

June 27, 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
Entergy Nuclear Generation Co. and)	Docket No. 50-293-LR
Entergy Nuclear Operations, Inc.)	
)	ASLBP No. 06-848-02-LR
(Pilgrim Nuclear Power Station))	

NRC STAFF'S RESPONSE TO THE COMMONWEALTH OF MASSACHUSETTS' PETITION
FOR WAIVER OF 10 C.F.R. PART 51 SUBPART A, APPENDIX B
OR, IN THE ALTERNATIVE, PETITION FOR RULEMAKING

INTRODUCTION

Pursuant to 10 C.F.R. § 2.335(b), the Staff of the U.S. Nuclear Regulatory Commission ("Staff") hereby files its response to the "Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. 51 Subpart A, Appendix B or, in the alternative, Petition for Rulemaking to Rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental Review" (Waiver Petition).¹ For the reasons set forth below, the Staff submits that the Commonwealth of Massachusetts ("Massachusetts") has failed to establish a *prima facie* case to support its Waiver Petition. Accordingly, the Atomic Safety and Licensing Board ("Board") should deny the Waiver Petition.

¹ Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. 51 Subpart A, Appendix B or, in the alternative, Petition for Rulemaking to Rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental Review (June 2, 2011) (Agencywide Document Access and Management System ("ADAMS") Accession No. ML111530342).

BACKGROUND

The history of this license renewal proceeding spans five years. It has been discussed in full in prior filings.² Accordingly, only those portions of the procedural history directly relevant to the discussion below will be addressed herein. By letter dated January 27, 2006, Entergy Nuclear Operations, Inc. ("Applicant") submitted an application for renewal of Operating License No. DPR-35 for the Pilgrim Nuclear Power Station ("Pilgrim") for an additional 20 years.³ On May 26, 2006, Massachusetts filed an initial hearing request,⁴ which the Atomic Safety and Licensing Board ("ASLB" or "Board") denied.⁵ Subsequently, Massachusetts participated in these proceedings as an interested state under 10 C.F.R. § 2.315(c).⁶ Since that time, parties have filed a number of contentions challenging the application before the Board. The Board dismissed some of the contentions, held evidentiary hearings on two contentions, and has yet to rule on other contentions.⁷

² See e.g., NRC Staff's Answer in Opposition to Pilgrim Watch Request for Hearing on New Contention (Jan. 7, 2011) (ADAMS Accession No. ML110070837).

³ Letter from Michael A. Balduzzi, Entergy Nuclear Operations, to U.S. NRC, Re: License Renewal Application (Jan. 25, 2006) (ADAMS Accession No. ML060300026).

⁴ Massachusetts Attorney General's Request for a Hearing and Petition for Leave to Intervene wit[h] respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Pilgrim Nuclear Power Plant Operating and Petition for Backfit Order Requiring New Design Features to Protect Against Spent Fuel Pool Accidents (May 26, 2006) (ADAMS Accession No. ML061630088).

⁵ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 288 (2006).

⁶ Commonwealth of Massachusetts' Notice of Intent to Participate as an Interested State (May 6, 2008) (ADAMS Accession No. ML081500531).

⁷ NRC Staff's Answer in Opposition to Commonwealth of Massachusetts Motion to Hold Licensing Decision in Abeyance Pending Commission Decision Whether to Suspend the Pilgrim Proceeding to Review the Lessons of the Fukushima Accident, at 1-5 (May 12, 2011) (ADAMS Accession No. ML111320669).

On June 2, 2011, Massachusetts filed a “Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident” (“Fukushima Contention”), accompanied by the instant Waiver Petition.⁸ In support of the Waiver Petition, SLOMFP filed a report from its witness, Dr. Gordon R. Thompson (“Thompson Report”).⁹ The Waiver Petition and the accompanying Thompson report ask for a waiver of the NRC regulations that codify the Commission’s determination that the environmental impacts of on-site fuel storage will be small during the period of extended operation (“PEO”). Waiver Petition at 1-2. In the absence of waiver, the regulations exclude many issues raised by the Fukushima Contention from the scope of license renewal. *Id.* at 2. As set forth below, Massachusetts’ Waiver Petition and referenced materials fail to establish a *prima facie* showing that Commission’s regulations should be waived in this proceeding.

