

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)	
)	
PACIFIC GAS & ELECTRIC COMPANY)	Docket Nos. 50-275-LR
)	50-323-LR
(Diablo Canyon Nuclear Power Plant,)	
Units 1 and 2))	

NRC STAFF'S BRIEF IN OPPOSITION TO WAIVER OF 10 C.F.R. §§ 51.53(C)(2) AND
10 C.F.R. PART 51, SUBPART A, APPENDIX B AS TO CONTENTION EC-2

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10 C.F.R. PART 51, SUBPART A, APPENDIX B AS TO CONTENTION EC-2

INTRODUCTION

On August 31, 2010, the Nuclear Regulatory Commission ("Commission") requested briefs from the parties to this license renewal proceeding for Diablo Canyon Nuclear Power Plant ("DCNPP") on "whether 10 C.F.R. § 51.53(c)(2) and 10 C.F.R. Part 51, Subpart A, Appendix B ("Appendix B") should be waived to permit litigation of Contention EC-2."¹ The Atomic Safety and Licensing Board ("Board") referred this issue to the Commission pursuant to 10 C.F.R. § 2.335(d).² For the reasons discussed below, the Commission should deny the San Luis Obispo Mothers for Peace's ("SLOMFP") Petition for Waiver of Appendix B and 10 C.F.R. § 51.53(c)(2) ("Waiver Petition").³

¹ Order, at 1 (August 31, 2010) (Agency Document Access & Management System ("ADAMS") Accession No. ML1024301450) ("Order").

² *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-10-15, 72 NRC __ (Aug. 4, 2010) (slip op. at 45).

³ San Luis Obispo Mothers for Peace's Petition for Waiver of 10 C.F.R. Part 51 Subpart A Appendix B and 10 C.F.R. § 51.53(c)(2) (Mar. 22, 2010) (ADAMS Accession No. ML1008104420).

BACKGROUND

On November 23, 2009, Pacific Gas and Electric Company (“PG&E” or “Applicant”) filed an application to renew its operating licenses for DCNPP, Units 1 and 2.⁴ On March 22, 2010, SLOMFP submitted a Request for Hearing and Petition to Intervene that contained five contentions.⁵ Because two of the contentions in the Petition to Intervene challenged NRC regulations, SLOMFP filed a petition to waive those regulations’ application to this proceeding.⁶

On August 4, 2010, the Board ruled on the Petition to Intervene.⁷ With respect to the two contentions that were the subject of the Waiver Petition, the Board referred one, Environmental Contention 2 (“EC-2”), to the Commission for a ruling on waiver and dismissed the other.⁸ In essence, EC-2 challenges the NRC’s generic regulatory determination that the environmental impacts of on-site spent fuel storage during the license renewal period would be small.⁹ Both PG&E and the NRC Staff (“Staff”) appealed the Board’s ruling to the Commission,

⁴ Letter from James R. Becker , Senior Vice President, dated November 23, 2009, transmitting application for license renewal for Diablo Canyon Nuclear Power Plant, Units 1 and 2 (ADAMS Accession No. ML093350335).

⁵ Request for Hearing and Petition to Intervene by San Luis Obispo Mothers for Peace (March 22, 2010) (ADAMS Accession No. ML1008104410) (“Petition to Intervene”).

⁶ Petition to Intervene at 19, 21. See also Waiver Petition.

⁷ LBP-10-15. The Board admitted the three contentions that did not require a waiver of NRC regulations. *Id.* at 96.

⁸ *Id.* at 96. The other contention related to terrorist attacks on the spent fuel pool during the period of extended operation. *Id.* at 51. Thus SLOMFP sought a waiver to challenge the Commission’s generic determinations regarding the environmental impacts of on-site fuel storage during the period of extended operation. *Id.* The Board found that SLOMFP failed to make a *prima facie* showing that the Commission should waive its regulations with respect to that contention. Therefore, the Board appropriately declined to consider it further. *Id.* at 96 (*citing* 10 C.F.R. § 2.335).

⁹ Petition to Intervene at 16.

although the NRC Staff only appealed part of the ruling.¹⁰ On August 31, 2010, the Commission requested briefs from the parties on “whether 10 C.F.R. § 51.53(c)(2) and 10 C.F.R. Part 51, Subpart A, Appendix B should be waived to permit litigation of Contention EC-2.”¹¹

STATEMENT OF THE CASE

SLOMFP seeks a waiver of NRC regulations to enable it to challenge the conclusions in the NRC’s 1996 Generic Environmental Impact Statement (“Current GEIS” or “GEIS”) for reactor license renewal.¹² The waiver is related to EC-2, which states “PG&E’s Environmental report is inadequate to satisfy NEPA because it does not address the airborne environmental impacts of a reasonably foreseeable spectrum of spent fuel pool accidents, including accidents caused by earthquakes.”¹³ Specifically, SLOMFP challenges the GEIS’s determination that the environmental impacts from on-site storage of spent fuel will be small during the period of extended operation (“PEO”). The GEIS reached this conclusion, in part, because the probability of a fire from a spent fuel pool (“SFP”) accident is low.¹⁴

To successfully petition for waiver of NRC regulations, a party to the proceeding must show that (1) application of the rule to the proceeding will not serve the purposes for which the

¹⁰ Applicant’s Notice of Appeal of LBP-10-15 and Applicant’s Brief in Support of Appeal from LBP-10-15 (Aug. 16, 2010) (ADAMS Accession No. ML1022806030) (“Applicant’s Appeal”); NRC Staff’s Petition for Interlocutory Review of Atomic Safety and Licensing Board Decision (LBP-10-15) Admitting an Out of Scope Safety Contention and Improperly Recasting an Environmental Contention (August 19, 2010) (ADAMS Accession No. ML1023105650).

¹¹ Order at 1.

¹² NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (May 1996) (ADAMS Accession No. ML040690705) (“GEIS”).

¹³ Petition to Intervene at 16.

¹⁴ GEIS at 6-72 – 6-75, 6-85. Table B-1 of 10 C.F.R. Part 51, Subpart A, Appendix B codifies this determination.

Commission adopted the rule; (2) special circumstances, which the Commission did not consider when it promulgated the rule, exist; (3) the special circumstances uniquely apply to the proceeding; and (4) waiver is necessary to reach an issue of regulatory significance.¹⁵

SLOMFP contends that the NRC's proposed draft update to the Current GEIS ("Draft GEIS") supports such a demonstration.¹⁶ SLOMFP asserts that the draft update relied on a different set of analyses than the Current GEIS. Moreover, SLOMFP states that although the draft update also concluded that the probability of a SFP fire is low, it relied on a document, NUREG-1738, "Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants" ("NUREG-1738"), that excluded DCNPP.¹⁷ Thus, SLOMFP maintains that the NRC has no basis to apply the conclusions in the Current GEIS to DCNPP. SLOMFP's argument does not meet the first or fourth factors for waiver.

As discussed in more detail below, SLOMFP must demonstrate that the Current GEIS's conclusion that the impacts of on-site spent fuel storage will be small cannot be reliably applied to DCNPP to meet the first factor. But, the Draft GEIS largely relied on the same studies as the Current GEIS to conclude that the probability of a SFP fire is low. This determination supported the Staff's finding that the impacts of on-site spent fuel storage will be small for all plants.¹⁸ Therefore, the conclusions in the draft update do not undermine the findings in the Current

¹⁵ *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); see also 10 C.F.R. § 2.335.

¹⁶ Waiver Petition (*citing* NUREG-1437, Rev. 1, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Draft Report for Comment (July 2009) (ADAMS Accession No. ML091520164) ("Draft GEIS").

¹⁷ NUREG-1738, Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants, at 3-7 (Feb. 2001) (ADAMS Accession No. ML010430066).

