's decision "makes sense").

ARGUMENT

I. THE NRC VIOLATED NEPA AND THE APA BY REFUSING TO CONSIDER NEW AND SIGNIFICANT INFORMATION IN THE PILGRIM AND VERMONT YANKEE LICENSE RENEWAL PROCEEDINGS OR TO ENSURE THAT IT WOULD DO SO IN AN ALTERNATIVE GENERIC PROCEEDING

By denying the Commonwealth's requests to consider significant new information about the risks of severe accidents involving the high density storage of spent nuclear fuel at Pilgrim and Vermont Yankee, the NRC has decided to initiate a major federal action through the relicensing of these plants without first ensuring that it will consider this information as mandated by NEPA. As explained in this section, NEPA requires agencies to take a "hard look" at the environmental impacts and risks before taking the major federal action. This Court therefore should reverse the NRC's ruling and remand to the agency with instructions to withhold any final decision in the individual license renewal proceedings unless and until the Commission considers and rules upon the Commonwealth's new and significant information in accordance with NEPA and the AEA and any further rulings by the Court, and the Commission

applies those considerations and rulings to the individual Pilgrim and Vermont Yankee relicensing proceedings.

A. NEPA's Statutory and Regulatory Framework

1. NEPA's statutory purpose is to protect the environment

The National Environmental Policy Act of 1969 mandates that federal agencies consider the environmental impacts of major federal actions. "Congress has *direct(ed)* that, *to the fullest extent possible*: (1) the policies, regulations, and public laws of the United States *shall* be interpreted and administered in accordance with the policies set forth in (NEPA)." *Silva v. Romney*, 473 F.2d 287, 292 (1st Cir. 1973)(quoting 42 U.S.C. § 4332 (1))(emphasis Court)).

NEPA is the "basic national charter for protection of the environment." 40 C.F.R. § 1500.1. Its fundamental purpose is to "help public officials make decisions that are based on understanding of environmental consequences, and take decisions that protect, restore and enhance the environment." *Id.* NEPA "insure[s] that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government." 40 C.F.R. § 1502.1. Consistent with those policies, NEPA requires that an "agency take a 'hard look' at the environmental

consequences before taking a major action." *Baltimore Gas and Elec. Co.*, 462 U.S. 87, 97.

NEPA's duties "are not discretionary, but are specifically mandated by Congress, and are to be reflected in the procedural process by which agencies render their decisions." *Silva*, 473 F. 2d. at 292. "NEPA's mandate has been given strict enforcement in the courts, with frequent admonitions that it is insufficient to give mere lip service to the statute and then proceed in blissful disregard of its requirements." *Public Service Co. of New Hampshire v. NRC,* 582 F.2d 77, 81 (1st Cir. 1978).

2. NEPA review must be completed before taking major federal action

NEPA's procedures are time sensitive. NEPA requires an agency to consider the environmental impacts "*before* decisions are made and *before* actions are taken," 40 C.F.R. § 1500.1 (emphasis added), 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.

Whether an agency addresses NEPA's requirements through individual licensing proceedings or generic rulemaking can be determined by an agency. *Baltimore Gas Elec. Co.*, 462 U.S. at 100 ("NEPA does not

require agencies to adopt any particular internal decision-making structure.") However, NEPA requires that, whether the process adopted by the agency is generic rulemaking or case specific, the agency must consider the environmental impacts of its decisions before taking the action in the particular proceeding.

> The key requirement of NEPA . . . is that the agency consider and disclose the actual environmental effects in a manner that will ensure that the overall process, including both the generic rulemaking and the individual proceedings, brings those effects to bear on decisions to take particular actions that significantly affect the environment.

Id. at 96.[12]

3. NEPA requires preparation of an environmental impact statement

The primary method by which NEPA ensures that its mandate is met is the "action-forcing" requirement for preparation of an Environmental Impact Statement (EIS), which assesses the environmental impacts of the proposed action and weighs the costs and benefits of alternative actions. *Marsh,* 490 U.S. at 370 – 371. An EIS must be searching and rigorous, providing a "hard look" at the environmental

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[12] NEPA's mandate applies "regardless of [the agency's] eventual assessment of the significance of this information." *Marsh,* 490 U.S. at 385 (1989). "[F]ailure to do so ignores the central role assigned by NEPA to public participation." *Natural Resources Defense Council v. Lujan,* 768 F.Supp. 870, 889 (D.C. Cir. 1991).

consequences of the agency's proposed action. *Marsh*, 490 U.S. at 374. NEPA's instruction in 42 U.S.C. § 4332 that all federal agencies must comply with the impact statement requirement "to the fullest extent possible" is:

> neither accidental nor hyperbolic. Rather, the phrase is a deliberate command that the duty NEPA imposes upon the agencies to consider the environmental factors not be shunted aside in the bureaucratic shuffle.

Flint Ridge Development Co. v. Scenic Rivers Ass'n of Oklahoma, 426 U.S. 776, 787 (1976).

Not surprisingly, ["l]icensing of a nuclear power station by a federal regulatory Commission is a major federal action" subject to NEPA. *Natural Resources Defense Council, Inc. v. NRC,* 547 F.2d 633, 638 (D.C. Cir. 1976), *rev'd on other grounds, Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978) *(Natural Resources Defense Council I)*. To comply with NEPA in the context of a nuclear licensing proceeding, the environmental impacts that must be considered in an EIS include "reasonably foreseeable" impacts which have "catastrophic consequences, even if their probability of occurrence is low." 40 C.F.R. § 1502.22(b)(1).

4. NEPA requires that the EIS be supplemented

The completion of an EIS for a proposed action does not end an agency's responsibility to weigh the environmental impacts of a proposed action. *Marsh,* 490 U.S. at 371-72. As the Supreme Court recognized in *Marsh,* it would be incongruous with NEPA's "action-forcing" purpose to allow an agency to put on "blinders to adverse environmental effects," just because the EIS has been completed. *Id.* Accordingly, up until the point when the agency is ready to take the proposed action, it must supplement the EIS to consider new information showing that the remaining federal action may affect the quality of the human environment "in a significant manner or to a significant extent not already considered." *Id.* at 374.

5. NRC relies on License Renewal GEIS in individual license renewal proceedings

NRC regulations for the implementation of NEPA do not require the preparation of a new, site specific EIS for every nuclear power plant license renewal application. Instead, the NRC relies on a generic EIS (License Renewal GEIS or GEIS), prepared in 1996, to evaluate certain environmental impacts of license renewal. *See* 10 C.F.R. § 51.71(d).

The License Renewal GEIS and the NRC's environmental regulations governing license renewal-related NEPA issues separate environmental impacts, including accidents, into two major categories: Category 1 or "generic" impacts, and Category 2 or "plant-specific" impacts. *Duke Energy Corporation* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 290 (2002). For Category 1 impacts, the NRC considers the License Renewal GEIS analysis sufficient, and no further analysis is required in the EIS that is prepared by the NRC at the time of the license renewal application. 10 C.F.R. § 51.71(d)(4), 10 C.F.R. Part 51 Appendix B. For Category 2 impacts, the NRC has determined that impacts and alternatives cannot be fully addressed in the License Renewal EIS and therefore must be addressed in the site-specific EIS. *McGuire/Catawba*, 55 NRC at 290; *Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4)*, CLI-01-17, 54 NRC 3, 12 (2001).

6. NRC is required to supplement License Renewal EIS

Consistent with *Marsh*, 490 U.S. at 374, NRC regulations require that a license renewal application "must contain any new and significant information regarding the environmental impacts of license renewal of

which the applicant is aware." 10 C.F.R. § 51.53(c)(3)(iv). In addition, 10 C.F.R. § 51.71(d)(3) also requires consideration of new and significant information in a supplemental EIS for license renewal. Thus, the conclusions of the 1996 License Renewal GEIS are subject to modification in license renewal proceedings if new and significant information, not evaluated in the License Renewal GEIS, shows that the environmental impacts of license renewal are greater than concluded in the 1996 License Renewal GEIS.[13]

B. By Adopting a Generic Rulemaking Process that Fails to Ensure that the NRC will Consider the New and Significant Information in an Effective and Timely Manner, the NRC Violated NEPA.

In CLI-07-03, the Commission rejected the Commonwealth's contentions and dismissed the Commonwealth from the Pilgrim and Vermont Yankee license renewal proceedings, on the procedural ground

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[13] The NRC has issued final supplements to the License Renewal GEIS for the Pilgrim and Vermont Yankee nuclear plants. NUREG-1437, Generic Environmental Impact Statement for License renewal of Nuclear Plants, Supplement 29 Regarding Pilgrim Nuclear Power Station, Final Report (July 2007); NUREG-1437, Generic Environmental Impact Statement for License renewal of Nuclear Plants, Supplement 30 Regarding Vermont Yankee Nuclear Power Station, Final Report (July 2007). Consistent with Appendix B of 10 C.F.R. Part 51, neither document addresses the environmental impacts of extended high-density pool storage of spent fuel.

that it "makes more sense" to consider the concerns raised by the Commonwealth's contentions in a generic rulemaking. 65 NRC at 20, JA 05. However, once the Commonwealth complied with the NRC's suggestion and submitted an alternative rulemaking petition, the Commission then refused to ensure that it would, as required by NEPA, take a hard look at this new and significant information in a timely way as part of the generic rulemaking process -- prior to relicensing Pilgrim and Vermont Yankee -- or that it will apply this information back to the individual licensing proceedings that gave rise to the concerns.

As a result, the Commission has failed to fulfill its nondiscretionary duties under NEPA with respect to the relicensing for Pilgrim and Vermont Yankee. Simultaneously, the Commission also seeks to deprive the Commonwealth of any opportunity to seek enforcement of those NEPA duties, beyond the present appeal, by rejecting its contentions and denying the Commonwealth party status in the individual proceedings. The NRC should not be permitted to so construe its regulations to violate NEPA and evade judicial review.[14]

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[14] Since the Commonwealth has been dismissed as a party from the individual proceedings, it will not have another opportunity in those cases to seek judicial review -- beyond the present appeal -- in the event that the NRC elects to relicense Pilgrim and Vermont Yankee before the

While the NRC has discretion to select a generic rulemaking process to resolve environmental issues arising in an individual proceeding, it still must:

> consider and disclose the actual environmental effects in a manner that will ensure that the overall process, including both the generic rulemaking and the individual proceedings, brings those effects to bear on decisions to take particular actions that significantly affect the environment.

Natural Resources Defense Council v. NRC, 685 F. 2d 459, 482-483 (D.C. Cir. 1980), *rev'd on other grounds, Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 96 (1983) (Natural Resources Defense Council II). *See also Natural Resources Defense Council I*, 547 F.2d at 641, n. 17 ("What the agency may not do, consistent with NEPA, is to fail to give these [environmental] issues adequate consideration in either [generic or site specific] forum."

Thus, where the agency's generic process is ineffective or uncertain to resolve the site-specific concerns, courts have reversed or remanded to the NRC to address these concerns. See *State of Minnesota v. NRC*, 602 F.2d 412, 418 (D.C. Cir., 1979)("The question is whether there has been an NRC disposition in generic proceedings that is adequate to dispose of the

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rulemaking is completed or declines to exercise its discretion to apply the results of the rulemaking to the relicensing proceedings.

objections to the licensing amendments."); *Natural Resources Defense Council I*, 547 F. 2d at 641 ("We therefore hold that absent effective generic proceedings to consider these [environmental] issues, they must be dealt with in individual licensing proceedings.").[15]

In short, as the Supreme Court observed, the conclusions reached by the NRC in a generic rulemaking must be "plugged into" the individual licensing decisions from which the rulemaking issues arose. *Baltimore Gas & Elec. Co.*, 462 U.S. at 101 ("[T]he Commission has the discretion to evaluate generically the environmental effects of the fuel cycle and require that these values be 'plugged into' individual licensing decisions."). Here, the NRC has explicitly refused to ensure that decisions reached in the generic rulemaking will be plugged into the individual Pilgrim and Vermont Yankee proceedings. This process violates NEPA:

> In the course of such a generic rulemaking . . . , the agency [NRC] must consider and disclose the actual environmental effects it has assessed in a manner that will ensure that the overall process, including both generic rulemaking and the

[15] After the D.C. Circuit reversed the NRC in *Natural Resources Defense Council I* to address NEPA compliance in the individual licensing proceedings, and before the Supreme Court could address the matter, the NRC mooted the issue by publicly delcaring it would consider the environmental impact of spent fuel processes when licensing nuclear power plants. *See Vermont Yankee Nuclear Power Plant v. NRDC,* 435 U.S. 519, 538 (1978).