In the alternative, Massachusetts requests rulemaking to rescind the regulations it seeks to waive. *Id.* at 5. Because Massachusetts filed the request with the Board, it is not yet before the portion of the agency tasked with processing petitions for rulemaking. 10 C.F.R. § 2.802(a),(e), (f). Consequently, should the Board dismiss the Waiver Petition, the Staff asks that the Board forward the request to the NRC Staff for consideration as a formal petition for rulemaking under 10 C.F.R. §§ 2.802, 2.803.

⁸ Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident (June 2, 2011) (ADAMS Accession No. ML111530343) Massachusetts also filed a “Motion to Admit Contention and, If Necessary, to Re-Open Record Regarding New and Significant information Revealed by Fukushima Accident” (June 2, 2011) (ADAMS Accession No. ML111530340), and a “Conditional Motion to Suspend Pilgrim Nuclear Power Plant License Renewal Proceeding Pending Resolution of Petition for Rulemaking to Rescind Spent Fuel Pool Exclusion Regulations” (June 2, 2011) (ADAMS Accession No. ML111530344). The Staff will respond to these motions, as well as the Fukushima contention, separately.

⁹ Declaration of Dr. Gordon R. Thompson in Support of Commonwealth of Massachusetts’ Contention and Related Petitions and Motions (June 1, 2011) (ADAMS Accession No. ML111530345).

DISCUSSION

A. Legal Standards Governing Petitions for Waiver Under 10 C.F.R. § 2.335

Pursuant to 10 C.F.R. § 2.335(a), “[e]xcept as provided in [§ 2.335 (b), (c), and (d)], no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities . . . is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part.” Subsection (b) of § 2.335 further provides,

The sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted.”¹⁰

Subsection (c) directs the presiding officer to dismiss the petition and related claims if the petitioner does not produce a “*prima facie* showing” that meets the requirements of subsection (b). 10 C.F.R. § 2.335(c). If the petitioner does make that *prima facie* showing, subsection (d) instructs the presiding officer to “certify the matter directly to the Commission.” 10 C.F.R. § 2.335(d).

In applying these provisions, the Commission has emphasized that a waiver of one or more of the license renewal rules may be granted only upon a showing that four requirements have been satisfied:

- (i) the rule’s strict application “would not serve the purposes for which [it] was adopted;”
- (ii) the movant has alleged “special circumstances” that were “not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived;”
- (iii) those circumstances are “unique” to the facility rather than “common to a large class of facilities;”

¹⁰ In addition, “the petition must be accompanied by an affidavit” that “must state with particularity the special circumstances alleged to justify the waiver or exception.” 10 C.F.R. § 2.335(a). Technically, Massachusetts did not meet this requirement. The Thompson Report is not an affidavit because Dr. Thompson has not sworn to the accuracy of the statements therein. Thompson Report. See BLACK’S LAW DICTIONARY, 22 (2d Pocket Ed. 2001) (stating that an affidavit is “a declaration of facts written down and sworn to by the declarant”).

and (iv) a waiver of the regulation is necessary to reach a “significant safety problem.” The use of “and” in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551; 559-60 (2005) (emphasis in original; footnotes omitted). Thus, unless these requirements are satisfied, any environmental issues the Commission resolved generically through rulemaking cannot be challenged in individual license renewal proceedings.¹¹ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10, 12 (2001).

B. Massachusetts Has Failed to Establish A Prima Facie Case Showing That A Waiver of the Commission’s Rules Is Warranted

Specifically, Massachusetts seeks a waiver of 10 C.F.R. § 51.71(d) and 10 C.F.R. Part 51, Subpart A, Appendix B (“Table B-1”).¹² Those provisions divide environmental issues for license renewal into two categories: Category 1 and Category 2. The Commission has explained that Category 1 issues are those issues on which the Commission found it could