¹⁸ GEIS at 6-72 – 6-75

GEIS. Additionally, the exclusion of DCNPP from NUREG-1738 does not challenge the NRC's ability to conclude that the probability of a SFP fire is low at DCNPP. Rather, the purpose of NUREG-1738 was to undertake a quantitative safety analysis to determine whether the NRC could relax existing regulatory requirements related to emergency planning, insurance, and safeguards for decommissioning plants.¹⁹ Consequently, the omission of DCNPP in NUREG-1738 does not form a basis for challenging the Current GEIS's assessment that the probabilities of a SFP fire at operating reactors are low and therefore the environmental impacts of SFP storage during the PEO are small.

Moreover, SLOMFP has not shown that waiver is necessary to reach an issue of regulatory significance. In addition to NUREG-1738, the update to the Current GEIS also relied on studies undertaken subsequent to the Current GEIS that have further refined the NRC's conclusion that the chances of a SFP fire are low. These studies presented a more accurate analysis of SFP fires, concluded that the chances of a SFP fire are lower than initially expected, and determined that subsequent mitigative measures have further reduced the probability of a SFP fire.²⁰ These studies confirm the NRC's determination that the environmental impacts of spent fuel storage will be small for all plants. Thus, waiving 10 C.F.R. § 51.53(c)(2) and Appendix B to challenge the Current GEIS is not necessary to reach a matter of regulatory significance. Therefore, the Commission should deny SLOMFP's Waiver Petition.

¹⁹ *Id.* at 1-1.

²⁰ For a complete discussion of these studies see Section III.B.

DISCUSSION

I. Legal Standards

A. Legal Standards Governing Waiver Petitions 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 as follows:

(b) A party to an adjudicatory proceeding subject to this part may petition that the application of a specified Commission rule or regulation or any provision thereof, of the type described in paragraph (a) of this section, be waived or an exception made for the particular proceeding. *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.* The petition must be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted. *The affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested.* Any other party may file a response by counter affidavit or otherwise.

In *Millstone*, the Commission emphasized that a waiver of one or more of the license renewal rules may be granted only upon a showing that the following 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;” 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.²¹

Because SLOMFP has petitioned for waiver of rules that generically evaluate the environmental impacts of license renewal, a brief discussion of the regulatory structure governing the NRC's environmental review of license renewal applications follows.

B. The NRC's Environmental Regulations for License Renewal

1. The NRC's Part 51 Regulations Address the Requirements of NEPA

In the National Environmental Policy Act of 1969 ("NEPA"), Congress announced a national policy "to create and maintain conditions under which man and nature can exist in productive harmony."²² Thus, pursuant to Section 102 of NEPA, before undertaking a major Federal action, Federal agencies must prepare a detailed statement that discusses the environmental impacts of the proposed action.²³ This statement furthers the policies of NEPA in two ways.²⁴ First, "It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts."²⁵ Second, "[I]t also guarantees that the relevant information will be made available to the larger audience," and thus "provides a springboard for public comment."²⁶ Importantly, NEPA only

²¹ *Millstone*, CLI-05-24, 62 NRC at 559-60 (emphasis in original; footnotes omitted).

²² 42 U.S.C. § 4331.

²³ *Id.* at § 4332.

²⁴ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

²⁵ *Id.*

²⁶ *Id.*

requires that agencies take a “hard look at environmental consequences;” NEPA does not “mandate particular results.”²⁷

Part 51 of the NRC’s regulations contains the agency’s implementation of NEPA.²⁸ Under Part 51, the NRC must prepare an environmental impact statement (“EIS”) for license renewals.²⁹ On many environmental issues related to license renewal, the Commission “found that it could draw generic conclusions applicable to all existing nuclear power plants, or to a specific subgroup of plants.”³⁰ Consequently, the NRC prepared a generic environmental impact statement (“GEIS”) that assessed those impacts generically.³¹ Table B-1 of Appendix B of Subpart A to 10 C.F.R. Part 51 (“Table B-1”) codifies the results of the Current GEIS.

Table B-1 defines environmental issues that the NRC can resolve generically as “Category 1” issues and defines issues that that the NRC could not resolve generically as “Category 2” issues. The NRC must address these Category 2 issues in the site-specific supplemental environmental impact statement (“SEIS”) it prepares prior to granting a renewed operating license.³² For all Category 1 issues, Table B-1 also assigns an impact level of small, moderate, or large. A small impact means “environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute or resource.”³³

²⁷ *Id.* (internal quotations omitted).

²⁸ 10 C.F.R. § 51.2.

²⁹ 10 C.F.R. § 51.20(b)(2).

³⁰ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11 (2001).

³¹ GEIS.

³² 10 C.F.R. § 51.95(c).

³³ Table B-1, note 3.

Radiological impacts that do not exceed “permissible levels in the Commission’s regulations” are “small.”³⁴ Moderate impacts “are sufficient to alter noticeably, but not destabilize, important attributes” of an environmental resource.³⁵ Finally, large impacts “are clearly noticeable and are sufficient to destabilize important attributes of the resource.”³⁶ An agency may consider the improbability of an event occurring, among other things, in assessing and determining its environmental impact.³⁷

To qualify as a Category 1 issue, an environmental issue must meet three criteria. First, the environmental impacts associated with that issue must apply to all plants or groups of plants. Second, those impacts must have a single significance level across all plants. Finally, additional plant-specific mitigation measures must not be likely to be sufficiently beneficial to warrant implementation.³⁸ The NRC’s regulations specifically provide that the NRC may incorporate the generic conclusions for Category 1 issues into its SEIS and applicants for license renewal need not discuss Category 1 issues in their applications.³⁹ Consequently, a

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Carolina Environmental Study Group v. AEC*, 510 F.2d 796, 798-800 (D.C. Cir. 1975); *City of New York v. DOT*, 715 F.2d 732, 748-50 (2d Cir. 1983).

³⁸ The Attorney General of Commonwealth of Massachusetts, The Attorney General of California; Denial of Petitions for Rulemaking, 73 Fed. Reg. 46204, 46206 (Aug. 8, 2008). The NRC must further evaluate Category 1 issues, however, if it identifies new and significant information. 10 C.F.R. §§ 51.53(c)(3)(iv), 51.72(a)(2) and 51.92(a).

³⁹ 10 C.F.R. §§ 51.53(c)(3), 51.95(c). While NEPA ultimately places an obligation on the NRC to prepare an EIS to support a major Federal action, 42 U.S.C. § 4332, the NRC requires applicants to submit an Environmental Report (“ER”) to aid the NRC in conducting its environmental analysis. 10 C.F.R. § 51.41. Potential intervenors must file contentions based on the ER, and may amend those contentions if the NRC’s EIS contains different information. 10 C.F.R. § 2.309(f)(2).

party seeking to litigate a Category 1 issue in a license renewal proceeding must seek a waiver of the Commission's regulations, pursuant to 10 C.F.R. § 2.335.⁴⁰

As pertinent here, Table B-1 defines the issue of on-site storage of spent fuel during the license renewal PEO as a Category 1 issue. Table B-1 concludes that the environmental impact of on-site spent fuel will be small. It states, "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." The GEIS provides the analysis supporting the Commission's generic determination that the environmental impacts of on-site spent fuel storage during the PEO will be small.⁴¹

2. Contention EC-2 Challenges the NRC's Environmental Regulations

SLOMFP requested a waiver of Appendix B, including Table B-1, and 10 C.F.R. § 51.53(c)(2) to challenge the generic finding regarding on-site SFP storage during the PEO. Specifically, EC-2 states,

PG&E's Environmental Report is inadequate to satisfy NEPA because it does not address the airborne environmental impacts of a reasonably foreseeable spectrum of spent fuel pool accidents, including accidents caused by earthquakes.⁴²

⁴⁰ *Turkey Point*, CLI-01-17, 54 NRC at 12, 22-23.

⁴¹ GEIS at 5-9, 6-70 - 6-85.