> individual proceedings, brings those effects to bear on decisions to take particular actions that significantly affect the environment.
>
> * * * *
>
> As we have emphasized above, NEPA requires an agency to consider the environmental risks of a proposed action in a manner that allows the existence of such risks to influence the agency's decision to take the action.

Natural Resources Defense Council II, 685 F. 2d at 482 – 483.

Because the NRC in this case has failed to ensure that it will consider the Commonwealth's new and significant information in a timely manner, that it will apply those considerations to the Pilgrim and Vermont Yankee relicensing proceedings, and that it will conform to these nondiscretionary requirements mandated by NEPA rather than reserving to itself the discretion whether to do so in the future, the NRC violated NEPA. Consistent with the above authority, the NRC must consider the Commonwealth's new and significant information in an effective manner, whether through generic rulemaking or in the individual proceedings, and ensure that these considerations will be timely applied to the relicensing proceedings for Pilgrim and Vermont Yankee. See *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 92 (2nd Cir. 1975)(holding that "the critical agency decision" must be made after the new

information has been considered in good faith; otherwise "the process becomes a useless ritual, defeating the purpose of NEPA, and rather making a mockery of it.")

C. By turning the NRC's Nondiscretionary Duty to Consider Environmental Impacts Prior to Relicensing into a Matter of Agency Discretion, the NRC Violated NEPA and Acted Arbitrarily and Capriciously.

In this case, the NRC has decided that whether it will comply with NEPA's non-discretionary duties to consider the Commonwealth's significant new information prior to relicensing the Pilgrim and Vermont Yankee nuclear power plants is now a matter of complete agency discretion:

> Nonetheless, depending on the timing and outcome of the NRC Staff's resolution of the Mass AG's petition for rulemaking, it is possible that the NRC staff could seek the Commission's permission to suspend the generic determination and include a new analysis in the Pilgrim and Vermont Yankee plant-specific environmental impact statements.

CLI-07-03, 65 NRC at 22 and n.37, JA 6.

Under the NRC's present process, the Commonwealth does not even have a right to request the agency to exercise its discretion to stay the individual proceedings so that the results of the rulemaking may be applied to Pilgrim and Vermont Yankee.

> To clarify an additional point, under NRC regulations, the Mass AG currently has no right to request that the final decisions in the Pilgrim and Vermont Yankee license renewal proceedings be stayed until the rulemaking is resolved.

CLI-07-13, 65 NRC at 214, JA 9.

However, the Commonwealth's rights under NEPA are not subject to the NRC's unfettered discretion to grant or withhold. Once the Commonwealth submitted new and significant information to the NRC as part of the relicensing process for Pilgrim and Vermont Yankee, the NRC is required in some manner to consider this information and weigh its merits prior to relicensing. *Marsh,* 490 U.S. at 374. Because the NRC has turned NEPA's non-discretionary duty to consider this information into a matter of agency discretion, the NRC violated NEPA. *Silva,* 473 F. 2d *supra,* at 292 ("These [NEPA] duties are not discretionary."). *See also Students Challenging Regulatory Agency Procedures (S.C.R.A.P.) v. U.S.*, 346 F.Supp. 189, 198 (D.C. Cir. 1972), *rev'd on other* grounds, *United States v. S.C.R.A.P.*, 412 U.S. 669 (1973) ("[J]udicial insistence on compliance with the non-discretionary procedural requirements of NEPA in no way interferes with the Commission's substantive discretion"). *See also Marsh,* 490 U.S. at 385 (holding that "regardless of its eventual assessment of the

significance of this information, the Corps had a duty to take a hard look at the proffered evidence.").

Contrary to NEPA, the NRC has not complied with its non-discretionary duty to take a "hard look" at the information as required by NEPA. Indeed the NRC has not given any consideration in this proceeding to the merits of the Commonwealth's information and refuses to ensure that it will ever do so.

Moreover, it is arbitrary and capricious for the NRC to decouple the merits of the Commonwealth's significant new information from the individual proceedings, supposedly to address it in the "more appropriate" generic rulemaking, and then refuse to ensure it will in fact reconnect and "plug in" its ultimate determination on the merits to the individual proceedings once the generic rulemaking is resolved. The NRC's arbitrary manner of proceeding in this case violates both NEPA and the APA's mandate for reasoned agency decision-making. *Citizens Awareness Network*, 59 F.3d at 291.[16]

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[16] In *Citizens Awareness Network*, this Court found that "the Commission's action in allowing [the licensee] to complete ninety percent of the decommissioning at a nuclear power plant prior to NEPA compliance lacked any rational basis, and was thus arbitrary and capricious." 59 F.3d at 293. The Court concluded that the NRC "essentially exempt[ed] a licensee from regulatory compliance," a practice the Court found to be "skirt[ing]

II. THE NRC VIOLATED THE ATOMIC ENERGY ACT BY FAILING TO GRANT THE COMMONWEALTH A HEARING ON THE MATERIAL LICENSING ISSUE OF WHETHER THE NRC MUST ADDRESS NEW AND SIGNIFICANT INFORMATION REGARDING THE ENVIRONMENTAL IMPACTS AND RISKS OF SEVERE ACCIDENTS FROM HIGH DENSITY SPENT FUEL STORAGE

A. The Atomic Energy Act Requires the NRC to Grant the Commonwealth a Hearing in this Case

Section 189a of the AEA requires the NRC to provide interested members of the public with an opportunity for a hearing on any decision regarding the issuance or amendment of a nuclear facility license. 42 U.S.C. § 2239(a)(1)(A). The NRC has indicated that a hearing should be granted in license renewal proceedings because renewal of an operating license "is essentially the granting of a license." Proposed Rule, Nuclear Power Plant License Renewal, 55 Fed. Reg. 29,043, 29,052 (July 17, 1990). The scope of issues on which a petitioner may request a hearing includes all issues that are material to the NRC's licensing decision. *Union of Concerned Scientists v. NRC*, 735 F.2d 1437, 1439 (D.C. Cir.1984), *cert. denied*, 469 U.S. 1132 (1985).

To obtain a hearing, a petitioner must demonstrate standing and submit at least one admissible "contention" or claim regarding the

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NEPA" and "manifestly arbitrary and capricious." *Id.*

inadequacy of the license application. 10 C.F.R. § 2.309(a). To be admissible, a contention must "set forth with particularity" the petitioner's claims regarding the inadequacy of the license application, explain the basis for the petitioner's claims, demonstrate that the issues raised are within the scope of the proceeding and material to the NRC's licensing decision, and provide sufficient legal and/or evidentiary support to show that "a genuine dispute exists with the applicant/licensee on a material issue of law or fact." 10 C.F.R. § 2.309(f)(1)(i)-(vi).

Contentions that seek compliance with NEPA must be based on the applicant's Environmental Report (ER). 10 C.F.R. § 2.309(f)(2).[17] The NRC uses the ER to prepare an EIS, although it has an independent obligation to "evaluate and be responsible for the reliability" of the information. 10 C.F.R. § 51.70.

The NRC then convenes an ASLB, which holds a public adjudicatory hearing restricted to the subject matter of the contentions that have been admitted for litigation. 10 C.F.R. § 2.309(a); *see also Union of Concerned Scientists,* 735 F.2d at 1439. In the alternative, the NRC may satisfy the

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[17] *See also* 10 C.F.R. § 51.53, which requires that a license renewal applicant must evaluate environmental issues, in the first instance, in the ER.

AEA hearing requirement in appropriate cases though a generic rulemaking proceeding. *See Kelly v. Selin*, 42 F. 3d 1501, 1511 (6th Cir. 1995).

B. The NRC Unlawfully Deprived the Commonwealth of a Nondiscretionary Hearing in Either the Individual Relicensing Proceedings or in the Generic Rulemaking Process

To obtain approval of its license renewal applications for the Pilgrim and Vermont Yankee nuclear plants, Entergy must satisfy the requirement of 10 C.F.R. § 51.53(c)(3)(iv) that its ER must address "any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware." Since this regulatory requirement is material to licensing, under the AEA the Commonwealth, upon submission of an admissible contention, was entitled to a hearing on whether Entergy had complied with that relicensing regulation and had adequately addressed the significant adverse environmental impacts of high-density storage of spent fuel at the Pilgrim and Vermont Yankee nuclear power plants. AEA § 189a, 42 U.S.C. § 2239(a).

Under the AEA, the Commission has the discretion to satisfy the AEA hearing requirement through a generic rulemaking proceeding and need not grant an adjudicatory hearing in the individual licensing

proceeding. *See Kelly*, 42 F. 3d at 1511 (quoting *Mobil Oil Exploration v. United Distribution Cos.*, 498 U.S. 211, 228 (1991)("A contrary holding would require the agency to relitigate issues that may be established fairly and efficiently in a single rulemaking proceeding.")). However, as the Court suggested in *Kelly*, the results of the rulemaking should be available *before* the decision making in the individual licensing proceeding so that the information may be given due consideration prior to relicensing. *See* 42 F. 3d at 1512 ("The public had an extensive opportunity to comment on the proposed amendment...").

Here, unlike *Kelly*, the Commission has not satisfied Section 189a of the AEA because it has never considered the merits of the Commonwealth's significant new information regarding environmental risks at Pilgrim and Vermont Yankee in either the individual licensing proceedings, or in a generic rulemaking, and has declined to commit to do so in a timely way. The Commission's discretionary process impermissibly burdens the Commonwealth's AEA hearing right to insist that the Commonwealth's information be considered prior to relicensing. *See Union of Concerned Scientists,* 735 F.2d at 1443-44 (opportunity to request

the NRC to re-open a closed hearing record is not the equivalent of a Section 189a hearing right).

Moreover, if the NRC were to deny the Commonwealth's rulemaking petition at any time, or to decline to apply the rulemaking to the individual licensing proceedings, the Commonwealth could appeal the rulemaking but could not ensure that the results of that rulemaking process would be binding on the individual license renewal cases. This could render the Commonwealth's AEA hearing right meaningless.[18]

Thus, in violation of the AEA, the Commission has failed to satisfy its nondiscretionary duty to grant the Commonwealth a hearing on the material licensing issue raised in the Commonwealth's contentions. *Union of Concerned Scientists*, 735 F.2d at 1445 (holding that while the NRC has "great discretion" to determine what matters are relevant to its licensing decisions, it lacks discretion to eliminate issues from hearings once they are found to be relevant).

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[18] To date, the Commission has not ruled upon the Commonwealth's rulemaking petition, which was filed one year ago on August 25, 2006.

VII. CONCLUSION AND REQUEST FOR RELIEF

For the foregoing reasons, this Court should reverse and remand CLI-07-03 with directions that the Commission withhold any final decision in the individual license renewal proceedings for Pilgrim and Vermont Yankee unless and until the Commission considers and rules upon the Commonwealth's new and significant information in accordance with NEPA and the AEA and any further rulings by the Court, and the Commission applies those considerations and rulings to the individual Pilgrim and Vermont Yankee relicensing proceedings.

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This brief complies with the type-volume requirements of Fed. R. App. P. 32(a)(7)(B) because it contains 8,731 words as determined by the word-count function on the word processor, and excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii). The court does not include the title page, corporate disclosure statement, table of contents, table of authorities, statement with respect to oral argument, addendum of statutes, rules, and regulations. The word count does include all footnotes, headings, and sub-headings within the brief.

This brief also complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6). The typeface used is Times New Roman, a proportionally spaced typeface using serifs, and the Brief is set in 14-point type. The word processing program used was WordPerfect 9.