¹¹ Although the Commission stated that it would only waive application of a rule if a party demonstrated that the waiver was necessary to reach a “significant safety problem,” the Staff assumes that the Commission would also waive a regulation if necessary to reach a significant environmental issue as well. In *Millstone*, the Commission relied on *Public Service Company of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597, 599 (1988) for the fourth factor in its waiver test. In *Seabrook*, the Commission established this prong of the waiver test to protect the Commission’s already crowded regulatory agenda from non-substantive problems. *Id.* The Commission concluded that spending “time and resources on matters that are of no substantive regulatory significance” would be inconsistent with its “statutorily mandated responsibilities.” *Id.* As a result, the rationale behind the “significance” factor was limiting Commission consideration to matters of significance. Thus, even though the *Millstone* test could be read to only permit waiver of rules to reach safety issues, the Staff believes it should be construed to also permit waiver of regulations to reach environmental issues, provided, of course, that those issues are significant. At least one other board has agreed with this view. *Pacific Gas & Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-10-15, 72 NRC ___ (Aug. 4, 2010)(slip op. at 44 n. 56) (ADAMS Accession No. ML102160435).

¹²The Staff agrees with Massachusetts that earlier in the proceeding Massachusetts should have also sought a waiver of 10 C.F.R. § 51.53(c)(3)(i), which contains requirements for the Applicant’s Environmental Report. Waiver Petition at 2 n.1. But, because the Staff’s environmental impact statement has superseded the Environmental Report, waiver of 10 C.F.R. § 51.53(c)(3)(i) is unnecessary. *Id.*

reach generic determinations regarding the environmental impacts of license renewal. *Turkey Point*, CLI-01-17, 54 NRC at 11. In contrast, Category 2 issues are the remaining issues which the Commission determined it must resolve on a site-specific basis. *Id.* Table B-1 sets forth the Commission's generic determinations of the environmental impacts of Category 1 issues and identifies the matters that are to be considered on a site-specific basis as Category 2 issues.

As pertinent here, Table B-1 defines the issue of on-site storage of spent fuel as a Category 1 issue. Table B-1 concludes that the environmental impact of on-site spent fuel will be small, which means that its effects "are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute or resource." It explains, "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."

NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (May 1996) (ADAMS Accession No. ML040690705) ("GEIS") provides the analysis supporting the Commission's determinations in 10 C.F.R. Part 51, Table B-1. The Commission reviewed its experience with on-site storage of spent fuel and regulatory requirements for on-site storage of spent fuel. GEIS at 6-85. The Commission concluded "that there is ample basis to conclude that continued storage of existing spent fuel and storage of spent fuel generated during the license renewal period can be accomplished safely and without significant environmental impacts." *Id.* In discussing spent fuel pool accidents, the Commission stated,

The fuel-handling structures also have accident-mitigating systems. Spent fuel is handled and stored under water, which would tend to greatly reduce the amount of radioactive material released to the building environment in the event of fuel failure. A safety-grade exhaust air ventilation subsystem contains both charcoal and high-efficiency particulate filters. The ventilation systems are also designed to keep the area around the spent-fuel pool below the prevailing barometric pressure during fuel-handling operations to minimize the outleakage through building openings. Upon detection of high radiation, exhaust air is routed through the filter units, and radioactive iodine and particulate fission products

which escaped from the spent fuel pool would be removed from the flow stream before exhausting to the atmosphere.

GEIS at 5-9. As the Staff later explained in its proposed revision to the GEIS, because this discussion demonstrated that the impact of accidents at spent fuel pools would be less than impacts from reactor accidents, the Commission concluded that accidents at spent fuel pools should be classified as a Category 1 issue. NUREG-1437, Rev. 1, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Draft Report for Comment, at E-33 (July 2009) (ADAMS Accession No. ML091520164) (“Draft Revised GEIS”). Ultimately, the Commission concluded that the “need for consideration of mitigation alternatives within the context of renewal of a power reactor license has been considered” and the “regulatory requirements already in place provide adequate mitigation incentives for on-site storage of spent fuel.” GEIS at 6-86.