⁴² Petition to Intervene at 16. After concluding that SLOMFP had stated a *prima facie* case for waiver with respect to EC-2, the Board evaluated whether EC-2 met the contention admissibility criteria in 10 C.F.R. § 2.309(f)(1). LBP-10-15 at 45-51. Ultimately, the Board admitted and recast EC-2 to read, "PG&E's Environmental Report is inadequate to satisfy NEPA because it does not address the airborne environmental impacts of a spent fuel pool accident caused by an earthquake adversely affecting DCNPP." *Id.* at 51. On appeal, both PG&E and the Staff argued that the Board improperly considered EC-2's admissibility rather than "certif[y]ing] the matter directly to the Commission." 10 C.F.R. § 2.335; Applicant's Appeal at 21 n.16; NRC Staff's Answer to Applicant's Appeal of Atomic Safety and Licensing Board Decision (LBP-10-15), at 9-10 (August 26, 2010) (ADAMS Accession No. ML1023805780) ("NRC Staff's Answer to Applicant's Appeal").

Therefore, the Commission must decide whether SLOMFP has produced sufficient evidence to demonstrate that the Commission should waive its conclusions in Appendix B, Table B-1 regarding the environmental impacts of SFP storage during the PEO.⁴³

II. SLOMFP's Petition Does Not Meet the First *Millstone* Factor

A. The Purpose for Which the Commission Adopted the GEIS

As discussed above, a party seeking waiver of a NRC regulation must meet the four-part *Millstone* test in a NRC proceeding.⁴⁴ The first factor of this test requires the petitioner to demonstrate that “the rule’s strict application would not serve the purposes for which [it] was adopted.”⁴⁵ SLOMFP has petitioned for waiver of Appendix B, including Table B-1, which incorporates the Commission’s generic determinations regarding the environmental impacts of SFP storage during license renewal, which are outlined in the Current GEIS.⁴⁶

As the Board noted, the purpose of Appendix B “is to apply generic determinations where the generic determinations are appropriate.”⁴⁷ With respect to on-site storage of spent

⁴³ Additionally, SLOMFP seeks a waiver of 10 C.F.R. § 51.53(c)(2), which provides that an environmental report need not contain any discussion regarding spent fuel storage after the period of operation, in light of the Commission’s Waste Confidence rule at 10 C.F.R. §§ 51.23(a) and (b). But SLOMFP does not argue that application of the Waste Confidence rule to this proceeding would not serve the purposes for which the Commission promulgated that rule. Rather, SLOMFP directs its argument toward the GEIS. Presumably, SLOMFP meant to challenge 10 C.F.R. §§ 51.53(c)(3) and 51.95(c), which apply the findings in Table B-1 to the ER and SEIS, respectively. Nonetheless, the Staff notes that many of the studies that support the conclusions in the GEIS also support the Waste Confidence rule. See GEIS at 6-75 (*citing* Waste Confidence Decision Review, 55 Fed. Reg. 38,474 (Sep. 18, 1990)). Consequently, the following discussion, which demonstrates that SLOMFP has not produced an adequate reason to waive Table B-1 (which codifies the GEIS’s conclusions), applies with equal force to any suggestion that the Commission should waive the Waste Confidence rule in this proceeding.

⁴⁴ *Millstone*, CLI-05-24, 62 NRC at 559-60.

⁴⁵ *Id.*

⁴⁶ Waiver Petition.

⁴⁷ LBP-10-15 at 41.

fuel during the PEO, the Commission found that the environmental impacts associated with that issue apply to all plants, those impacts have a small significance level, and plant-specific mitigation measures are unlikely to be beneficial.⁴⁸ Thus, to meet the first *Millstone* factor, SLOMFP must demonstrate that either the significance of the impacts of SFP during the PEO at DCNPP would be different from other plants (not small) or that plant-specific mitigation measures would likely be beneficial.

B. SLOMFP's Arguments

In July of 2009, the NRC published a draft update to the Current GEIS.⁴⁹ SLOMFP argues that the Draft GEIS “contains significant new information demonstrating that DCNPP has unique seismic characteristics that resulted in its exclusion from the principal study on which the NRC relies for its conclusion that spent fuel storage impacts are small.”⁵⁰ According to SLOMFP, the Draft GEIS “demonstrates that in determining that the environmental impacts of onsite spent fuel storage are small, the NRC now relies on an entirely new set of risk analyses and mitigative measures than it did in the 1996 License Renewal GEIS.”⁵¹ Because the Draft GEIS relies partially on NUREG-1738, and that document excludes DCNPP from its conclusions,⁵² SLOMFP argues that the conclusions in the Current GEIS are no longer applicable to DCNPP.⁵³ However, SLOMFP's pleadings have not demonstrated with any

⁴⁸ 73 Fed. Reg. at 46,206.

⁴⁹ Draft GEIS.

⁵⁰ Waiver Petition at 1 (*citing* Draft GEIS).

⁵¹ Waiver Petition, Declaration by Diane Curran in Support of Petition for Waiver of 10 C.F.R. Part 51 Subpart A Appendix B and 10 C.F.R. § 51.53(c)(2), at 2 (Mar. 22, 2010) (“Curran Declaration”).

⁵² Draft GEIS at E-33 n. (a).

⁵³ *Id.* (*citing* NUREG-1738, at 3-7).

specificity how this exclusion challenges the generic spent fuel determination in the Current GEIS.⁵⁴ As a result, the Waiver Petition does not satisfy 10 C.F.R. § 2.335(a)'s requirement that a party seeking waiver "state with particularity the special circumstances alleged to justify the waiver."

Although not discussed in SLOMFP's pleadings, at oral argument, SLOMFP's Counsel provided an indication of how, in SLOMFP's view, the Draft GEIS changed the analysis of environmental impacts from SFP accidents in the Current GEIS. Specifically, SLOMFP's Counsel stated, "We have come quite a long way from the 1996 GEIS in which the NRC technical staff, relying to a significant extent on studies of low density pool storage, said, [SFP] fires are not credible. Just won't happen. Don't have to worry about it."⁵⁵ Thus, SLOMFP's Counsel asserted, "[T]hat conclusion, that if fuel is uncovered it can burn, that's really different than what is in the '96 [G]EIS."⁵⁶ Consequently, SLOMFP's Waiver Petition rests on the assumption that the Draft GEIS relies on a fundamentally different analysis of the environmental impacts of on-site SFP storage.⁵⁷ But, the analysis underlying the Current GEIS is similar to the analysis underlying the Draft GEIS, and, contrary to SLOMFP's suggestions, both analyses explicitly considered high-density fuel storage and the possibility of uncovered-spent fuel fire.⁵⁸

⁵⁴ Waiver Petition, Curran Declaration.

⁵⁵ Transcript of Diablo Canyon Nuclear Plant Oral Arguments, at 276-77 (May 26, 2010) (ADAMS Accession No. ML101590109) ("Tr").

⁵⁶ *Id.*

⁵⁷ *Id.*; Curran Declaration at 2.

⁵⁸ Compare NUREG-1353 at 1-1, 2-1, 4-7 – 4-12, 4-39 with NUREG-1738 at ix, 3-25.

C. The Conclusions in the Draft GEIS Do Not Undermine the Current GEIS

1. The Current GEIS

The Staff relied on several studies, analyses, and existing regulatory requirements⁵⁹ in reaching the conclusion in the Current GEIS that SFP storage during the PEO is a Category 1 issue with small environmental impacts and remote risk for all reactors. One important study was NUREG-1353, “Regulatory Analysis for the Resolution of Generic Issue 82, ‘Beyond Design Basis Accidents in Spent Fuel Pools’,” (Apr. 1989) (“NUREG-1353”).⁶⁰ NUREG-1353 explicitly assessed whether additional mitigation measures were needed to address the safety implications of high-density storage in SFPs, particularly in light of studies that indicated the possibility of SFP fire propagation in an air-cooled, or uncovered, environment.⁶¹ Ultimately, NUREG-1353 concluded that no additional measures would prove cost effective.⁶² Notably, NUREG-1353 considered beyond design basis earthquakes, and did not exclude DCNPP or other West Coast reactors. In fact, NUREG-1353 specifically included DCNPP⁶³ and discussed reactors located in the West, concluding that:

Some siting procedures differ in the western United States because there is a strong ground motion data base available. Less extrapolation is required and tectonic faults and

⁵⁹ For example, the requirements in 10 C.F.R. Part 50 App. A General Design Criteria (GDC) 2, 4, 5, 44, 45, 46, 61, 62, 62 and 10 C.F.R. Part 20, as well as guidance licensees should have implemented based on information notices and generic letters, apply to SFPs. NUREG-1353 at ES-1, ES-2.