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Certificate of Service

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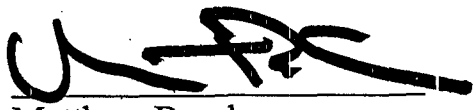

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ADDENDUM

ADDENDUM

PERTINENT STATUTES AND REGULATIONS

DECISION ON REVIEW AND OTHER RELEVANT ITEMS

Statutes

Administrative Procedure Act

5 U.S.C. § 702. Right of review

A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: *Provided,* That any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

Atomic Energy Act

42 U.S.C. § 2239. Hearings and judicial review

(a)

(1) (A) In any proceeding under this Act [42 USCS §§ 2011 et seq.], for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees, and in any proceeding for the payment of compensation, an award or royalties under sections 153, 157, 186(c), or 188 [42 USCS §§ 2183, 2187, or 2236(c), 2238], the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding. The Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register, on each application under section 103 or 104(b) [42 USCS § 2133 or 2134(b)] for a construction permit for a facility, and on any application under section 104(c) [42 USCS § 2134(c)] for a construction permit for a testing facility. In cases where such a construction permit has been issued following the holding of such a hearing, the Commission may, in the absence of a request therefore by any person whose interest may be affected, issue an operating license or an amendment to a construction permit or an amendment to an operating license without a hearing, but upon thirty days' notice and publication once in the Federal Register of its intent to do so. The Commission may dispense with such thirty days' notice and publication with respect to any application for an amendment to a construction permit or an amendment to an operating license upon a determination by the Commission that the amendment involves no significant hazards consideration.

(b) The following Commission actions shall be subject to judicial review in the manner prescribed in chapter 158 of title 28, United States Code [28 USCS §§ 2341 et seq.], and chapter 7 of title 5, United States Code [5 USCS §§ 701 et seq.]:

(1) Any final order entered in any proceeding of the kind specified in subsection (a).

(2) Any final order allowing or prohibiting a facility to begin operating under a combined construction and operating license.

(3) Any final order establishing by regulation standards to govern the Department of Energy's gaseous diffusion uranium enrichment plants, including any such facilities leased to a corporation established under the USEC Privatization Act.

(4) Any final determination under section 1701(c) [42 USCS § 2297f(c)] relating to whether the gaseous diffusion plants, including any such facilities leased to a corporation established under the USEC Privatization Act, are in compliance with the Commission's standards governing the gaseous diffusion plants and all applicable laws.

Hobbs Act

28 U.S.C. § 2342(4).

The court of appeals (other than the United States Court of Appeals for the Federal Circuit) has exclusive jurisdiction to enjoin, set aside, suspend (in whole or in part), or to determine the validity of--

(4) all final orders of the Atomic Energy Commission made reviewable by section 2239 of title 42.

28 U.S.C. § 2344.

Review of orders; time; notice; contents of petition; service

On the entry of a final order reviewable under this chapter [28 USCS §§ 2341 et seq.], the agency shall promptly give notice thereof by service or publication in accordance with its rules. Any party aggrieved by the final order may, within 60 days after its entry, file a petition to review the order in the court of appeals wherein venue lies. The action shall be against the United States. The petition shall contain a concise statement of—

(1) the nature of the proceedings as to which review is sought;
(2) the facts on which venue is based;
(3) the grounds on which relief is sought; and
(4) the relief prayed.

The petitioner shall attach to the petition, as exhibits, copies of the order, report, or decision of the agency. The clerk shall serve a true copy of the petition on the agency and on the Attorney General by registered mail, with request for a return receipt.

National Environmental Policy Act

42 U.S.C. § 4332.

Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act [42 USCS §§ 4321 et seq.], and (2) all agencies of the Federal Government shall--

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act [42 USCS §§ 4341 et seq.], which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on--

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this Act [42 USCS §§ 4321 et seq.]; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.[;]

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available

resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by title II of this Act [42 USCS §§ 4341 et seq.].

NRC Regulations

10 C.F.R. § 2.309.

Hearing requests, petitions to intervene, requirements for standing, and contentions.

(a) General requirements. Any person whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing or petition for leave to intervene and a specification of the contentions which the person seeks to have litigated in the hearing. Except as provided in paragraph (e) of this section, the Commission, presiding officer or the Atomic Safety and Licensing Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section. In ruling on the request for hearing/petition to intervene submitted by petitioners seeking to intervene in the proceeding on the HLW repository, the Commission, the presiding officer or the Atomic Safety and Licensing Board shall also consider any failure of the petitioner to participate as a potential party in the pre-license application phase under subpart J of this part in addition to the factors in paragraph (d) of this section. If a request for hearing or petition to intervene is filed in response to any notice of hearing or opportunity for hearing, the applicant/licensee shall be deemed to be a party.

(b) Timing. Unless otherwise provided by the Commission, the request and/or petition and the list of contentions must be filed as follows:

(1) In proceedings for the direct or indirect transfer of control of an NRC license when the transfer requires prior approval of the NRC under the Commission's regulations, governing statute, or pursuant to a license condition, twenty (20) days from the date of publication of the notice in the Federal Register.

(2) In proceedings for the initial authorization to construct a high-level radioactive waste geologic repository, and the initial licensee to receive and process high level radioactive waste at a geological repository operations area, thirty (30) days from the date of publication of the notice in the Federal Register.

(3) In proceedings for which a Federal Register notice of agency action is published (other than a proceeding covered by paragraphs (b)(1) or (b)(2) of this section), not later than:

(i) The time specified in any notice of hearing or notice of proposed action or as provided by the presiding officer or the Atomic Safety and Licensing Board designated to rule on the request and/or petition, which may not, with the exception of a notice provided under § 2.102(d)(3), be less than 60 days from the date of publication of the notice in the Federal Register;

(ii) The time provided in § 2.102(d)(3); or

(iii) If no period is specified, sixty (60) days from the date of publication of the notice.

(4) In proceedings for which a Federal Register notice of agency action is not published, not later than the latest of:

(i) Sixty (60) days after publication of notice on the NRC Web site at http://www.nrc.gov/public-involve/major-actions.html, or

(ii) Sixty (60) days after the requestor receives actual notice of a pending application, but not

more than sixty (60) days after agency action on the application.

(5) For orders issued under § 2.202 the time period provided therein.

(c) Nontimely filings. (1) Nontimely requests and/or petitions and contentions will not be entertained absent a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on the request and/or petition and contentions that the request and/or petition should be granted and/or the contentions should be admitted based upon a balancing of the following factors to the extent that they apply to the particular nontimely filing:

(i) Good cause, if any, for the failure to file on time;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;

(iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;

(v) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

(2) The requestor/petitioner shall address the factors in paragraphs (c)(1)(i) through (c)(1)(viii) of this section in its nontimely filing.

(d) Standing. (1) General requirements. A request for hearing or petition for leave to intervene must state:

(i) The name, address and telephone number of the requestor or petitioner;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding; and

(iv) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest.

(2) State, local governmental body, and affected, Federally-recognized Indian Tribe. (i) A State, local governmental body (county, municipality or other subdivision), and any affected Federally-recognized Indian Tribe that desires to participate as a party in the proceeding shall submit a request for hearing/petition to intervene. The request/petition must meet the requirements of this section (including the contention requirements in paragraph (f) of this section), except that a State, local governmental body or affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries need not address the standing

requirements under this paragraph. The State, local governmental body, and affected Federally-recognized Indian Tribe shall, in its request/petition, each designate a single representative for the hearing.

(ii) The Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene will admit as a party to a proceeding a single designated representative of the State, a single designated representative for each local governmental body (county, municipality or other subdivision), and a single designated representative for each affected Federally-recognized Indian Tribe. In determining the request/petition of a State, local governmental body, and any affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries, the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene shall not require a further demonstration of standing.

(iii) In any proceeding on an application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, the Commission shall permit intervention by the State and local governmental body (county, municipality or other subdivision) in which such an area is located and by any affected Federally-recognized Indian Tribe as defined in parts 60 or 63 of this chapter if the requirements of paragraph (f) of this section are satisfied with respect to at least one contention. All other petitions for intervention in any such proceeding must be reviewed under the provisions of paragraphs (a) through (f) of this section.

(3) The Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on requests for hearing and/or petitions for leave to intervene will determine whether the petitioner has an interest affected by the proceeding considering the factors enumerated in § 2.309(d)(1)-(2), among other things. In enforcement proceedings, the licensee or other person against whom the action is taken shall have standing.

(e) Discretionary Intervention. The presiding officer may consider a request for discretionary intervention when at least one requestor/petitioner has established standing and at least one admissible contention has been admitted so that a hearing will be held. A requestor/petitioner may request that his or her petition be granted as a matter of discretion in the event that the petitioner is determined to lack standing to intervene as a matter of right under paragraph (d)(1) of this section. Accordingly, in addition to addressing the factors in paragraph (d)(1) of this section, a petitioner who wishes to seek intervention as a matter of discretion in the event it is determined that standing as a matter of right is not demonstrated shall address the following factors in his/her initial petition, which the Commission, the presiding officer or the Atomic Safety and Licensing Board will consider and balance:

(1) Factors weighing in favor of allowing intervention --

(i) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record;

(ii) The nature and extent of the requestor's/petitioner's property, financial or other interests in the proceeding; and

(iii) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest;

(2) Factors weighing against allowing intervention --

(i) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(ii) The extent to which the requestor's/petitioner's interest will be represented by existing parties; and

(iii) The extent to which the requestor's/petitioner's participation will inappropriately broaden the issues or delay the proceeding.

(f) Contentions. (1) A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

(i) Provide a specific statement of the issue of law or fact to be raised or controverted;

(ii) Provide a brief explanation of the basis for the contention;

(iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;

(iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;

(v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and

(vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

(2) Contentions must be based on documents or other information available at the time the petition is to be filed, such as the application, supporting safety analysis report, environmental report or other supporting document filed by an applicant or licensee, or otherwise available to a petitioner. On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents. Otherwise, contentions may be amended or new contentions filed after the initial filing only with leave of the presiding officer upon a showing that --

(i) The information upon which the amended or new contention is based was not previously available;

(ii) The information upon which the amended or new contention is based is materially different than information previously available; and

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

(3) If two or more requestors/petitioners seek to co-sponsor a contention, the requestors/petitioners shall jointly designate a representative who shall have the authority to act for the requestors/petitioners with respect to that contention. If a requestor/petitioner seeks to

adopt the contention of another sponsoring requestor/petitioner, the requestor/petitioner who seeks to adopt the contention must either agree that the sponsoring requestor/petitioner shall act as the representative with respect to that contention, or jointly designate with the sponsoring requestor/petitioner a representative who shall have the authority to act for the requestors/petitioners with respect to that contention.

(g) Selection of hearing procedures. A request for hearing and/or petition for leave to intervene may also address the selection of hearing procedures, taking into account the provisions of § 2.310. If a request/petition relies upon § 2.310(d), the request/petition must demonstrate, by reference to the contention and the bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures.

(h) Answers to requests for hearing and petitions to intervene. Unless otherwise specified by the Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene --

(1) The applicant/licensee, the NRC staff, and any other party to a proceeding may file an answer to a request for a hearing, a petition to intervene and/or proffered contentions within twenty-five (25) days after service of the request for hearing, petition and/or contentions. Answers should address, at a minimum, the factors set forth in paragraphs (a) through (g) of this section insofar as these sections apply to the filing that is the subject of the answer.

(2) The requestor/petitioner may file a reply to any answer within seven (7) days after service of that answer.

(3) No other written answers or replies will be entertained.

(i) Decision on request/petition. The presiding officer shall, within forty-five (45) days after the filing of answers and replies under paragraph (h) of this section, issue a decision on each request for hearing/petition to intervene, absent an extension from the Commission.

10 C.F.R. § 51.53. Postconstruction environmental reports.

(a) General. Any environmental report prepared under the provisions of this section may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or any information contained in a final environmental document previously prepared by the NRC staff that relates to the production or utilization facility. Documents that may be referenced include, but are not limited to, the final environmental impact statement; supplements to the final environmental impact statement, including supplements prepared at the license renewal stage; NRC staff-prepared final generic environmental impact statements; and environmental assessments and records of decisions prepared in connection with the construction permit, the operating license, and any license amendment for that facility.