In 2006, Massachusetts filed a petition for rulemaking asking the Commission to rescind the findings in Table B regarding on-site fuel storage. The Attorney General of Commonwealth of Massachusetts, The Attorney General of California; Denial of Petitions for Rulemaking, 73 Fed. Reg. 46,204, 46,204 (Aug. 8, 2008). Massachusetts claimed that those findings were no longer valid because new and significant information showed that “spent fuel stored in high-density [spent fuel pools “SFP”] is more vulnerable to a zirconium fire than the NRC concluded in its NEPA analysis.” *Id.* The Commission denied the petition for rulemaking in light of “the physical robustness of SFPs, the physical security measures, and SFP mitigation measures, and based upon NRC site evaluations of every SFP in the United States, the NRC has determined that the risk of an SFP zirconium fire . . . is very low.” *Id.* at 46,206. As a result, the Commission concluded, “the findings in NUREG-1437 and in Table B-1 remain valid, both for SFP accidents and for potential terrorist attacks that could result in an SFP zirconium fire.” *Id.* The Second Circuit Court of Appeals affirmed the Commission’s denial of the petition for rulemaking in *New York v. NRC*, 589 F.3d 551 (2d Cir. 2009).

1. Massachusetts Has Not Made a Prima Facie Showing that Circumstances Unique to the Pilgrim License Renewal Proceeding Justify Waiver

As stated above, the third *Millstone* factor requires Massachusetts to make a *prima facie* showing of special circumstances that “are ‘unique’ to the facility rather than ‘common to a large class of facilities.’” *Millstone*, CLI-05-24, 62 NRC at 559-60 (citations omitted). The Commission promulgated the predecessor of 10 C.F.R. § 2.335 “[i]n view of the expanding opportunities for participation in Commission rule making proceedings and increased emphasis on rule making proceedings as the appropriate forum for settling basic policy issues.” Restructuring of Facility License Application Review and Hearing Process, 37 Fed. Reg. 15,127, 15,129, 15,136 (Jul. 28, 1972). Thus, “intervenors have been precluded from raising . . . the issue of whether, on generic grounds not unique to a particular plant, something more than compliance with NRC regulations can be a prerequisite to obtaining an operating license.” Statement of Policy: Further Guidance for Power Reactor Operating Licenses, CLI-81-16, 14 NRC 14, 16 (1980) (Separate Views of Chairman Ahearne and Commissioner Hendrie); see also *Public Service Company of New Hampshire*, (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597 (1988) (stating that “special circumstances are present only if the petition properly pleads one or more facts, not common to a large class of applicants or facilities”).

The third prong of the *Millstone* test embodies the Commission’s policy to resolve generic issues through rulemaking, as opposed to a series of site-specific determinations in adjudications. Therefore, parties with new and significant information that could undermine the rationale for a Commission regulation must seek a rulemaking instead of challenging the regulation in a particular proceeding unless the information uniquely applies to a given adjudication. 10 C.F.R. §§ 2.335, 2.802. Obvious considerations of efficiency and fairness support this policy. Resolving generic issues through rulemaking consumes less agency resources than proceeding piecemeal and provides all potentially affected parties with a chance to meaningfully comment before the agency establishes a new policy. See, e.g., *Connecticut*

Yankee Atomic Power Co. (Haddam Neck Plant), CLI-03-7, 58 NRC 1, 7 (2003) (stating that agencies may resolve generic issues through rulemaking to avoid continually relitigating “issues that may be established fairly and efficiently in a single rulemaking procedure” (internal quotations omitted)).

Massachusetts has not demonstrated that the events of Fukushima have any unique application to Pilgrim. Massachusetts asserts that “significant new information yielded by the Fukushima accident shows fundamental errors or oversights in the key environmental analysis relied on by the NRC for its generic designation of spent fuel storage impacts as insignificant.” Waiver Petition at 3. Specifically, Massachusetts claims that the Fukushima incident shows that (1) “there is a substantial conditional probability of a pool fire during or following a reactor accident,” (2) “the probability of a pool fire is also increased by the fact that the likelihood of a precursor reactor core melt accident” is substantially greater than previously assumed, (3) the NRC’s security requirements imposed in response to the attacks of September 11, 2001 will be “ineffective,” and (4) the unreliability of these regulations “is compounded by the secrecy under which they were imposed.” *Id.* at 27-28.