⁶⁰ Other studies related to this included NUREG/CR-5281, Value/Impact Analyses of Accident Preventive and Mitigative Options for Spent Fuel Pools (Mar. 1989) (ADAMS Accession No. ML071690022) and NUREG/CR-3568, A Handbook for Value-Impact Assessment (Dec. 1983) (ADAMS Accession No. ML062830096).

⁶¹ NUREG-1353 at ES-1.

⁶² *Id.* at ES-3 – ES-4.

⁶³ *See id.* at A-2, A-10.

structures are also much easier to identify. *The design seismic input is still conservatively evaluated in comparison to historical data.*⁶⁴

NUREG-1353 discussed both the potential effects and the probability of a SFP fire.⁶⁵

Regarding the potential effects, NUREG-1353 concluded that fuel assemblies could potentially ignite in certain scenarios.⁶⁶ Therefore, NUREG-1353 provided “worst-case” and “best-case” estimates of the consequences of a SFP fire. The “worst-case” estimate assumed a fire resulting in “the release of radionuclides from the entire pool inventory” and determined that such a fire would result in an estimated 26 million person-rem worth of radiation exposure and “offsite property damage” of \$26 billion in 1983 dollars.⁶⁷ NUREG-1353’s “best-estimate” of consequences assumed a smaller fire and lower population density and determined that such a fire would result in an estimated 8 million person-rem of radiation exposure and \$3.4 billion worth of damage in 1983 dollars.⁶⁸

In terms of the probability of a SFP fire, NUREG-1353 ultimately concluded that a SFP fire could occur twice per million reactor years⁶⁹ (2.0×10^{-6}).⁷⁰ NUREG-1353 stated that “most of the [SFP] risk is derived from beyond design basis earthquakes, [but] this risk is no greater than the risk from core damage accidents due to seismic events beyond the safe-shutdown

⁶⁴ *Id.* at 4-29 (emphasis added).

⁶⁵ *Id.* at ES-1.

⁶⁶ *Id.* at 4-7 – 4-13, 6-1.

⁶⁷ *Id.* at 4-41 – 4-42.

⁶⁸ *Id.*

⁶⁹ A reactor year is one year at one reactor.

⁷⁰ NUREG-1353 at 6-3 – 6-4.

earthquake.”⁷¹ Further, NUREG-1353 noted that given the large safety margins inherent in the design and construction of the SFPs, the SFPs could safely withstand earthquakes more severe than their design basis earthquake.⁷² NUREG-1353 then considered several options for reducing the probability of SFP fires, but concluded that, given the low probability of a fire, “[t]he risk[s] due to beyond design basis accidents in spent fuel pools, while not negligible, are sufficiently low that the added costs involved with further risk reductions are not warranted.”⁷³

The Current GEIS’s conclusion that the environmental impacts of SFP storage, including SFP accidents, would be small for all reactors was based in part on NUREG-1353’s conclusions that the environmental impacts of a SFP fire, while severe if it occurred, would be an exceedingly unlikely event – in the range of 2 chances per million reactor years.⁷⁴ The NRC also considered several other studies in reaching its conclusions concerning SFP storage during the PEO in the Current GEIS, including analyses supporting the Waste Confidence rule.⁷⁵ As noted above, the NRC may rely on the probability of an event occurring when evaluating its

⁷¹ *Id.* at ES-4. Technically, risk is the product of the probability of an event occurring and the event’s consequences. Therefore, NUREG-1353’s conclusion that the probability of a SFP fire is low supports its finding that the risk is also low. *Id.* at ES-4. 6-3 - 6-4.

⁷² *Id.* at ES-2 – ES-3.

⁷³ *Id.* at 6-8.

⁷⁴ Current GEIS at 6-75 (*citing* 55 Fed. Reg. 38481 (*citing* NUREG-1353 at ES-3 – ES-4)).

⁷⁵ *Id.* at 6-80-6-81 (*citing, e.g.*, 55 Fed. Reg. at 38,474, NUREG-1092, Environment Assessment for 10 CFR 72 “Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste,” (Aug. 1984) (ADAMS Accession No. ML091050510)). The Commission recently updated its finding in the Waste Confidence rule that fuel can be stored on-site without significant environmental consequence. SRM-M100915, Final Update of the Commission’s Waste Confidence Decision, at 1 (Sep. 15, 2010) (ADAMS Accession No. ML102580229); Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 73 Fed. Reg. 59,547 (Oct. 9, 2008).

environmental impacts.⁷⁶ Consequently, the analysis in NUREG-1353, which demonstrated the minute probability of a seismically-caused SFP fire, fully supports the NRC's conclusion in the Current GEIS that the environmental impacts of on-site storage of spent fuel during the twenty-year PEO would be small.

2. The Draft GEIS

a. The Draft GEIS Does Not Represent a New Approach

SLOMFP's argument that the NRC cannot reliably apply the Current GEIS to DCNPP rests on the assumption that the Staff is taking a "new" approach in the Draft GEIS by relying in part on NUREG-1738. However, the Draft GEIS represents no departure from the Current GEIS's analyses or new approach by the Staff. In fact, the Draft GEIS states that "[t]his revision does *not* attempt to provide new quantitative estimates of severe accident impacts."⁷⁷ Instead, the Draft GEIS considers how more recent studies and developments could potentially affect the conclusions in the Current GEIS and provides comparative data where appropriate.⁷⁸

Therefore, contrary to SLOMFP's assertion, the Current GEIS's conclusions related to SFP storage and accidents are not supplanted or withdrawn by the Draft GEIS's conclusions. Rather, like the Current GEIS, the Draft GEIS relies on the analyses underlying the Waste Confidence rule and contained in NUREG-1353 to conclude that the actual effects of a seismically-generated SFP fire would be high but that the probability of a SFP fire occurring is very low. Moreover, contrary to SLOMFP's assertion,⁷⁹ both the Current GEIS and the Draft

⁷⁶ *Carolina Env'tl. Study Group v. AEC*, 510 F.2d at 798-800; *City of New York*, 715 F.2d at 748-50.

⁷⁷ Draft GEIS at E-2 (emphasis added).

⁷⁸ *Id.* at E-2.

⁷⁹ Tr. at 276-78.

GEIS explicitly account for the impacts of high-density fuel storage and the possibility of uncovered fuel igniting. Additionally, the findings in the Draft GEIS do not exclude DCNPP.

In making these updates to the Draft GEIS, the NRC fulfilled its duty under NEPA⁸⁰ and NRC regulations⁸¹ to analyze more recent and available data to determine whether its previous conclusions should be modified.⁸² NUREG-1738 was one of many studies done since the Current GEIS was published that the NRC considered. The NRC's consideration of NUREG-1738, however, did not demonstrate a "new" approach or change its conclusion regarding the effects of SFP storage during the PEO for all reactors.⁸³ Instead, after considering NUREG-1738 and other more recent studies, the Staff concluded that NUREG-1738's findings were conservative,⁸⁴ and that the Current GEIS's conclusions bounded these findings for all reactors. Therefore, the Draft GEIS reaches the same conclusion as the Current GEIS regarding SFP storage and accident mitigation.⁸⁵

⁸⁰ See *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 372 (1989) (noting that all federal agencies must prepare supplements to either draft or final EISs if there "are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."). The *Marsh* Court noted that whether information was new and significant was primarily a factual dispute, and because analysis of the relevant documents requires a high level of technical expertise, the Court must defer to the informed discretion of the responsible federal agency. *Id.* at 377, (citing *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976) and *Baltimore Gas & Electric Co. v. NRDC, Inc.*, 462 U.S. 87 (1983)).