(b) Operating license stage. Each applicant for a license to operate a production or utilization facility covered by § 51.20 shall submit with its application a separate document entitled "Supplement to Applicant's Environmental Report -- Operating License Stage," which will update "Applicant's Environmental Report -- Construction Permit Stage." Unless otherwise required by the Commission, the applicant for an operating license for a nuclear power reactor shall submit this report only in connection with the first licensing action authorizing full-power operation. In this report, the applicant shall discuss the same matters described in §§ 51.45, 51.51, and 51.52, but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. No discussion of need for power, or of alternative energy

sources, or of alternative sites for the facility, or of any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b) is required in this report.

(c) Operating license renewal stage. (1) Each applicant for renewal of a license to operate a nuclear power plant under part 54 of this chapter shall submit with its application a separate document entitled "Applicant's Environmental Report -- Operating License Renewal Stage."

(2) The report must contain a description of the proposed action, including the applicant's plans to modify the facility or its administrative control procedures as described in accordance with § 54.21 of this chapter. This report must describe in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment. In addition, the applicant shall discuss in this report the environmental impacts of alternatives and any other matters described in § 51.45. The report is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such costs and benefits are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. The environmental report need not discuss other issues not related to the environmental effects of the proposed action and the alternatives. In addition, the environmental report need not discuss any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b).

(3) For those applicants seeking an initial renewal license and holding either an operating license or construction permit as of June 30, 1995, the environmental report shall include the information required in paragraph (c)(2) of this section subject to the following conditions and considerations:

(i) The environmental report for the operating license renewal stage is not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1 issues in Appendix B to subpart A of this part.

(ii) The environmental report 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 identified as Category 2 issues in Appendix B to subpart A of this part. The required analyses are as follows:

(A) If the applicant's plant utilizes cooling towers or cooling ponds and withdraws make-up water from a river whose annual flow rate is less than 3.15x10<12> ft<3>/year (9x10<10> m<3>/year), an assessment of the impact of the proposed action on the flow of the river and related impacts on instream and riparian ecological communities must be provided. The applicant shall also provide an assessment of the impacts of the withdrawal of water from the river on alluvial aquifers during low flow.

(B) If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant can not provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from heat shock and impingement and entrainment.

(C) If the applicant's plant uses Ranney wells or pumps more than 100 gallons (total onsite) of ground water per minute, an assessment of the impact of the proposed action on ground-water use must be provided.

(D) If the applicant's plant is located at an inland site and utilizes cooling ponds, an assessment of the impact of the proposed action on groundwater quality must be provided.

(E) All license renewal applicants shall assess the impact of refurbishment and other license-renewal-related construction activities on important plant and animal habitats. Additionally, the applicant shall assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act.

(F) If the applicant's plant is located in or near a nonattainment or maintenance area, an assessment of vehicle exhaust emissions anticipated at the time of peak refurbishment workforce must be provided in accordance with the Clean Air Act as amended.

(G) If the applicant's plant uses a cooling pond, lake, or canal or discharges into a river having an annual average flow rate of less than 3.15x10<12> ft<3>/year (9x10<10> m<3>/year), an assessment of the impact of the proposed action on public health from thermophilic organisms in the affected water must be provided.

(H) If the applicant's transmission lines that were constructed for the specific purpose of connecting the plant to the transmission system do not meet the recommendations of the National Electric Safety Code for preventing electric shock from induced currents, an assessment of the impact of the proposed action on the potential shock hazard from the transmission lines must be provided.

(I) An assessment of the impact of the proposed action on housing availability, land-use, and public schools (impacts from refurbishment activities only) within the vicinity of the plant must be provided. Additionally, the applicant shall provide an assessment of the impact of population increases attributable to the proposed project on the public water supply.

(J) All applicants shall assess the impact of highway traffic generated by the proposed project on the level of service of local highways during periods of license renewal refurbishment activities and during the term of the renewed license.

(K) All applicants shall assess whether any historic or archaeological properties will be affected by the proposed project.

(L) If the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.

(M) [Reserved]

(iii) The report must contain a consideration of alternatives for reducing adverse impacts, as required by § 51.45(c), for all Category 2 license renewal issues in Appendix B to subpart A of this part. No such consideration is required for Category 1 issues in Appendix B to subpart A of this part.

(iv) The environmental report must contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.

(d) Post operating license stage. Each applicant for a license amendment authorizing decommissioning activities for a production or utilization facility either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license amendment approving a license termination plan or decommissioning plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license or license amendment to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor shall submit with its application a separate document, entitled "Supplement to Applicant's Environmental Report -- Post Operating License Stage," which will update "Applicant's Environmental Report -- Operating

License Stage," as appropriate, to reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), the applicant shall only address the environmental impact of spent fuel storage for the term of the license applied for. The "Supplement to Applicant's Environmental Report -- Post Operating License Stage" may incorporate by reference any information contained in "Applicants Environmental Report -- Construction Permit Stage.

10 C.F.R. § 51.70. Draft environmental impact statement—general.

(a) The NRC staff will prepare a draft environmental impact statement as soon as practicable after publication of the notice of intent to prepare an environmental impact statement and completion of the scoping process. To the fullest extent practicable, environmental impact statements will be prepared concurrently or integrated with environmental impact analyses and related surveys and studies required by other Federal law.

(b) The draft environmental impact statement will be concise, clear and analytic, will be written in plain language with appropriate graphics, will state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies, will identify any methodologies used and sources relied upon, and will be supported by evidence that the necessary environmental analyses have been made. The format provided in section 1(a) of appendix A of this subpart should be used. The NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement.

(c) The Commission will cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, in accordance with 40 CFR 1506.2 (b) and (c).

10 C.F.R. § 51.71(d). Draft Environmental Impact Statement

(d) Analysis. The draft environmental impact statement will include a preliminary analysis that considers and weighs the environmental effects of the proposed action; the environmental impacts of alternatives to the proposed action; and alternatives available for reducing or avoiding adverse environmental effects. Except for supplemental environmental impact statements for the operating license renewal stage prepared pursuant to § 51.95(c), draft environmental impact statements should also include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of Federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action identified pursuant to paragraph (a) of this section. Supplemental environmental impact statements prepared at the license renewal stage pursuant to § 51.95(c) need not discuss the economic or technical benefits and costs of either the proposed action or alternatives except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and associated alternatives. The draft supplemental environmental impact statement for license renewal prepared pursuant to § 51.95(c) will rely on conclusions as amplified by the supporting information in the GEIS for issues designated as Category 1 in Appendix B to subpart A of this part. The draft supplemental environmental impact statement must contain an analysis of those issues identified as Category 2 in Appendix B to subpart A of this part that are open for the proposed action. The analysis for all draft environmental impact statements will, to the fullest extent practicable, quantify the various

factors considered. To the extent that there are important qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms. Due consideration will be given to compliance with environmental quality standards and requirements that have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection, including applicable zoning and land-use regulations and water pollution limitations or requirements promulgated or imposed pursuant to the Federal Water Pollution Control Act. The environmental impact of the proposed action will be considered in the analysis with respect to matters covered by such standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained. n3 While satisfaction of Commission standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the analysis will, for the purposes of NEPA, consider the radiological effects of the proposed action and alternatives.

10 C.F.R. § 51.92. Supplement to the final environmental impact statement.

(a) If the proposed action has not been taken, the NRC staff will prepare a supplement to a final environmental impact statement for which a notice of availability has been published in the FEDERAL REGISTER as provided in § 51.118, if:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(b) The NRC staff may prepare a supplement to a final environmental impact statement when, in its opinion, preparation of a supplement will further the purposes of NEPA.

(c) The supplement to a final environmental impact statement will be prepared in the same manner as the final environmental impact statement except that a scoping process need not be used.

(d)(1) A supplement to a final environmental impact statement will be accompanied by or will include a request for comments as provided in § 51.73 and a notice of availability will be published in the FEDERAL REGISTER as provided in § 51.117 if the conditions described in paragraph (a) of this section apply.

(2) If comments are not requested, a notice of availability of a supplement to a final environmental impact statement will be published in the FEDERAL REGISTER as provided in § 51.118.

10 C.F.R. § 51.95(c). Postconstruction environmental impact statements.

(c) Operating license renewal stage. In connection with the renewal of an operating license for a nuclear power plant under part 54 of this chapter, the Commission shall prepare an EIS, which is a supplement to the Commission's NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) which is available in the NRC Public Document Room, 2120 L Street, NW., (Lower Level) Washington, DC.

(1) The supplemental environmental impact statement for the operating license renewal stage shall address those issues as required by § 51.71. In addition, the NRC staff must comply with 40 CFR 1506.6(b)(3) in conducting the additional scoping process as required by § 51.71(a).

(2) The supplemental environmental impact statement for license renewal is not required to

include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and the alternatives, or any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b). The analysis of alternatives in the supplemental environmental impact statement should be limited to the environmental impacts of such alternatives and should otherwise be prepared in accordance with § 51.71 and Appendix A to subpart A of this part.

(3) The supplemental environmental impact statement shall be issued as a final impact statement in accordance with §§ 51.91 and 51.93 after considering any significant new information relevant to the proposed action contained in the supplement or incorporated by reference.

(4) The supplemental environmental impact statement must contain the NRC staff's recommendation regarding the environmental acceptability of the license renewal action. In order to make its recommendation and final conclusion on the proposed action, the NRC staff, adjudicatory officers, and Commission shall integrate the conclusions, as amplified by the supporting information in the generic environmental impact statement for issues designated Category 1 (with the exception of offsite radiological impacts for collective effects and the disposal of spent fuel and high level waste) or resolved Category 2,information developed for those open Category 2 issues applicable to the plant in accordance with § 51.53(c)(3)(ii), and any significant new information. Given this information, the NRC staff, adjudicatory officers, and Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

10 C.F.R. Part 51, Appendix B

Environmental Effect of Renewing the Operating License of a Nuclear Power Plant

The Commission has assessed the environmental impacts associated with granting a renewed operating license for a nuclear power plant to a licensee who holds either an operating license or construction permit as of June 30, 1995. Table B-1 summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant as required by section 102(2) of the National Environmental Policy Act of 1969, as amended. Table B-1, subject to an evaluation of those issues identified in Category 2 as requiring further analysis and possible significant new information, represents the analysis of the environmental impacts associated with renewal of any operating license and is to be used in accordance with § 51.95(c). On a 10-year cycle, the Commission intends to review the material in this appendix and update it if necessary. A scoping notice must be published in the *Federal Register* indicating the results of the NRC's review and inviting public comments and proposals for other areas that should be updated.

Table B-1.--Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants[1]

Issue	Category[2]	Findings[3]
Surface Water Quality, Hydrology, and Use (for all plants)		
Impacts of refurbishment on surface water quality	1	SMALL. Impacts are expected to be negligible during refurbishment because best management practices are expected to be employed to control soil erosion and spills.