While Massachusetts phrases some of these issues as challenges specific to Pilgrim, the underlying analysis could apply to any plant. Thompson Report at 14-28. Dr. Thompson’s conclusions on conditional probability and the likelihood of a core melt rely on “direct experience,” which is based on the global operating experience of the nuclear industry. Thompson Report at 16-18, 27. Consequently, these findings would apply with equal force to all operating reactors and have no special applicability to Pilgrim. Likewise, the NRC’s post-September 11 security requirements apply to all of the plants, and for obvious reasons, the NRC has kept many of those security provisions safeguarded from public release. Power Reactor Security Requirements, 74 Fed. Reg. 13,926, 13,926 (Mar. 27, 2009) (noting that the NRC’s post-September 11, 2001 security requirements were “generically applicable” and “protected as Safeguards Information”). Consequently, any flaws Dr. Thompson believes Fukushima reveals

in those requirements would also apply to many plants. Thompson Report at 18-23.

Perhaps sensing this weakness in its argument, Massachusetts contends that this issue is unique to Pilgrim because “the NRC relies on plant-specific information for its finding that the environmental impacts of spent fuel pool storage are insignificant.” Petition at 4. In particular, Massachusetts contends that the NRC relies on the post-September 11 requirements and site-specific evaluations to support its finding that the environmental impacts of spent fuel pool storage will be small during the period of extended operation. *Id.* at 4-5. But again, these issues apply to a large class of facilities, as opposed to just Pilgrim. The Commission has stated that these post-September 11 requirements apply to all licensees and that it conducted site evaluations at every facility. 73 Fed. Reg. at, 46,207-08. Therefore, these arguments could conceivably apply to many operating reactors and thus do not meet the third *Millstone* factor. Indeed, the board in the *Diablo Canyon* license renewal proceeding made a similar finding. In rejecting a waiver petition also challenging the Commission’s generic environmental findings on spent fuel storage, the board held,

But the same information that shows that NRC has done a site evaluation of every [spent fuel pool (“SFP”)] in the United States contradicts the proposition that the need for a waiver is “unique to the [*Diablo Canyon*] facility.” We reject the proposition that a review of every site in the United States is a “way of saying each plant is unique.” If this were true, then a “terrorist attack” waiver would be appropriate for every spent fuel pool site in the United States.

Diablo Canyon, LBP-10-15, 72 NRC __ (slip op. at 58-59) (internal citations omitted).

The Staff asks the Board to follow the reasoning of *Diablo Canyon*. The arguments advanced by Massachusetts could apply to many facilities and are therefore appropriate for the rulemaking context, not site-specific adjudications.

Finally, Massachusetts suggests that the site-specific nature of the Pilgrim severe accident mitigation alternatives (SAMA) analysis indicates that the NRC should consider spent fuel pool accidents on a site-specific bases, at least with respect to the SAMA analysis. Waiver Petition at 4. But, the Commission has already addressed this concern. In an earlier decision in

this proceeding, the Commission rejected a claim that SAMA analyses should consider the impacts of spent fuel pool accidents. *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Station), CLI-10-14, 71 NRC ___ (Jun. 17, 2010)(slip op. at 29, 39) (ADAMS Accession No. ML101680369). The Commission stated, “[B]ecause onsite storage of spent fuel during the license renewal term is a Category 1 issue, and as such explicitly has been found not to warrant any additional site-specific analysis of mitigation measures, the required SAMA analysis for license renewal is intended to focus on reactor accidents.” *Id.* at 32. The Commission further explained, “a SAMA that addresses [spent fuel pool] accidents would not be expected to have a significant impact on total risk for the site because the spent fuel pool accident risk level is less than that for a reactor accident.” *Id.* at 37 (quotations omitted and alteration in original). Even though the NRC considers SAMAs on a site-specific basis, the Commission has concluded on a generic level that that consideration need not address spent fuel pools. Therefore, the Pilgrim SAMA analysis does not contain any site specific information with respect to spent fuel pools. Rather, it rests on the Commission’s generic determination that consideration of spent fuel pool SAMAs would be unnecessary.

Consequently, Massachusetts has not made a *prima facie* showing that any of the information that supports its Waiver Petition uniquely applies to Pilgrim. 10 C.F.R. § 2.335(b). Although Massachusetts applies the findings in the Thompson report to Pilgrim, that analysis could also apply to many plants. As a result, the Board should dismiss the Waiver Petition and not further consider any portions of the Fukushima Contention related to SFPs. 10 C.F.R. § 2.335(c).