⁸¹ 10 C.F.R. §§ 51.53(c)(3)(iv) and 51.92(a).

⁸² The NRC will undertake this review on a ten year cycle. Appendix B.

⁸³ Draft GEIS at E-33.

⁸⁴ 73 Fed. Reg. at 46,208. For a complete discussion of the additional studies considered in the 2009 Draft GEIS, see *infra* section III.B.

⁸⁵ Draft GEIS at E-42.

Specifically, the Draft GEIS states that the consequences of a SFP accident would be “comparable to those from reactor accidents at full power.”⁸⁶ In addition, the Draft GEIS finds that “[s]ubsequent analyses performed, and mitigative measures employed, since 2001 have further lowered the probability of this class of accidents.”⁸⁷ Moreover, the Draft GEIS affirmed that the potential for any cost-effective severe accident mitigation alternatives (“SAMA”) related to SFP accidents are “substantially less than for reactor accidents.”⁸⁸ Thus, mitigation alternatives for SFP accidents need not be considered on a site-specific basis.⁸⁹ Finally, the Draft GEIS affirmed the Current GEIS’s conclusion that the environmental impacts of spent fuel storage during the PEO are small for all reactors.⁹⁰ In reaching these conclusions, the Staff acted within its discretion in relying on the reasonable opinions of its own qualified experts.⁹¹

b. NUREG-1738’s Exclusion of DCNPP Does Not Invalidate the Current GEIS

SLOMFP correctly points out that the conclusions in NUREG-1738 do not apply to DCNPP.⁹² However, this exclusion does not invalidate the SFP findings in the Current GEIS. NUREG-1738 did not assess the environmental impacts of on-site spent fuel storage during the PEO. Rather, NUREG-1738’s primary purpose was “to provide risk insights to support possible

⁸⁶ *Id.* at E-37.

⁸⁷ *Id.*

⁸⁸ *Id.* at E-42.

⁸⁹ *Id.*

⁹⁰ *Id.* at E-37.

⁹¹ See *Marsh v. Oregon Natural Res. Council*, 490 U.S. at 378 (noting that in dispute where specialists express conflicting views, agency must have discretion to rely on reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive).

⁹² Waiver Petition; see NUREG-1738 at 4-3.

revisions to regulatory requirements for decommissioning plants.”⁹³ Consequently, NUREG-1738 undertook a quantitative analysis of the change in risk from SFP fires that would result from relaxing the NRC’s regulatory requirements for decommissioning plants.⁹⁴ The purpose of this analysis was to determine whether relaxing the regulatory requirements related to emergency planning, insurance, and safeguards would result in acceptable risk to the public.⁹⁵ To make this determination, NUREG-1738 compared the increased risk from the SFP to the Commission’s stated acceptable changes in reactor risk due to increases in core damage frequency and large early release frequency.⁹⁶

NUREG-1738’s analysis rested on the assumption that a decommissioning plant must comply with a less comprehensive licensing basis, would not have automated back-up systems, and would lack redundancy in onsite mitigating capability.⁹⁷ In light of these differences between operating and decommissioning reactors, NUREG-1738’s conservative assumptions regarding operator actions are reasonable.⁹⁸ Specifically, “NUREG-1738 did not account for the additional time available following the spent fuel being partially or completely uncovered, but prior to the onset of a zirconium fire, that would allow for plant operator actions, makeup of SFP water levels, and other mitigation measures.”⁹⁹ In addition, “NUREG-1738 did not consider the

⁹³ *Id.* at 4-1.

⁹⁴ *Id.*

⁹⁵ *Id.* at 1-1

⁹⁶ *Id.* at 4-2- 4-3.

⁹⁷ *Id.* at A2A-5.

⁹⁸ 73 Fed. Reg. at 46,207.

⁹⁹ *Id.* at 46,209.

impact of plant and procedure changes implemented as a result of the events of the September 11, 2001.”¹⁰⁰ Given these conservative assumptions, NUREG-1738 provides a strong basis for the Draft GEIS’s conclusion that the probability of a SFP fire is low at Eastern reactors. But, because those conservative assumptions do not reflect the actual operation of a SFP at an operating reactor, the exclusion of Western reactors from NUREG-1738 does not undermine the Current GEIS’s conclusion that the probability of a SFP fire at Western operating reactors is low.

Moreover, NUREG-1738 excluded Western reactors from its analysis because the studies it relied on to estimate seismic risk at reactor sites only considered sites east of the Rocky Mountains.¹⁰¹ But, the purpose of these studies was to “capture the uncertainties in estimating seismic hazard in the Eastern United States”¹⁰² in light of indications that the seismic risk could be greater than originally estimated at Eastern reactor sites.¹⁰³ Thus, the omission of Western reactors from the studies NUREG-1738 relied on does not imply that the Current GEIS is incorrect. In fact, these studies predate the Current GEIS, which further suggests that these studies, and consequently NUREG-1738, do not contain “an entirely new set of risk analyses” that undermine the Current GEIS, as SLOMFP contends.¹⁰⁴

¹⁰⁰ *Id.*

¹⁰¹ NUREG-1738 at 4-3 (*citing* NUREG-1488, Revised Livermore Seismic Hazard Estimates for Sixty-Nine Nuclear Power Plant Sites East of the Rocky Mountains, at 1 (Apr. 1994) (ADAMS Accession No. ML0526405910) (“NUREG-1488”); Electric Power Research Institute, Seismic Hazard Methodology for the Central United States, NP-4726, Volume 4: Applications, at v (Jun. 1991) *available at* my.epri.com (“EPRI NP-4726”).

¹⁰² NUREG-1488 at 1.

¹⁰³ See EPRI NP-4726 at v. (indicating that the NRC requested a plan for developing a seismic hazard characterization methodology for the eastern United States in light of a U.S. Geological Survey that concluded that large earthquakes similar to the Charleston South Carolina earthquake of 1886 may occur with low probability at other locations).

¹⁰⁴ Curran Declaration at 2, Tr. at 276-77.

Consequently, NUREG-1738's omission of DCNPP does not show that the NRC lacks an adequate basis to determine that the environmental impacts of SFP storage during the PEO are small for DCNPP, an operating plant. Instead, NUREG-1738 conducted a different analysis for a different purpose at a different type of plant. It includes a number of conservatisms applicable to decommissioning reactors that would not apply to SFPs at operating reactors. Therefore, its exclusion of Western sites does not indicate that the NRC cannot form conclusions about operating reactors at those locations. Moreover, NUREG-1738 excluded DCNPP from its conclusions because the studies on which it relied, available at the time the Commission published the Current GEIS, only considered Eastern reactors. As a result, NUREG-1738 does not represent a new approach to seismic analysis that reveals the NRC cannot form reliable conclusions for DCNPP. Thus, NUREG-1738's omission of DCNPP does not undermine the generic determinations in the Current GEIS regarding SFP storage during the PEO or its applicability to DCNPP. Therefore the Commission should deny SLOMFP's Waiver Petition.

D. The Draft GEIS is Neutral With Respect to DCNPP

The Staff has consistently taken the position that the Draft GEIS's reliance on NUREG-1738 is neutral with regard to DCNPP.¹⁰⁵ Specifically, because NUREG-1738 does not discuss DCNPP, nothing in NUREG-1738 undermines the conclusions in the Current GEIS, which considered *all* reactors.¹⁰⁶ The mere fact that NUREG-1738, which concerned relaxation of the NRC's safety regulations for decommissioning plants, excluded DCNPP from its analysis does

¹⁰⁵ NRC Staff's Response to the Petition for Waiver of Commission Regulations Filed by San Luis Obispo Mothers for Peace, at 8 (Apr. 16, 2010) (ADAMS Accession No. ML101060657) ("Staff's Response to Waiver Petition"); Tr. at 258.