Impacts of refurbishment on surface water use	1	SMALL. Water use during refurbishment will not increase appreciably or will be reduced during plant outage.
Altered current patterns at intake and discharge structures.	1	SMALL. Altered current patterns have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered salinity gradients	1	SMALL. Salinity gradients have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered thermal stratification of lakes	1	SMALL. Generally, lake stratification has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Temperature effects on sediment transport capacity	1	SMALL. These effects have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Scouring caused by discharged cooling water	1	SMALL. Scouring has not been found to be a problem at most operating nuclear power plants and has caused only localized effects at a few plants. It is not expected to be a problem during the license renewal term.
Eutrophication	1	SMALL. Eutrophication has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Discharge of chlorine or other biocides	1	SMALL. Effects are not a concern among regulatory and resource agencies, and are not expected to be a problem during the license renewal term.
Discharge of sanitary wastes and minor chemical spills	1	SMALL. Effects are readily controlled through NPDES permit and periodic modifications, if needed, and are not expected to be a problem during the license renewal term
Discharge of other metals in waste water	1	SMALL. These discharges have not been found to be a problem at operating nuclear power plants with cooling-tower-based heat dissipation systems and have been satisfactorily mitigated at other plants. They are not expected to be a problem during the license renewal term.
Water use conflicts (plants with once-through cooling systems)	1	SMALL. These conflicts have not been found to be a problem at operating nuclear power plants with once-through heat dissipation systems.
Water use conflicts (plants with cooling ponds or cooling towers using make-up water from a small river with low flow)	2	SMALL OR MODERATE. The issue has been a concern at nuclear power plants with cooling ponds and at plants with cooling towers. Impacts on instream and riparian communities near these plants could be of moderate significance in some situations. See §

		51.53
Aquatic Ecology (for all plants)		
Refurbishment	1	SMALL. During plant shutdown and refurbishment there will be negligible effects on aquatic biota because of a reduction of entrainment and impingement of organisms or a reduced release of chemicals.
Accumulation of contaminants in sediments or biota	1	SMALL. Accumulation of contaminants has been a concern at a few nuclear power plants but has been satisfactorily mitigated by replacing copper alloy condenser tubes with those of another metal. It is not expected to be a problem during the license renewal term.
Entrainment of phytoplankton and zooplankton	1	SMALL. Entrainment of phytoplankton and zooplankton has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Cold shock	1	SMALL. Cold shock has been satisfactorily mitigated at operating nuclear plants with once-through cooling systems, has not endangered fish populations or been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds, and is not expected to be a problem during the license renewal term.
Thermal plume barrier to migrating fish	1	SMALL. Thermal plumes have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Distribution of aquatic organisms	1	SMALL. Thermal discharge may have localized effects but is not expected to affect the larger geographical distribution of aquatic organisms.
Premature emergence of aquatic insects	1	SMALL. Premature emergence has been found to be a localized effect at some operating nuclear power plants but has not been a problem and is not expected to be a problem during the license renewal term.
Gas supersaturation (gas bubble disease)	1	SMALL. Gas supersaturation was a concern at a small number of operating nuclear power plants with once-through cooling systems but has been satisfactorily mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Low dissolved oxygen in the discharge	1	SMALL. Low dissolved oxygen has been a concern at one nuclear power plant with a once-through cooling system but has been effectively mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.

Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses	1	SMALL. These types of losses have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Stimulation of nuisance organisms (e.g., shipworms)	1	SMALL. Stimulation of nuisance organisms has been satisfactorily mitigated at the single nuclear power plant with a once-through cooling system where previously it was a problem. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Aquatic Ecology (for plants with once-through and cooling pond heat dissipation systems)		
Entrainment of fish and shellfish in early life stages	2	SMALL, MODERATE, OR LARGE. The impacts of entrainment are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. Further, ongoing efforts in the vicinity of these plants to restore fish populations may increase the numbers of fish susceptible to intake effects during the license renewal period, such that entrainment studies conducted in support of the original license may no longer be valid. See § 51.53(c)(3)(ii)(B).
Impingement of fish and shellfish	2	SMALL, MODERATE, OR LARGE. The impacts of impingement are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. See § 51.53(c)(3)(ii)(B).
Heat shock	2	SMALL, MODERATE, OR LARGE. Because of continuing concerns about heat shock and the possible need to modify thermal discharges in response to changing environmental conditions, the impacts may be of moderate or large significance at some plants. See § 51.53(c)(3)(ii)(B).
Aquatic Ecology (for plants with cooling-tower-based heat dissipation systems)		
Entrainment of fish and shellfish in early life stages	1	SMALL. Entrainment of fish has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Impingement of fish and shellfish	1	SMALL. The impingement has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Heat shock	1	SMALL. Heat shock has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Ground-water Use and Quality		
Impacts of refurbishment on	1	SMALL. Extensive dewatering during the original

ground-water use and quality		construction on some sites will not be repeated during refurbishment on any sites. Any plant wastes produced during refurbishment will be handled in the same manner as in current operating practices and are not expected to be a problem during the license renewal term.
Ground-water use conflicts (potable and service water; plants that use <100 gpm)	1	SMALL. Plants using less than 100 gpm are not expected to cause any ground-water use conflicts.
Ground-water use conflicts (potable and service water, and dewatering; plants that use >100 gpm)	2	SMALL, MODERATE, OR LARGE. Plants that use more than 100 gpm may cause ground-water use conflicts with nearby ground-water users. See § 51.53(c)(3)(ii)(C).
Ground-water use conflicts (plants using cooling towers withdrawing make-up water from a small river)	2	SMALL, MODERATE, OR LARGE. Water use conflicts may result from surface water withdrawals from small water bodies during low flow conditions which may affect aquifer recharge, especially if other ground-water or upstream surface water users come on line before the time of license renewal. See § 51.53(c)(3)(ii)(A).
Ground-water use conflicts (Ranney wells)	2	SMALL, MODERATE, OR LARGE. Ranney wells can result in potential ground-water depression beyond the site boundary. Impacts of large ground-water withdrawal for cooling tower makeup at nuclear power plants using Ranney wells must be evaluated at the time of application for license renewal. See § 51.53(c)(3)(ii)(C).
Ground-water quality degradation (Ranney wells)	1	SMALL. Ground-water quality at river sites may be degraded by induced infiltration of poor-quality river water into an aquifer that supplies large quantities of reactor cooling water. However, the lower quality infiltrating water would not preclude the current uses of ground water and is not expected to be a problem during the license renewal term.
Ground-water quality degradation (saltwater intrusion)	1	SMALL. Nuclear power plants do not contribute significantly to saltwater intrusion) intrusion.
Ground-water quality degradation (cooling ponds in salt marshes)	1	SMALL. Sites with closed-cycle cooling ponds may degrade ground-water quality. Because water in salt marshes is brackish, this is not a concern for plants located in salt marshes.
Ground-water quality degradation (cooling ponds at inland sites)	2	SMALL, MODERATE, OR LARGE. Sites with closed-cycle cooling ponds may degrade ground-water quality. For plants located inland, the quality of the ground water in the vicinity of the ponds must be shown to be adequate to allow continuation of current uses.
Terrestrial Resources		
Refurbishment impacts	2	SMALL, MODERATE, OR LARGE. Refurbishment impacts are insignificant if no loss of important plant

		and animal habitat occurs. However, it cannot be known whether important plant and animal communities may be affected until the specific proposal is presented with the license renewal application
Cooling tower impacts on crops and ornamental vegetation	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling tower impacts on native plants	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Bird collisions with cooling towers	1	SMALL. These collisions have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling pond impacts on terrestrial resources	1	SMALL. Impacts of cooling ponds on terrestrial ecological resources are considered to be of small significance at all sites.
Power line right-of-way management (cutting and herbicide application)	1	SMALL. The impacts of right-of-way maintenance on wildlife are expected to be of small significance at all sites.
Bird collision with power lines	1	SMALL. Impacts are expected to be of small significance at all sites.
Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock)	1	SMALL. No significant impacts of electromagnetic fields on terrestrial flora and fauna have been identified. Such effects are not expected to be a problem during the license renewal term.
Floodplains and wetland on power line right of way		SMALL. Periodic vegetation control is necessary in forested wetlands underneath power lines and can be achieved with minimal damage to the wetland. No significant impact is expected at any nuclear power plant during the license renewal term.
Threatened or Endangered Species (for all plants)		
Threatened or endangered species	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are not expected to adversely affect threatened or endangered species. However, consultation with appropriate agencies would be needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected.
Air Quality		
Air quality during refurbishment	2	SMALL, MODERATE, OR LARGE. Air quality impacts from plant refurbishment associated with license

(nonattainment and maintenance areas)		renewal are expected to be small. However, vehicle exhaust emissions could be cause for concern at locations in or near nonattainment or maintenance areas. The significance of the potential impact cannot be determined without considering the compliance status of each site and the numbers of workers expected to be employed during the outage. See § 51.53
Air quality effects of transmission lines	1	SMALL. Production of ozone and oxides of nitrogen is insignificant and does not contribute measurably to ambient levels of these gases.
Land Use		
Onsite land use	1	SMALL. Projected onsite land use changes required during refurbishment and the renewal period would be a small fraction of any nuclear power plant site and would involve land that is controlled by the applicant.
Power line right of way	1	SMALL. Ongoing use of power line right of ways would continue with no change in restrictions. The effects of these restrictions are of small significance.
Human Health		
Radiation exposures to the public during refurbishment	1	SMALL. During refurbishment, the gaseous effluents would result in doses that are similar to those from current operation. Applicable regulatory dose limits to the public are not expected to be exceeded.
Occupational radiation exposures during refurbishment	1	SMALL. Occupational doses from refurbishment are expected to be within the range of annual average collective doses experienced for pressurized-water reactors and boiling-water reactors. Occupational mortality risk from all causes including radiation is in the mid-range for industrial settings.
Microbiological organisms (occupational health)	1	SMALL. Occupational health impacts are expected to be controlled by continued application of accepted industrial hygiene practices to minimize worker exposures.
Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	2	SMALL, MODERATE, OR LARGE. These organisms are not expected to be a problem at most operating plants except possibly at plants using cooling ponds, lakes, or canals that discharge to small rivers. Without site-specific data, it is not possible to predict the effects generically. See § 51.53
Noise	1	SMALL. Noise has not been found to be a problem at operating plants and is not expected to be a problem at any plant during the license renewal term.
Electromagnetic fields, acute effects (electric shock)	2	SMALL, MODERATE, OR LARGE. Electrical shock resulting from direct access to energized conductors or from induced charges in metallic structures have not been found to be a problem at most operating plants and generally are not expected to be a problem during the license renewal term. However, site-specific

		review is required to determine the significance of the electric shock potential at the site.
Electromagnetic fields, chronic effects[5]	[4]NA	UNCERTAIN. Biological and physical studies of 60 - Hz electromagnetic fields have not found consistent evidence linking harmful effects with field exposures. However, because the state of the science is currently inadequate, no generic conclusion on human health impacts is possible.[5]
Radiation exposures to public (license renewal term)	1	SMALL. Radiation doses to the public will continue at current levels associated with normal operations.
Occupational radiation exposures (license renewal term)	1	SMALL. Projected maximum occupational doses during the license renewal term are within the range of doses experienced during normal operations and normal maintenance outages, and would be well below regulatory limits.
Socioeconomics		
Housing impacts	2	SMALL, MODERATE, OR LARGE. Housing impacts are expected to be of small significance at plants located in a medium or high population area and not in an area where growth control measures that limit housing development are in effect. Moderate or large housing impacts of the workforce associated with refurbishment may be associated with plants located in sparsely populated areas or in areas with growth control measures that limit housing development.
Public services: public safety, social services, and tourism and recreation	1	SMALL. Impacts to public safety, social services, and tourism and recreation are expected to be of small significance at all sites.
Public services: public utilities	2	SMALL OR MODERATE. An increased problem with water shortages at some sites may lead to impacts of moderate significance on public water supply availability.
Public services, education (refurbishment)	2	SMALL, MODERATE, OR LARGE. Most sites would experience impacts of small significance but larger impacts are possible depending on site- and project-specific factors.
Public services, education (license renewal term)	1	SMALL. Only impacts of small significance are expected.
Offsite land use (refurbishment)	2	SMALL OR MODERATE. Impacts may be of moderate significance at plants in low population areas
Offsite land use (license renewal term)	2	SMALL, MODERATE, OR LARGE. Significant changes in land use may be associated with population and tax revenue changes resulting from license renewal
Public services, Transportation	2	SMALL, MODERATE, OR LARGE. Transportation impacts are generally expected to be of small significance. However, the increase in traffic associated with the additional workers and the local