2. Massachusetts Has Not Produced a Prima Facie Showing that Undercuts the Commission’s Generic Finding that the Impacts of Onsite Fuel Storage Will Be Small

As discussed above, under the first *Millstone* factor, a party seeking to waive a rule must show that “the rule’s strict application “would not serve the purposes for which [it] was adopted.” *Millstone*, CLI-05-24, 62 NRC at 559-60 (citations omitted alteration in original). The

Commission has stated that “this means, at a minimum, that the special circumstances must be such as to undercut the rationale for the rule sought to be waived.” *Seabrook*, CLI-88-10, 28 NRC at 597. With respect to the NRC’s conclusions in the GEIS that the Commission codified in Table B-1, the board in *Diablo Canyon* stated, “the purpose of these regulations is to apply generic determinations where the generic determinations are appropriate.” *Diablo Canyon*, LBP-10-15, 72 NRC at ___ (slip op. at 41).

First, Massachusetts claims that new information undermines the Commission’s conclusion that the impacts of onsite storage in SFPs will be small for the PEO because “the relationship between a pool fire and a core melt accident is not addressed in the License Renewal GEIS or the Rulemaking Denial.” Waiver Petition at 3-4, 27. But, the Commission explicitly considered this relationship when it addressed Massachusetts’ petition for rulemaking. 73 Fed. Reg. at 46,210. The Commission considered the lengthy sequence of events that must occur for a reactor accident to cause a spent fuel pool fire and found that “the probability of a SFP zirconium fire due to a severe reactor accident and subsequent containment failure would be well below the Petitioners’ 2E-5 per year estimate.” *Id.* Therefore, the Commission actually considered this issue when it denied Massachusetts’ petition for rulemaking. Massachusetts has not shown, or attempted to show, how the analysis in its expert report relates to the Commission’s conclusions on this topic.

Second, Massachusetts alleges that Fukushima incident illustrates the ineffectiveness of the mitigation measures required by the post-September 11 requirements. *Id.* at 27-28. But, as mentioned above, the Commission did not just rely on those requirements when it affirmed its finding that the environmental impacts of onsite fuel storage would be low during the PEO. *Id.* at 46,206. The Commission also relied on “the physical robustness of SFPs, the physical security measures, [and] NRC site evaluations of every SFP in the United States.” *Id.* at 46,206. Massachusetts has not alleged that the Fukushima events undermined these aspects of the Commission’s decision. Given the strength of these other bases, a very robust analysis

still underlies the Commission's determination, even if Massachusetts' arguments were true. *Id.* at 46,206 – 08. As a result, the Commission's generic findings on the impacts of onsite spent fuel storage can still be reliably applied to this proceeding. Moreover, the Thompson report alleges that, in light of the Fukushima experience, post-accident mitigation measures to restore water to SFPs will be ineffective. Thompson Report at 20. But, the Thompson Report concedes, "Eventually, TEPCO brought a concrete pumping truck with a long boom to the site, and this proved effective in spraying water into spent-fuel pools." *Id.* at 19. While the Staff believes it is too early to draw definitive lessons from the Fukushima incident, the conclusions in the Thompson Report do not provide *prima facie* support for the Waiver Petition because they state that experience from Fukushima indicates that post-accident mitigation measures may succeed in restoring water to an SFP.

Finally, Massachusetts contends that the Fukushima accident demonstrates that the "unreliability of [the Commission's post-September 11 requirements] is compounded by the secrecy under which they were imposed." Waiver Petition at 28. The Thompson Report alleges that "TEPCO's response to the Fukushima accident revealed poor understanding of the risk of a spent-fuel-pool fire." Thompson Report at 22. The Thompson Report alleges that the secrecy of the post-September 11 requirements "deprived [TEPCO] of information that could have helped it to mitigate the Fukushima accident." *Id.* at 23. But, the Thompson Report does not establish that the mitigation measures TEPCO followed in the wake of the Fukushima accident were classified, secret, or otherwise controlled. Therefore, this argument is unsupported because it simply alleges that TEPCO's response was less effective than it could have been but does not establish that TEPCO followed a confidential protocol. Moreover, as discussed above, the Thompson Report actually suggests that some of TEPCO's steps were effective. *Id.* at 19.