¹⁰⁶ Current GEIS at 6-86.

not demonstrate that the NRC's generic environmental conclusions for operating plants are suspect. The Board rejected this argument in LBP-10-15 because neither PG&E nor the Staff produced "evidence that the Current GEIS relies on sufficient information to reach a conclusion applicable to DCNPP regarding the impacts of a seismically-induced SFP accident."¹⁰⁷ But, the burden to demonstrate that the *Millstone* factors are met rests with the proponent of waiver.¹⁰⁸ SLOMFP's reliance on NUREG-1738's exclusion of DCNPP alone does not meet this burden. Therefore the Commission should deny the Waiver Petition.

E. Recent Commission Precedent Supports the Staff's Position that the Current GEIS Applies to DCNPP

A number of Commission decisions support the Staff's position that the Current GEIS's conclusions regarding SFP storage during the PEO apply to DCNPP. First, the Commission has already rejected an argument that the conclusions in NUREG-1738 undermine the conclusions in the Current GEIS. Specifically, California and Massachusetts filed petitions for rulemaking pursuant 10 C.F.R. § 2.208¹⁰⁹ asking the NRC to reverse its Current GEIS finding that SFPs at nuclear power plants did not create a significant environmental impact under

¹⁰⁷ LBP-10-15, at 43 (emphasis removed).

¹⁰⁸ *Millstone*, CLI-05-24, 62 NRC 551, 560.

¹⁰⁹ The Massachusetts Petition was filed August 25, 2006, docketed as PRM-51-10, and noticed by the NRC in the *Federal Register* on November 1, 2006. Massachusetts Attorney General; Receipt of Petition for Rulemaking, 71 Fed. Reg. 64,169 (Nov. 1, 2006). California's Petition was filed on March 16, 2007, docketed as PRM-51-12, and noticed by the NRC in the Federal Register on May 14, 2007. State of California; Receipt of Petition for Rulemaking, 72 Fed. Reg. 27,068. California's petition incorporated by reference the facts and legal arguments set forth in PRM-51-10. The California Attorney General filed an amended petition on September 19, 2007 to clarify its rulemaking request. This amended petition was treated as a supplement to PRM-51-12, and noticed by the NRC in the Federal Register on November 14, 2007. State of California; Supplement to Petition for Rulemaking, 72 Fed. Reg. 64,003.

NEPA.¹¹⁰ California and Massachusetts argued that the NRC “incorrectly characterized the environmental impacts of high-density spent fuel storage as ‘insignificant’ in its [Current GEIS] for the renewal of nuclear power plant licenses.”¹¹¹ Those states asserted that NUREG-1738 and other studies¹¹² presented new and significant information¹¹³ that there was a greater risk of SFP fire than previously appreciated.¹¹⁴ Thus, California and Massachusetts requested that SFP impacts be categorized as a Category 2 issue instead of a Category 1 issue¹¹⁵ and that SFP fires be considered within the body of SAMAs.¹¹⁶ Notably, the rulemaking petitions did not take into account the newer studies done by Sandia National Laboratories,¹¹⁷ which analyzed SFP fire

¹¹⁰ 73 Fed. Reg. at 46,205. A petition for rulemaking is an appropriate way to challenge a GEIS finding, which is codified in NRC regulations. *Massachusetts v. United States*, 522 F.3d 115, 127 (1st Cir. 2008).

¹¹¹ 73 Fed. Reg. at 46,208.

¹¹² The other alleged sources of new and significant information were the National Academy of Sciences 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) and Gordon R. 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. *Id.*

¹¹³ The NRC’s definition of “new and significant information” is found in Supplement 1 to Regulatory Guide 4.2, Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses, at 4.2-S-4 (Sep. 2000) (ADAMS Accession No. ML003710495).

¹¹⁴ The petitioners claimed that “either an accident or a malicious act, such as a terrorist attack, could result in a SFP being drained, either partially or completely, of its cooling water. The Petitioners further asserted that this drainage would then cause the stored spent fuel assemblies to heat up and then ignite, with the resulting fire releasing a substantial amount of radioactive material into the environment.” 73 Fed. Reg. at 46,204. Thus, the petitions claimed that SFP fires are more likely than they were thought to be when NRC made its generic SFP environmental impact findings in the Current GEIS. *Id.* at 46,208

¹¹⁵ 73 Fed. Reg. at 46,205.

¹¹⁶ *Id.* (noting Petitioners’ assertion that new and significant information shows that the radiological risk of a fire in a high-density SFP at an operating nuclear power plant can be comparable to, or greater than, the risk of a core-degradation event of non-malicious origin (i.e., a “severe accident”) at the plant’s reactor).

¹¹⁷ These studies are referred to hereafter as “the Sandia studies.”

risks, or the latest security and mitigation measures in place at nuclear plants after September 11, 2001.¹¹⁸

In 2008, the Commission consolidated and denied the petitions.¹¹⁹ In denying the petitions, the Commission considered public comments submitted in response to the petitions¹²⁰ and the Staff's determination that the Current GEIS's findings were still valid.¹²¹ The *Federal Register* notice associated with the Commission's denial outlined the reasons the Staff found the rulemaking petitioners' key assertions unconvincing and also explained that newer studies, combined with recent nuclear plant security and mitigation improvements, showed that SFP fires are actually *less* likely than previously thought.¹²² Ultimately, the Commission concluded that NUREG-1738 and the other fire-risk studies cited by petitioners were not new and significant information, and that the NRC's findings of low environmental impacts from SFP fires, which support the Current GEIS and Waste Confidence findings,¹²³ "remain valid."¹²⁴ This Commission decision directly supports the Staff's position that NUREG-1738 does not invalidate the conclusions in the Current GEIS, which apply to all reactors. The Commission's decision

¹¹⁸ 73 Fed. Reg. at 46,204. For a complete discussion of these additional security and mitigation measures and the "Sandia studies," see Section III.B.

¹¹⁹ *Id.*; see also 10 C.F.R. § 2.803 (noting that NRC's action on a petition will involve either (1) granting it and issuing a notice of proposed rulemaking or (2) denying it and issuing "a simple statement of the grounds of denial").

¹²⁰ See 10 C.F.R. § 2.802(e).

¹²¹ 73 Fed. Reg. at 46,204, 06, 08.

¹²² *Id.* at 46,212.

¹²³ *Id.* at 46,208.

¹²⁴ *Id.* at 46,212.

was upheld by the Second Circuit.¹²⁵ The Second Circuit found that the NRC's risk rating for SFP storage was properly based on scientific studies and that the NRC acted within its discretion in setting risk ratings.¹²⁶

Moreover, in a recent decision, the Commission rejected claims similar to SLOMFP's that alleged that a SAMA analysis was deficient for not considering the risk of SFP accidents.¹²⁷ In rejecting these claims, the Commission noted that the Current GEIS considers a seismic-generated accident and concludes that there is no need for further mitigation analysis.¹²⁸ The Commission stated that the Draft GEIS finds that "no change is warranted to the existing GEIS conclusion that mitigation alternatives for spent fuel pool accidents need not be considered on a site-specific basis."¹²⁹ This Commission decision confirms that the Draft GEIS does not invalidate the findings in the Current GEIS related to spent fuel storage during the PEO.¹³⁰

The Commission has also determined, at another site, that the chances of a reactor accident resulting in a SFP fire are very low. Specifically, the NRC considered SFP fire risks in a licensing proceeding involving the Shearon Harris nuclear power plant.¹³¹ At issue in that

¹²⁵ *New York v. NRC*, 589 F.3d 551 (2d Cir. 2009).

¹²⁶ *Id.* at 553.

¹²⁷ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC __ (Mar. 26, 2010)(slip. op. at 33).

¹²⁸ *Id.*

¹²⁹ *Id.* at 33 n. 125.

¹³⁰ Petition to Intervene at 16-19.