		road and traffic control conditions may lead to impacts of moderate or large significance at some sites.
Historic and archaeological resources	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are expected to have no more than small adverse impacts on historic and archaeological resources. However, the National Historic Preservation Act requires the Federal agency to consult with the State Historic Preservation Officer to determine whether there are properties present that require protection
Aesthetic impacts (refurbishment)	1	SMALL. No significant impacts are expected during refurbishment.
Aesthetic impacts (license renewal term)	1	SMALL. No significant impacts are expected during the license renewal term.
Aesthetic impacts of transmission lines (license renewal term)	1	SMALL. No significant impacts are expected during the license renewal term.
Postulated Accidents		
Design basis accidents	1	SMALL. The NRC staff has concluded that the environmental impacts of design basis accidents are of small significance for all plants.
Severe accidents	2	SMALL. The probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents are small for all plants. However, alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives.
Uranium Fuel Cycle and Waste Management		
Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high level waste	1	SMALL. Off-site impacts of the uranium fuel cycle have been considered by the Commission in Table S - 3 of this part. Based on information in the GEIS, impacts on individuals from radioactive gaseous and liquid releases including radon-222 and technetium-99 are small.
Offsite radiological impacts (collective effects)	1	The 100 year environmental dose commitment to the U.S. population from the fuel cycle, high level waste and spent fuel disposal excepted, is calculated to be about 14,800 person rem, or 12 cancer fatalities, for each additional 20-year power reactor operating term. Much of this, especially the contribution of radon releases from mines and tailing piles, consists of tiny doses summed over large populations. This same dose calculation can theoretically be extended to include many tiny doses over additional thousands of years as well as doses outside the U. S. The result of such a calculation would be thousands of cancer fatalities from the fuel cycle, but this result assumes that even tiny doses have some statistical adverse health effect which will not ever be mitigated (for

		example no cancer cure in the next thousand years), and that these doses projected over thousands of ears are meaningful. However, these assumptions are questionable. In particular, science cannot rule out the possibility that there will be no cancer fatalities from these tiny doses. For perspective, the doses are very small fractions of regulatory limits, and even smaller fractions of natural background exposure to the same populations. Nevertheless, despite all the uncertainty, some judgment as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgment in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR Part 54 should be eliminated. Accordingly, while the commission has not assigned a single level of significance for the collective effects of the fuel cycle, this issue is considered Category 1.
Offsite radiological impacts (spent fuel and high level waste disposal)	1	For the high level waste and spent fuel disposal component of the fuel cycle, there are no current regulatory limits for offsite releases of radionuclides for the current candidate repository site. However, if we assume that limits are developed along the lines of the 1995 National Academy of Sciences (NAS) report, "Technical Bases for Yucca Mountain Standards," and that in accordance with the Commission's Waste Confidence Decision, 10 CFR 51.23, a repository can and likely will be developed at some site which will comply with such limits, peak doses to virtually all individuals will be 100 millirem per year or less. However, while the Commission has reasonable confidence that these assumptions will prove correct, there is considerable uncertainty since the limits are yet to be developed, no repository application has been completed or reviewed, and uncertainty is inherent in the models used to evaluate possible pathways to the human environment. The NAS report indicated that 100 millirem per year should be considered as a starting point for limits for individual doses, but notes that some measure of consensus exists among national and international bodies that the limits should be a fraction of the 100 millirem per year. The lifetime individual risk from 100 millirem annual dose limit is about 3×10^{-3}. Estimating cumulative doses to populations over thousands of years is more problematic. The likelihood an consequences of events that could seriously compromise the integrity of a deep geologic repository

		were evaluated by the Department of Energy in the "Final Environmental Impact Statement: Management of Commercially Generated Radioactive Waste," October 1980. The evaluation estimated the 70-year whole-body dose commitment to the maximum individual and to the regional population resulting from several modes of breaching a reference repository in the year of closure, after 1,000 years, after 100,000 years and after 100,000,000 years. Subsequently, the NRC and other federal agencies have expended considerable effort to develop models for the design and for the licensing of a high level waste repository, especially for the candidate repository at Yucca Mountain. More meaningful estimates of doses to population may be possible in the future as more is understood about the performance of the proposed Yucca Mountain repository. Such estimates would involve very great uncertainty, especially with respect to cumulative population doses over thousands of years. The standard proposed by the NAS is a limit on maximum individual dose. The relationship of potential new regulatory requirements, based on the NAS report, and cumulative population impacts has not been determined, although the report articulates the view that protection of individuals will adequately protect the population for a repository at Yucca Mountain. However, EPA's generic repository standards in 40 CFR part 191 generally provide an indication of the order of magnitude of cumulative risk to population that could result from the licensing of a Yucca Mountain repository, assuming the ultimate standards will be within the range of standards now under consideration. The standards in 40 CFR part 191 protect the population by imposing amount of radioactive material released over 10,000 years. The cumulative release limits are based on EPA's population impact goal of 1,000 premature cancer deaths worldwide for a 100,000 metric tonne (MTHM) repository. Nevertheless, despite all the uncertainty, some judgment as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgment in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts pf spent fuel and high level waste disposal, this issue is considered in Category 1.
Non-radiological impacts of	1	SMALL. The nonradiological impacts of the uranium

the uranium fuel cycle		fuel cycle resulting from the renewal of an operating license for any plant are found to be small.
Low-level waste storage and disposal	1	SMALL. The comprehensive regulatory controls that are in place and the low public doses being achieved at reactors ensure that the radiological impacts to the environment will remain small during the term of a renewed license. The maximum additional on-site land that may be required for low-level waste storage during the term of a renewed license and associated impacts will be small. Nonradiological impacts on air and water will be negligible. The radiological and nonradiological environmental impacts of long-term disposal of low-level waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient low-level waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
Mixed waste storage and disposal	1	SMALL. The comprehensive regulatory controls and the facilities and procedures that are in place ensure proper handling and storage, as well as negligible doses and exposure to toxic materials for the public and the environment at all plants. License renewal will not increase the small, continuing risk to human health and the environment posed by mixed waste at all plants. The radiological and nonradiological environmental impacts of long-term disposal of mixed waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient mixed waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
On-site spent fuel	1	SMALL. The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available.
Nonradiological waste	1	SMALL. No changes to generating systems are anticipated for license renewal. Facilities and procedures are in place to ensure continued proper handling and disposal at all plants.
Transportation	1	SMALL. The impacts of transporting spent fuel enriched up to 5 percent uranium-235 with average burnup for the peak rod to current levels approved by NRC up to 62,000 MWd/MTU and the cumulative impacts of transporting high-level waste to a single repository, such as Yucca Mountain, Nevada are found to be consistent with the impact values

		contained in 10 CFR 51.52(c), Summary Table S–4—Environmental Impact of Transportation of Fuel and Waste to and from One Light-Water- Cooled Nuclear Power Reactor. If fuel enrichment or burnup conditions are not met, the applicant must submit an assessment of the implications for the environmental impact values reported in § 51.52.
Decommissioning		
Radiation doses	1	SMALL. Doses to the public will be well below applicable regulatory standards regardless of which decommissioning method is used. Occupational doses would increase no more than 1 man-rem caused by buildup of long-lived radionuclides during the license renewal term.
Waste management	1	SMALL. Decommissioning at the end of a 20-year license renewal period would generate no more solid wastes than at the end of the current license term. No increase in the quantities of Class C or greater than Class C wastes would be expected.
Air quality	1	SMALL. Air quality impacts of decommissioning are expected to be negligible either at the end of the current operating term or at the end of the license renewal term.
Water quality	1	SMALL. The potential for significant water quality impacts from erosion or spills is no greater whether decommissioning occurs after a 20-year license renewal period or after the original 40-year operation period, and measures are readily available to avoid such impacts.
Ecological resources	1	SMALL. Decommissioning after either the initial operating period or after a 20-year license renewal period is not expected to have any direct ecological impacts.
Socioeconomic impacts	1	SMALL. Decommissioning would have some short-term socioeconomic impacts. The impacts would not be increased by delaying decommissioning until the end of a 20-year relicense period, but they might be decreased by population and economic growth.
Environmental Justice		
Environmental justice	[4]NA	NONE. The need for and the content of an analysis of environmental justice will be addressed in plant-specific reviews.[6]

[61 FR 66546, Dec. 18, 1996, as amended at 62 FR 59276, Nov. 3, 1997; 64 FR 48507, Sept. 3, 1999; 66 FR 39278, July 30, 2001]

1. Data supporting this table are contained in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) and NUREG-1437, Vol. 1, Addendum 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants:

Main Report Section 6.3--'Transportation,' Table 9.1 'Summary of findings on NEPA issues for license renewal of nuclear power plants,' Final Report" (August 1999).

2. The numerical entries in this column are based on the following category definitions:

Category 1: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown:

(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 characteristic;

(2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective off site radiological impacts from the fuel cycle and from high level waste and spent fuel disposal); and

(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 are likely not to be sufficiently beneficial to warrant implementation.

The generic analysis of the issue may be adopted in each plant-specific review.

Category 2: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown that one or more of the criteria of Category 1 cannot be met, and therefore additional plant-specific review is required.

3. The impact findings in this column are based on the definitions of three significance levels. Unless the significance level is identified as beneficial, the impact is adverse, or in the case of "small," may be negligible. The definitions of significance follow:

SMALL--For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE--For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE--For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

For issues where probability is a key consideration (i.e. accident consequences), probability was a factor in determining significance.

4. NA (not applicable). The categorization and impact finding definitions do not apply to these issues.

5. If, in the future, the Commission finds that, contrary to current indications, a consensus has been reached b appropriate Federal health agencies that there are adverse health effects from electromagnetic fields, the commission will require applicants to submit plant-specific reviews of these health effects as part of their license renewal applications. Until such time, applicants for license renewal are not required to submit information on this issue.

6. Environmental Justice was not addressed in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," because guidance for implementing Executive Order 12898 issued on February 11, 1994, was not available prior to completion of NUREG-1437. This issue will be addressed in individual license renewal reviews.

appeals by an admitted intervenor, and the Commission generally "disfavor[s] interlocutory, piecemeal appeals."[6]

In exceptional instances, the Commission may in its discretion grant a petition for interlocutory review, where a party demonstrates that a ruling threatens it "with immediate and serious irreparable impact" or "[a]ffects the basic structure of the proceeding in a pervasive or unusual manner."[7] Here, Pilgrim Watch makes neither claim. Moreover, "[c]laims that a board has wrongly rejected a contention . . . are commonplace" and cannot without more "be said to affect a proceeding's 'basic structure' . . . ."[8]

For the reasons provided in this decision, we *deny* Pilgrim Watch's appeal of LBP-06-23.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 11th day of January 2007.

[6] *See Clinton*, CLI-04-31, 60 NRC at 466.
[7] *See* 10 C.F.R. § 2.341(f)(2).
[8] *See Clinton*, CLI-04-31, 60 NRC at 467.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Dale E. Klein, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 50-271-LR**

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

In the Matter of **Docket No. 50-293-LR**

ENTERGY NUCLEAR GENERATION COMPANY and ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station) **January 22, 2007**

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

Generic environmental impacts analyzed in the GEIS for license renewal are designated "Category 1" issues, for which the license renewal applicant is generally excused from discussing. 10 C.F.R. § 51.53(c)(3)(i). Generic analysis is "clearly an appropriate method" of meeting the agency's statutory obligations

under NEPA. *See Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 101 (1984).

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

The license renewal GEIS determined that the environmental effects of storing spent fuel for an additional 20 years at the site of nuclear reactors would be "not significant." *See* NUREG-1427, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (May 1996)," at 6-72 to -75, 6-85. Accordingly, this finding was expressly incorporated into our regulations. *See* 10 C.F.R. Part 51, Subpart A, App. B, Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants." Because the generic environmental analysis was incorporated into a regulation, the conclusions of that analysis are not subject to attack in an individual adjudication unless the rule is waived or suspended. 10 C.F.R. § 2.335(a), (b); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 364 (2001).

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

CONTENTIONS

One way to challenge a generic finding, or "Category 1" issue, in a particular license proceeding is to apply for a waiver where "special circumstances . . . are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." 10 C.F.R. § 2.335(b). In theory, Commission approval of a waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist.

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GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

CONTENTIONS

Adjudicating 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.

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

RULEMAKING

Where a petitioner argues that new information contradicts assumptions underlying the entire generic analysis for all facilities or a whole class of facilities, the appropriate remedy is a rulemaking petition. It makes more sense for the NRC to study whether, as a technical matter, the agency should modify its requirements for all plants across the board than to litigate in particular adjudications whether generic findings in the GEIS are impeached by a claim of new information.

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

RULEMAKING

Pending resoultion of a rulemaking petition, the NRC Staff may, where appropriate, seek the Commission's permission to suspend the generic determination of a Category 1 issue and include a new analysis in the plant-specific environmental impact statements. *See* Statement of Considerations, Final Rule: "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 61 Fed. Reg. 28,467, 28,472 (June 5, 1996). If the rule is suspended for the analysis, each supplemental EIS would reflect the corrected analysis until such time as the rule is amended.