Therefore, Massachusetts has also not met the first prong of the *Millstone* test, because it has not produced information that undercuts the Commission's rationale for Table B-1. *Seabrook*, CLI-88-10, 28 NRC at 597. Contrary to Massachusetts' claims, the Thompson

Report does not establish that the Commission's determination that the environmental impacts of onsite storage during the PEO will be small rests on a flawed estimation of the interplay between a reactor accident and an SFP fire or the efficacy of mitigation measures.

Consequently, Massachusetts has failed to establish a *prima facie* case for waiver, and the Board should deny the Waiver Petition.

3. The Fukushima Accident Constitutes New Information, but Massachusetts Has Not Shown that It Demonstrates Waiver Is Needed to Reach an Issue of Regulatory Significance

Last, *Millstone* factors two and four require the petitioner to show "special circumstances" that were "not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived"; and "a waiver of the regulation is necessary to reach a "significant safety problem." *Millstone*, CLI-05-24, 62 NRC at 559-60. The Staff agrees with Massachusetts that the Commission did not consider the Fukushima accident when it promulgated Table B-1. Therefore, Massachusetts has met the second prong of *Millstone*.

With regard to the fourth prong, the Staff recognizes that Fukushima may likely be an event of tremendous significance to Japan's multi-unit sites near active geological faults, but Massachusetts has not demonstrated that waiver is needed to reach a problem of regulatory significance with respect to Pilgrim. *Seabrook*, CLI-88-10, 28 NRC at 597, 599 (noting that spending "time and resources on matters that are of no substantive regulatory significance" would be inconsistent with the Commission's "statutorily mandated responsibilities").

As discussed above, when the Commission promulgated its determination that the impacts of onsite fuel storage would be low during the PEO, it relied on many features of SFPs required by the NRC's regulations. *E.g.* 10 C.F.R. §§ 50.34(i), 50.54(hh)(2), 50.150(a)(ii). Due to "the physical robustness of SFPs, the physical security measures, and SFP mitigation measures, and based upon NRC site evaluations of every SFP in the United States, the NRC has determined that the risk of an SFP zirconium fire . . . is very low." 73 Fed. Reg. at 46,206.

Since the Fukushima incident, the Commission has also established a Task Force to perform a review of the Fukushima Daiichi event. SRM-COMGBJ11-0002 (March 21, 2011) (ADAMS Accession No. ML110800456). The Task Force will “evaluate all technical and policy issues related to the event to identify potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to regulatory framework that should be conducted by the NRC.” *Id.* As a result, the NRC has already undertaken a review to study its regulations in light of the Fukushima event. This review will likely encompass many of the factors relied on by the Commission to determine that the environmental impacts of onsite storage during the PEO will be small. Therefore, Massachusetts has also failed to establish a *prima facie* case under the fourth *Millstone* factor, because it has not demonstrated that waiver is needed to reach a matter of regulatory significance. Rather, the NRC is already considering the questions raised by the Waiver Petition.

CONCLUSION

Massachusetts has failed to make a *prima facie* showing that the Commission should waive the application of 10 C.F.R. Part 51 Appendix B to its Fukushima Contention. Massachusetts has failed to show that any "special circumstances" "unique" to Pilgrim rather than "common to a large class of facilities" justifies waiver. In addition, Massachusetts has not shown that strict application of the rule adopting the GEIS would not serve the purposes for which the Commission adopted it or that a waiver of the regulation is necessary to reach a significant environmental problem. Consequently, the Board should deny Massachusetts' Waiver Petition and exclude from consideration the portions of the Fukushima Contention that relate to SFPs.

Respectfully submitted,
Signed (electronically) by

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Dated at Rockville, Maryland
this 27th day of June 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
ENTERGY NUCLEAR OPERATIONS, INC.) Docket No. 50-293-LR
)
(Pilgrim Nuclear Power Station))
)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S RESPONSE TO THE COMMONWEALTH OF MASSACHUSETTS' PETITION FOR WAIVER OF 10 C.F.R. PART 51 SUBPART A, APPENDIX B OR, IN THE ALTERNATIVE, PETITION FOR RULEMAKING" have been served upon the following by the Electronic Information Exchange, this 27th day of June, 2011:

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