¹³¹ See *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-01-9, 53 NRC 239, 266 (2001).

proceeding was the probability of a reactor accident that causes a SFP fire.¹³² Both the Board¹³³ and the Commission¹³⁴ supported the Staff's probability estimate as to a SFP fire at the Harris plant of 2.0×10^{-7} (2 in 10 million) per reactor year, and the D.C. Circuit upheld the Commission's decision on appeal.¹³⁵ This decision supports the Current GEIS's findings that the probability of a SFP fire is low and the environmental impacts from the SFP will be small during the PEO. In light of these evaluations of the risks posed by on-site spent fuel storage, there is no need for the Commission to grant the Waiver Petition in this case to undertake a similar analysis.

F. None of SLOMFP's Other Justifications for Waiving Appendix B or 10 C.F.R. § 51.53(c)(2) Meet the First *Millstone* Factor

SLOMFP advances a number of other arguments to support its Waiver Petition. But none of them meet the first *Millstone* factor. First, SLOMFP argues that neither the Current GEIS nor PG&E's ER adequately account for the damage a SFP fire would cause to surrounding California farm land.¹³⁶ But, as discussed above, the Current GEIS assumes that the result of a SFP fire would be catastrophic. Specifically, the Current GEIS's findings were based in part on the analysis in NUREG-1353, which found that a SFP fire could result in "offsite property damage" of up to \$26 billion in 1983 dollars.¹³⁷ However, the Current GEIS concludes

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 386-89 (2001).

¹³⁵ *Orange County v. NRC*, 47 Fed. Appx. 1 (D.C. Cir. 2002).

¹³⁶ Petition to Intervene at 18-19. Curran Declaration at 2-3 (pointing to U.S. Census data demonstrating value of California farm land).

¹³⁷ NUREG-1353 at 4-41 – 4-42.

that the probability of a SFP fire is so low that the environmental impacts of on-site fuel storage will be small during the PEO. SLOMFP has not demonstrated how their data undermines this finding.

Moreover, PG&E's ER, in its SAMA analyses, does account for and discuss property damage.¹³⁸ Specifically, PG&E used 2002 National Census of Agriculture data on the value of farm and non-farm land in calculating the SAMAs for DCNPP for reactor accidents.¹³⁹ SLOMFP has not shown that the environmental effects of a SFP fire on farm land would be different from the environmental impacts from reactor accidents.¹⁴⁰ Therefore, SLOMFP has not demonstrated how the census data they cite warrant special consideration for DCNPP.¹⁴¹

Next, SLOMFP argues that the Draft GEIS "strongly indicates that in concluding that the environmental impacts of spent fuel storage are small, the NRC relied on analyses and mitigation measures that are site-specific."¹⁴² Thus, SLOMFP argues that a site-specific analysis is required instead of the generic analysis in the Current GEIS. First, this argument challenges the adequacy of the Draft GEIS, not the Current GEIS, the applicable document to this proceeding.¹⁴³ Moreover, most of the "analyses and mitigation measures" relied on by the

¹³⁸ Appendix E, Applicant's Environmental Report – Operating License Renewal Stage, at section 3.3 of Attachment F (Nov. 23, 2010) (ADAMS Accession No. ML093340123) ("ER"). See also NRC Staff's Answer to the San Luis Obispo Mothers for Peace Request for Hearing and Petition to Intervene, at 39 (April 16, 2010) (ADAMS Accession No. ML093340123) ("NRC Staff's Answer").

¹³⁹ ER at section 3.3 of Attachment F.

¹⁴⁰ NRC Staff's Answer at 39.

¹⁴¹ Petition to Intervene at 18 n.7 (*citing* 2007 Census of Agriculture – State Data). See also Curran Declaration at 2 n. 1.

¹⁴² Waiver Petition at 2.

¹⁴³ Table B-1 incorporates the Current GEIS's findings into the Commission's regulations.

Draft GEIS, particularly the Sandia studies and the additional mitigation strategies implemented subsequent to September 11, 2001, applied to *all* reactors.¹⁴⁴ The implementation of mitigation measures, which have been found to reduce the probability of SFP accidents, at all reactors indicates that the generic conclusions in the Current GEIS are still valid.

Finally, SLOMFP argues that the NRC has not adequately supported its analysis of spent fuel storage impacts because “it fails to provide references to support its conclusion or to show that it has fully complied with its obligations to disclose all publicly releasable information on which it relies.”¹⁴⁵ But, the Current GEIS cites to the Waste Confidence rulemaking, which in turn references NUREG-1353.¹⁴⁶ These are public documents which provide support for the NRC’s conclusions in the Current GEIS and the Draft GEIS. SLOMFP contends that “[t]he NRC’s failure to provide citations to the reference documents that purportedly support its generic determination, or to disclose releasable portions of those documents, makes it impossible to rely on the generic determination in the [Draft GEIS].”¹⁴⁷ But, as mentioned above, the Draft GEIS does not apply to this proceeding. Moreover, the Sandia studies discussed in the Draft GEIS contain sensitive, security-related information and are not publicly available.¹⁴⁸ The NRC is not required to disclose confidential information to satisfy its NEPA

¹⁴⁴ Draft GEIS at E-36 (emphasis added).

¹⁴⁵ Waiver Petition at 2.

¹⁴⁶ Current GEIS at 6-75 (*citing* 55 Fed. Reg. 38,481 (*citing* NUREG-1353 at ES-3 – ES-4)).

¹⁴⁷ Curran Declaration at 3.

¹⁴⁸ Draft GEIS at E-35.

obligations.¹⁴⁹ Therefore, this argument likewise fails to demonstrate that the conclusions in the Current GEIS are invalid or inapplicable to DCNPP.

G. The Shoreline Fault Does Not Demonstrate that the Current GEIS is Inapplicable to DCNPP

Finally, in its Order, the Board concluded that “the discovery of the Shoreline Fault” also supports the Waiver Petition.¹⁵⁰ However, the Shoreline Fault does not demonstrate that the Current GEIS’s conclusions regarding SFP storage during the PEO do not apply to DCNPP.¹⁵¹ As explained above, the Current GEIS assigns an impact level of small, medium, or large to an environmental issue. The Current GEIS determined that the impacts from on-site storage of spent fuel during the PEO will be small. This conclusion is based, among other things, on a determination that the chances of a SFP accident are remote. This determination also rests, in part, on a conclusion that the probability of a severe earthquake is low. But, it also rests on findings that the SFP structure is robust,¹⁵² which results in a low probability that the SFP will drain in the event of an earthquake; that some time will exist between uncovering of the fuel and

¹⁴⁹ *Pacific Gas & Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 NRC 1, 20 (2008) (citing *Weinberger v. Catholic Action of Hawaii Educ. Project*, 454 U.S. 139, 146 (1981)). Notably, a redacted version of the Sandia studies was provided to parties in the *NY v. NRC* proceedings. See “SANDIA Letter Report, Revision 2, Mitigation of Spent Fuel Pool Loss-of-Coolant Inventory Accidents and Extension of Reference Plant Analyses to Other Spent Fuel Pools, Sandia National Laboratories (Redacted by NRC and released on Dec. 19, 2008) (ADAMS Accession No. ML090490559).

¹⁵⁰ LBP-10-15 at 44. The Shoreline Fault is a previously unknown and seismically active fault identified in 2008 less than one kilometer away from DCNPP’s power block. See NRC Press Release 09-071: NRC Analysis Confirms Continued Seismic Safety at Diablo Canyon Nuclear Power Plant (Apr. 10, 2009) (ADAMS Accession No. ML0910004940). The Staff notes that SLOMFP did not rely on the Shoreline Fault in support of its Waiver Petition.

¹⁵¹ See *Millstone*, CLI-05-24, 62 NRC at 559-60 (noting that the first Millstone factor is demonstrating that the rule’s strict application would not serve the purposes for which it was adopted).