GENERIC ISSUES

LICENSE RENEWAL

ENVIRONMENTAL IMPACT STATEMENT

SEVERE ACCIDENT MITIGATION ANALYSIS

A license renewal applicant need not discuss severe accident mitigation alternatives for generic — or "Category 1" — issues. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 21-22 (2001). This makes obvious sense since "for all issues designated as Category 1 the Commission has concluded that [generically] additional site-specific mitigation alternatives are unlikely to be beneficial." *Id.* at 22.

MEMORANDUM AND ORDER

Today we deny appeals by the Massachusetts Attorney General (Mass AG) and affirm two Atomic Safety and Licensing Board decisions rejecting his sole contention in two separate license renewal proceedings. The Mass AG proposed essentially identical contentions in the proceedings to renew the operating license at the Vermont Yankee Power Station in Windam County, Vermont,[1] and the Pilgrim Nuclear Power Station in Plymouth, Massachusetts.[2] The Mass AG's contention says that new information calls into question previous NRC findings on the environmental impacts of fires in spent fuel pools. The Mass AG contention challenges one of the findings in the Generic Environmental Impact Statement (GEIS) for license renewal — namely, that storing spent fuel in pools for an additional 20 years would have insignificant environmental impacts. In each of the challenged decisions, the Licensing Board found the contention inadmissible. Both Boards found the GEIS finding controlling absent a waiver[3] of the NRC's generic finding[4] or a successful petition for rulemaking.[5] We conclude that the Boards' interpretation of the law and regulations concerning generic, or "Category 1," environmental findings is consistent with *Turkey Point*[6] and we affirm both rulings.

The Mass AG has in fact filed a petition for rulemaking raising the same issues as his contention.[7] As he in essence acknowledges,[8] the petition for rulemaking is a more appropriate avenue for resolving his generic concerns about spent fuel fires than a site-specific contention in an adjudication.

[1] LBP-06-20, 64 NRC 131 (2006).

[2] LBP-06-23, 64 NRC 255 (2006).

[3] 10 C.F.R. § 2.335.

[4] *See* 10 C.F.R. § 51.53(c)(3)(i).

[5] 10 C.F.R. § 2.802.

[6] *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3 (2001).

I. BACKGROUND

A. Environmental Analysis for License Renewal

In 1996, the Commission amended the environmental review requirements in 10 C.F.R. Part 51 to address the scope of environmental review for license renewal applications.[9] The regulations divide the license renewal environmental review into generic and plant-specific issues. The generic impacts of operating a plant for an additional 20 years that are common to all plants, or to a specific subgroup of plants, were addressed in a 1996 GEIS.[10] Those generic impacts analyzed in the GEIS are designated "Category 1" issues. A license renewal applicant is generally excused from discussing Category 1 issues in its environmental report.[11] Generic analysis is "clearly an appropriate method" of meeting the agency's statutory obligations under NEPA.[12]

The license renewal GEIS determined that the environmental effects of storing spent fuel for an additional 20 years at the site of nuclear reactors would be "not significant."[13] Accordingly, this finding was expressly incorporated into Part 51 of our regulations.[14] Because the generic environmental analysis was incorporated into a regulation, the conclusions of that analysis may not be challenged in

[7] *See* Massachusetts Attorney General's Petition for Rulemaking To Amend 10 C.F.R. Part 51 (Aug. 25, 2006), *see* 71 Fed. Reg. 64,169 (public notice).

[8] *See, e.g.*, Massachusetts Attorney General's Brief on Appeal of LBP-06-20 (Oct. 3, 2006), at 8 n.7, agreeing that the Mass AG's contention does not fit the criteria for a rule waiver. *See also* Massachusetts' Petition for Rulemaking at 18.

[9] Final Rule: "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 61 Fed. Reg. 28,467 (1996).

[10] *See* NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," Final Report, Vol. 1 ("GEIS") (May 1996).

[11] 10 C.F.R. § 51.53(c)(3)(i).

[12] *See Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 101 (1984).

[13] *See* NUREG-1427, at 6-72 to -75 ("even under the worst probable cause of a loss of spent-fuel pool coolant (a severe seismic-generated accident causing a catastrophic failure of the pool), the likelihood of a fuel-cladding fire is highly remote"), at 6-85 (in a high-density pool, "risks due to accidents and their environmental effects are found to be not significant").

[14] *See* 10 C.F.R. Part 51, Subpart A, App. B, Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants" ("The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects").

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litigation unless the rule is waived by the Commission for a particular proceeding or the rule itself is suspended or altered in a rulemaking proceeding.[15]

B. The Mass AG's Contention

In both license renewal proceedings before us today, the Mass AG submitted a petition for intervention and request for hearing on a single contention challenging Entergy's[16] environmental report for failing to include an analysis of the long-term environmental effects of storing spent fuel in high-density pools at the site. Specifically, the Mass AG cited studies issued subsequent to the GEIS claiming that even a partial loss of water in the spent fuel pool could lead to a severe fire.[17] The Mass AG argues that Entergy's failure to include the new information violated 10 C.F.R. § 51.53(c)(3)(iv)[18] and raises a litigable contention:

> 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 (d) the fire may be catastrophic.[19]

[15] NRC regulations do not allow a contention to attack a regulation, unless the proponent requests a waiver from the Commission. 10 C.F.R. § 2.335(a), (b); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 364 (2001).

[16] Entergy Nuclear Operations, Inc., together with Entergy Nuclear Generation Company, holds the operating license for the Pilgrim Nuclear Power Station. Entergy Nuclear Operations, Inc., and Entergy Vermont Yankee, LLC, hold the license for the Vermont Yankee Nuclear Power Station. In today's decision we refer to the license applicants collectively as "Entergy."

[17] *See* NAS Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, *Safety and Security of Commercial Spent Nuclear Fuel Storage* (National Academies Press, 2006); Dr. Gordon 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); Dr. 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).

[18] In response to concerns raised by the Council on Environmental Quality and others that the NRC's generic approach in the license renewal GEIS would not take into consideration new pertinent information on environmental impacts, the NRC adopted a rule, 10 C.F.R. § 51.53(c)(3)(iv), requiring a license renewal applicant to include "new and significant information" concerning environmental effects. This information would be included in the site-specific supplemental EIS (SEIS) for each power plant which is issued as part of the license renewal application review.

[19] *See* Massachusetts Attorney General's Request for a Hearing and Petition for Leave To Intervene with Respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Vermont Yankee Nuclear Power Plant Operating License and Petition for Backfit Order Requiring New Design Features To Protect Against Spent Fuel Pool Accidents (May 26, 2006) ("VY Hearing Request") at 22; *see also* Massachusetts Attorney General's Request for a Hearing and Petition for Leave To Intervene *(Continued)*

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The Mass AG argued, therefore, that Entergy should have discussed consequences and mitigation of severe accidents in spent fuel pools (including those initiated by terrorist acts). In support of its claim that possible terrorist attacks increase the probability of an accident, the Mass AG pointed to the recent Ninth Circuit decision in *San Louis Obispo Mothers for Peace v. NRC.*[20] The Mass AG also claimed that NRC license renewal regulations require that the ER discuss severe accident mitigation alternatives for reducing the impact of a spent fuel accident, such as moving a portion of the fuel to dry storage to reduce density.[21]

The Mass AG also filed a petition for rulemaking to amend the applicable regulations. The Mass AG's petition covers somewhat broader grounds than his contention.[22] It asks NRC to consider the new information on pool fire risks, "revoke the regulations that codify the incorrect conclusion" that the environmental impacts of spent fuel storage are insignificant, issue a generic determination that the impacts of high-density pool storage are significant, and "order that any NRC licensing decision that approves high-density pool storage of spent fuel" (presumably in either a license renewal proceeding or any other license amendment proceeding) be accompanied by an environmental impact statement that discusses alternatives to avoid or mitigate the impacts. It also asks that no final decision issue on the *Vermont Yankee* and *Pilgrim* license renewal proceedings until the rulemaking petition is resolved.[23]

II. DISCUSSION

A. The Licensing Boards Correctly Found the Mass AG's Contention Not Admissible

1. *Category 1 Findings Based on the GEIS Analysis Not Subject To Attack in an Individual Licensing Proceeding*

Both Licensing Boards determined that this case is controlled by our ruling in the *Turkey Point* license renewal proceeding. In *Turkey Point,* a petitioner proposed to litigate the issue of the possible environmental effects of an accident involving stored fuel, including an accident resulting from an attack by the Cuban

with Respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Pilgrim Nuclear Power Plant Operating License and Petition for Backfit Order Requiring New Design Features To Protect Against Spent Fuel Pool Accidents (May 26, 2006) ("Pilgrim Hearing Request").

[20] 449 F.3d 1016 (9th Cir. 2006), *cert. denied,* No. 06-466 (Jan. 16, 2007).

[21] *See* VY Hearing Request at 23, *citing* 10 C.F.R. § 51.53(c)(3)(iii).

[22] *See* Massachusetts Attorney General's Petition for Rulemaking To Amend 10 C.F.R. Part 51 (Aug. 25, 2006).

[23] *See* Massachusetts Attorney General's Rulemaking Petition at 3.

Air Force.[24] The Commission agreed with the Board that this contention fell outside the scope of a license renewal proceeding, which focuses on those detrimental effects of aging that are not addressed as a matter of ongoing agency oversight and enforcement.[25] Our *Turkey Point* decision outlined the opportunity and procedures for presenting new and significant information that could undermine the findings in the GEIS, including asking for a rule waiver or filing a petition for rulemaking to change the GEIS finding.[26]

The Mass AG argues that *Turkey Point* is inapposite because, there, the petitioners did not argue that the license renewal applicant had violated the regulation requiring it to disclose "new and significant" information, whereas here the Mass AG does make that argument.[27] The Mass AG's argument that its "new and significant information" distinguishes this case from *Turkey Point* is not convincing in light of the regulatory history of the license renewal rulemaking, as explained by the *Vermont Yankee* Board.[28]

Fundamentally, any contention on a "Category 1" issue amounts to a challenge to our regulation that bars challenges to generic environmental findings. There are, however, procedural steps available to make such a challenge. A rule can be waived in a particular license proceeding only where "special circumstances . . . are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted."[29] In theory, Commission approval of a waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist.

Here, the Mass AG does not argue that unique or unusual characteristics of the Pilgrim and Vermont Yankee facilities undermine the GEIS's generic determinations, but instead argues that new information contradicts assumptions underlying the entire generic analysis for *all* spent fuel pools at all reactors, whether in a license renewal proceeding or not. It therefore appears that the Mass AG chose the appropriate way to challenge the GEIS when he filed his rulemaking petition. The Mass AG's appeal, as well as his petition for rulemaking, appears to recognize as much.[30] It makes more sense for the NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants across the board than to litigate in particular adjudications

[24] CLI-01-17, 54 NRC at 5-6.

[25] *See id.* at 7-8, 21-23.

[26] *See id.* at 11-13.

[27] Massachusetts Attorney General's Brief on Appeal of LBP-06-20, at 12, *citing* 10 C.F.R. § 51.53(c)(3)(iv); *see* note 18, *supra.*

[28] *See* LBP-06-20, 64 NRC at 157-59.

[29] 10 C.F.R. § 2.335(b).

[30] *See, e.g.*, Massachusetts Attorney General's Brief on Appeal of LBP-06-20, at 8. *See also* Petition for Rulemaking at 18.

whether generic findings in the GEIS are impeached by the Mass AG's claims of new information.[31] Adjudicating 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.

2. *No Discussion of Severe Accident Mitigation Alternatives Necessary for Category 1*

The Boards were correct to disregard the Mass AG's argument that Entergy's environmental report was required to discuss severe accident mitigation alternatives such as reducing the density of fuel in the pool by moving some of it to dry storage.[32] The Commission held in *Turkey Point* that no discussion of mitigation alternatives is needed in a license renewal application for a Category 1 issue.[33] This makes obvious sense since "for all issues designated as Category 1, the Commission has concluded that [generically] additional site-specific mitigation alternatives are unlikely to be beneficial."[34] Both Boards found that license renewal applicants need only to discuss such alternatives with respect to "Category 2" issues (that is, environmental issues *not* generically resolved in the GEIS).

As we explained in *Turkey Point,* it is not necessary to discuss mitigation alternatives when the GEIS has already determined that, due to existing regulatory requirements, the probability of a spent fuel pool accident causing significant harm is remote.[35] The Mass AG's rulemaking petition, of course, has challenged the GEIS determination. If the NRC should find the Mass AG's concerns well founded, then one result might be that the GEIS designation is changed and a discussion of mitigation alternatives required. Another result might be that mitigation measures already put in place as a result of NRC's post-9/11 security review could be generically determined to be adequate and consistent with the existing GEIS designation.

[31] The Mass AG claims that the Ninth Circuit's decision in *San Louis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006), requires admitting its spent fuel contention. But that decision — which calls on NRC to consider the environmental effects of terrorist attacks when licensing nuclear facilities — is also raised in the Mass AG's rulemaking petition and can be considered in that context. The Ninth Circuit decision nowhere says or implies that the NRC cannot consider spent fuel pool or other environmental issues generically.

[32] *See* LBP-06-20, 64 NRC at 161; LBP-06-23, 64 NRC at 288, 289-93.

[33] *See Turkey Point,* CLI-01-17, 54 NRC at 21-22.

[34] *Id.* at 22.

[35] *See* License Renewal GEIS at 6-86 ("The need for the consideration of mitigation alternatives within the context of renewal of a power reactor license has been considered, and the Commission concludes that its regulatory requirements already in place provide adequate mitigation incentives for on-site storage of spent fuel"); *see also id.* at 6-91.

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B. Effect of Rulemaking Petition

The NRC posted a notice of receipt of the Mass AG's rulemaking petition on November 1, 2006, and has requested public comments by March 19, 2007.[36] After considering the petition and public comments, the NRC will make a decision on whether to deny the petition or proceed to make necessary revisions to the GEIS. The license renewal proceeding is not suspended during this period.[37] Nonetheless, depending on the timing and outcome of the NRC Staff's resolution of the Mass AG's rulemaking petition, it is possible that the NRC Staff could seek the Commission's permission to suspend the generic determination and include a new analysis in the Pilgrim and Vermont Yankee plant-specific environmental impact statements. This approach is described in the statement of considerations for our license renewal regulations, where the Commission noted:

> b. If a commenter provides new information which is relevant to the plant and is also relevant to other plants (i.e., generic information) and that information demonstrates that the analysis of an impact codified in the final rule is incorrect, the NRC staff will seek Commission approval to either suspend the application of the rule on a generic basis with respect to the analysis or delay granting the renewal application (and possibly other renewal applications) until the analysis in the GEIS is updated and the rule amended. If the rule is suspended for the analysis, each supplemental EIS would reflect the corrected analysis until such time as the rule is amended.[38]

The Commission, in short, has in place various procedures for considering new and significant environmental information. Thus, whatever the ultimate fate of the Mass AG's "new information" claim, admitting the Mass AG's contention for an adjudicatory hearing is not necessary to ensure that the claim receives a full and fair airing.

[36] 71 Fed. Reg. 64,169; deadline for public comments extended to March 19, 2007, *see* 72 Fed. Reg. 24 (Jan. 19, 2007).

[37] The Mass AG's rulemaking petition (at 3) asked the NRC to withhold final decisions in the *Vermont Yankee* and *Pilgrim* license renewal proceedings until the rulemaking petition is resolved. But final decisions in those proceedings are not expected for another year or more. Those proceedings involve many issues unrelated to the Mass AG's rulemaking petition. It is therefore premature to consider suspending proceedings or delaying final decisions. NRC regulations provide that a petitioner who has filed a petition for rulemaking "may request the Commission to suspend all or any part of any licensing proceeding to which the petitioner is a party pending disposition of the petition for rulemaking." 10 C.F.R. § 2.802(d). An interested governmental entity participating under 10 C.F.R. § 2.315 could also make this request.

[38] Statement of Considerations, Final Rule: "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 61 Fed. Reg. 28,467, 28,472 (June 5, 1996).

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III. CONCLUSION

We find that the Licensing Boards were correct to reject the Mass AG's sole contention in the two cases, and therefore *affirm* the Boards' decisions.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 22d day of January 2007.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Dale E. Klein, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 50-271-LR**

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

In the Matter of **Docket No. 50-293-LR**

ENTERGY NUCLEAR GENERATION COMPANY and ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station)

March 15, 2007

MOTIONS FOR RECONSIDERATION

A motion for reconsideration must demonstrate "compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid." 10 C.F.R. § 2.323(e). The Massachusetts Attorney General has not demonstrated a "clear and material error" in our affirming the two Board decisions we were reviewing.

FINALITY

Our decision in CLI-07-3 was final as to the Massachusetts Attorney General's only claims in the two license renewal proceedings. The Massachusetts Attorney General has no claim remaining in either adjudication. A request for judicial review must be brought immediately if at all. *See Environmental Law and Policy Center v. NRC*, 470 F.3d 676, 681 (7th Cir. 2006). She also has the option of awaiting an NRC decision in her petition for rulemaking. Agency decisions on rulemaking petitions are judicially reviewable. *See, e.g., Bullcreek v. NRC*, 359 F.3d 536 (D.C. Cir. 2004).

FINALITY

The mere potential that an issue may become moot in the future due to a rulemaking does not affect the finality of a decision resting on current law.

STAY

Only a "party" to a proceeding, or an interested governmental entity participating under 10 C.F.R. § 2.315, may file a request to stay proceedings pending a rulemaking under 10 C.F.R. § 2.802. The Mass AG did not offer an admissible contention and was never admitted to either of these two proceedings as a "party."

MEMORANDUM AND ORDER

Today we deny the Massachusetts Attorney General's (Mass AG's) Motion for Reconsideration of CLI-07-3.[1] In CLI-07-3 we rejected the Mass AG's appeal of decisions by two different Licensing Boards in proceedings to renew the operating license at the Vermont Yankee Power Station in Windam County, Vermont,[2] and the Pilgrim Nuclear Power Station in Plymouth, Massachusetts.[3]

I. BACKGROUND

In CLI-07-3, we affirmed the Boards' rejection in each proceeding of a contention which disputed findings in the Generic Environmental Impact Statement for license renewal concerning the environmental consequences of spent fuel storage. The contention argued that recent evidence showed that high-density storage in spent fuel pools is more dangerous than previously believed. In our decision, we noted that the Mass AG had filed a petition for rulemaking raising even broader issues than the contention,[4] and said that a petition for rulemaking is a more appropriate avenue for resolving generic concerns about spent fuel fires than a site-specific contention in an adjudication.[5]

The Mass AG argues that CLI-07-3 was ambiguous in terms of its finality and whether the Mass AG is considered a "party" to the ongoing license proceedings. Her motion asks that the Commission:

> (a) confirm [that CLI-07-3] is a non-final decision with respect to the Attorney General, (b) clarify that the Attorney General continues to have party status in the individual license renewal proceedings until those proceedings are concluded, and (c) further clarify that the Attorney General has the right to seek judicial review, as necessary, to ensure the application of the final rulemaking to the individual license renewal proceedings for Pilgrim and Vermont Yankee.[6]

The Mass AG pointed to language in CLI-07-3 saying that it would be "premature" to consider staying the license renewal proceedings to await the outcome of the rulemaking petition because many issues unrelated to the Mass AG's rulemaking petition must also be resolved in those proceedings.[7] The Mass AG contends that if it is premature to rule on her request to halt the license renewal proceedings, then her request is still pending and, therefore, CLI-07-3 is not in all respects a "final" decision.

The NRC Staff and Entergy[8] oppose the Motion for Reconsideration.[9] They say that the Mass AG's motion has not shown any basis for us to reconsider the ruling, and the motion is more a request for clarification than a request for reconsideration. They also suggest that the Commission make clear that our

[1] CLI-07-3, 65 NRC 13 (2007).
[2] LBP-06-20, 64 NRC 131 (2006).
[3] LBP-06-23, 64 NRC 257 (2006).

[4] *See* Massachusetts Attorney General's Petition for Rulemaking To Amend 10 C.F.R. Part 51 (Aug. 25, 2006); *see* 71 Fed. Reg. 64,169 (public notice).
[5] CLI-07-3, 65 NRC at 17.
[6] *See* Massachusetts Attorney General's Motion for Reconsideration and Clarification of CLI-07-03, at 3 (Feb. 1. 2007).
[7] *See* CLI-07-3, 65 NRC at 22 n.37.
[8] Entergy Nuclear Operations, Inc., together with Entergy Nuclear Generation Company, holds the operating license for the Pilgrim Nuclear Power Station. Entergy Nuclear Operations, Inc. and Entergy Vermont Yankee, LLC, hold the license for the Vermont Yankee Nuclear Power Station. In today's decision we refer to the license applicants collectively as "Entergy."
[9] *See* NRC Staff Answer to Massachusetts Attorney General Motion for leave To File and Motion for Reconsideration of CLI-07-03 (Feb. 16, 2007); Entergy's Response to Massachusetts Attorney General's Motion for Reconsideration and Clarification of CLI-07-03 (Feb. 16, 2007).

previous ruling was final with respect to the Mass AG's participation in the *Pilgrim* and *Vermont Yankee* license renewal proceedings.[10]

II. ANALYSIS

A. No Basis for Reconsideration

Despite its characterization as a motion for "reconsideration," the Mass AG's pleading gives us no reason to reconsider our decision in CLI-07-3. A motion for reconsideration must demonstrate "compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid."[11] The Mass AG calls the decision "internally inconsistent, unclear, or potentially prejudicial" to her claims,[12] but does not contend that it violates our regulations or NEPA. The whole of the Mass AG's argument goes to the supposed "ambiguity" concerning the decision's finality. She has not demonstrated a "clear and material error" in our affirming the two Board decisions we were reviewing.

B. Finality of Decision

Our decision in CLI-07-3 was final as to the Mass AG's only claims in the two license renewal proceedings. The Mass AG has no claim remaining in either adjudication. Thus, if she wants to pursue judicial review of our rejection of her contentions, she must do so now.[13] It is true that the petition for rulemaking currently under consideration might possibly render judicial review moot. But the mere potential that an issue may become moot in the future due to a rulemaking does not affect the finality of the decision today.

To clarify an additional point, under NRC regulations, the Mass AG currently has no right to request that the final decisions in *Pilgrim* and *Vermont Yankee* license renewal proceedings be stayed until the rulemaking is resolved.[14] As we indicated in CLI-07-3, only a "party" to the proceedings, or an interested governmental entity participating under 10 C.F.R. § 2.315, may file a request to stay proceedings (pending a rulemaking) under 10 C.F.R. § 2.802.[15] The Mass AG is neither. Because she did not offer an admissible contention, she was never admitted to either of the two proceedings as a "party."[16]

III. CONCLUSION

For the forgoing reasons, the Mass AG's motion for reconsideration is denied. Our decision in CLI-07-3 is clarified as above.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
This 15th day of March 2007.

[10] NRC Staff Answer at 5; Entergy's Response at 5.

[11] 10 C.F.R. § 2.323(e).

[12] Massachusetts Attorney General's Motion for Reconsideration at 2.

[13] *See Environmental Law and Policy Center v. NRC*, 470 F.3d 676, 681 (7th Cir. 2006). She also has the option of awaiting an NRC decision in her petition for rulemaking. Agency decisions on rulemaking petitions are judicially reviewable. *See, e.g., Bullcreek v. NRC*, 359 F.3d 536 (D.C. Cir. 2004).

[14] The Mass AG's rulemaking petition requested such. CLI-07-3, 64 NRC at 22 n.37.

[15] *Id.*

[16] A state may participate *either* as an interested governmental entity *or* as a party with its own contentions, but not both. *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 626-27 (2004). Therefore, the Mass AG could not have sought "participation" status under section 2.315 while the appeal on the admissibility of her contention was still pending. But, as at least one contention has been admitted for hearing in each of the *Vermont Yankee* and *Pilgrim* proceedings, the Mass AG could seek participant status even now.