¹⁵² NUREG-1353 at ES-1- ES-2; 55 Fed. Reg. at 38,481.

ignition,¹⁵³ which provides time for operator action; and even if the fuel becomes uncovered, the fuel will not always ignite.¹⁵⁴ Neither the Board nor SLOMFP have suggested that the Shoreline Fault has or will produce a sufficient increase in the frequency of seismic occurrence to challenge the Current GEIS's finding with respect to the environmental impacts from SFPs during the PEO.

In fact, the Staff has determined in Research Information Letter 09-001 ("RIL-09-001")¹⁵⁵ that the severity of an earthquake near DCNPP, including an earthquake on the Shoreline Fault, is likely bounded by the existing analysis for DCNPP.¹⁵⁶ Further, PG&E has undertaken a series of ground motion studies to assess the Shoreline Fault. PG&E submitted the results of those studies to the NRC, which include preliminary probabilistic information on the Shoreline Fault.¹⁵⁷ Notably, the information submitted includes a new hazard curve suggesting that the seismic risk is actually slightly reduced, even after accounting for the additional risk from the Shoreline Fault.¹⁵⁸ This information indicates that the Shoreline Fault does not sufficiently increase the probability of a SFP fire to challenge the NRC's generic conclusion in the Current

¹⁵³ NUREG-1353 at 4-10.

¹⁵⁴ *Id.* at 4-7 – 4-13.

¹⁵⁵ RIL-09-001: Preliminary Deterministic Analysis of Seismic Hazard at Diablo Canyon Nuclear Power Plant from Newly Identified "Shoreline Fault" (ADAMS Accession No. ML090330523).

¹⁵⁶ NRC Staff's Answer at 32. The Staff recognizes that the RIL-09-001's determination is preliminary and based on deterministic data.

¹⁵⁷ See PG&E Letter DCL-10-106 "Response to NRC Letter dated July 6, 2010, Request for Additional Information for the Applicant's Environmental Report - Operating License Renewal Stage," Enclosure 1 at 39-66 (Aug. 27, 2010) ("PG&E Letter DCL-10-106")(ADAMS Accession No. ML102440440).

¹⁵⁸ See PG&E Letter DCL-10-106.

GEIS that the impacts of on-site fuel storage during the PEO will be small.¹⁵⁹ Thus, SLOMFP has not met the first *Millstone* factor, and its Waiver Petition should be denied.

III. The Remaining *Millstone* Factors

A. SLOMFP's Waiver Petition Meets the Second and Third *Millstone* Factors

As discussed above, SLOMFP must meet all four of the *Millstone* factors to justify waiving the Current GEIS's conclusions in this proceeding.¹⁶⁰ The second and third *Millstone* factors require SLOMFP to demonstrate, respectively, that “[there are] 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 that “those circumstances are unique to the facility rather than common to a large class of facilities.”¹⁶¹ The Waiver Petition arguably meets the second factor because when the NRC prepared the Current GEIS, the NRC had not written NUREG-1738, although the supporting studies were available, and the Shoreline Fault was undiscovered. Additionally, the Waiver Petition meets the third *Millstone* factor because

¹⁵⁹ The Staff recognizes, however, that the Shoreline Fault may present significant information concerning the probability of an earthquake for the required SAMA analysis in the ER. See NRC Staff's Answer at 28-29. Specifically, the Shoreline Fault may impact the seismic non-exceedance frequency used for the seismic analysis. But, the SAMA analyses rest on a “process that determines the worth of potential actions that could be taken, in advance, to mitigate the effects of a severe accident.” *Northern States Power Company*, (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905, 923 n. 115 (2008). Consequently, because a SAMA analysis essentially consists of a series of cost-benefit analyses, a slight increase in the probability of a seismic event from the Shoreline Fault could increase the benefit of a potential mitigation strategy enough to change the SAMA analysis. Thus, information on the Shoreline Fault is relevant to the SAMA analysis in PG&E's ER, and PG&E must provide the Staff with information on the Shoreline Fault to meet the Commission's license renewal regulations. NRC Staff's Answer at 28-29. The Staff disagrees, however, with SLOMFP's assertion that PG&E's ER must await the “Shoreline Fault” Study. *Id.* The Staff does not believe a revised seismic PRA is necessary for EC-1. NRC Staff's Answer at 30. Instead, “a sensitivity analysis using a best estimate or conservative multiplier on the CDF would be sufficient for the purpose of completing the SAMA analysis.” *Id.* Further, to the extent EC-2 is a SAMA contention, it is contrary to Commission precedent. See *Turkey Point*, CLI-01-17, 54 NRC at 21. See also NRC Staff's Answer to Applicant's Appeal, at 14-15.

¹⁶⁰ *Millstone*, CLI-05-24, 62 NRC at 559-60.

¹⁶¹ *Id.*

these special circumstances have a unique application to DCNPP. Specifically, the Shoreline Fault is one kilometer away from DCNPP, and NUREG-1738 specifically excludes DCNPP from its analysis.

B. SLOMFP Has Not Shown that Waiver is Necessary to Reach a Significant Environmental Issue and Therefore has Not Met the Fourth *Millstone* Factor

Even if the Commission concludes that SLOMFP has shown that the conclusions in the Current GEIS do not reliably apply to DCNPP, the Waiver Petition still fails to meet the fourth *Millstone* factor and should therefore be denied.¹⁶² Specifically, SLOMFP has not shown that waiver is necessary to address a significant environmental problem. Rather, the Draft GEIS relies on a number of additional studies, undertaken since the Current GEIS, which demonstrate that the probability of a seismically-generated SFP accident is lower than initially expected. As a result, the conclusion in the Draft GEIS that the environmental impacts of on-site SFP storage during the PEO will be small at all plants, including DCNPP, rests on an even more reliable justification than the conclusions in the Current GEIS.

In particular, after September 11, 2001, newer, more robust analyses of fire risks were completed, at the NRC's request, by Sandia National Laboratories.¹⁶³ These studies assessed SFP accident risks and confirmed the low probability of pool fires and suggested that NRC's

¹⁶² The fourth *Millstone* factor requires the proponent of waiver to show that "waiver of the regulation is necessary to reach a significant safety problem." *Millstone*, CLI-05-24, 62 NRC 551; 559-60. As a result, *Millstone* could be read to indicate that the Commission will not waive its regulations for environmental issues. But, the fourth *Millstone* factor arose from the Commission's determination that spending "time and resources on matters that are of no substantive regulatory significance" would be inconsistent with its "statutorily mandated responsibilities." *Public Service Company of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597, 599 (1988). Because environmental issues can certainly qualify as matters of "regulatory significance," the Staff believes that the fourth *Millstone* factor should be liberally construed to permit waiver of NRC regulations in order to consider significant environmental, as well as safety, issues. See Staff's Response to Waiver Petition at 4 n.3.

¹⁶³ 73 Fed. Reg. at 46,207-08.

prior analyses had actually overestimated this probability.¹⁶⁴ This conclusion was supported by several findings. Specifically, the Sandia studies found that, “there may be a significant amount of time between the initiating event[, such as an earthquake,] and the spent fuel assemblies becoming partially or completely uncovered.”¹⁶⁵ The Sandia studies also confirmed that “[t]here is a significant amount of time between the spent fuel becoming uncovered and the possible onset of...a zirconium fire, thereby providing a substantial opportunity for both operator and system event mitigation.”¹⁶⁶ The Sandia studies also “more fully account[ed] for relevant heat transfer and fluid flow mechanisms” than previous studies.¹⁶⁷ Specifically, the Sandia studies accounted for the natural heat transfer mechanism from newer, “higher-decay-power assemblies to older, lower-decay-power fuel assemblies in the SFP. This heat transfer would substantially increase the effectiveness of air cooling in the event the SFP is drained, far beyond the effectiveness of air cooling cited in past studies.”¹⁶⁸ Moreover, in a scenario where the water level does not permit full air cooling, this transfer of heat from newer to older assemblies will provide extra time for operator action.¹⁶⁹ Further, the Sandia studies noted that “air-cooling of spent fuel would be sufficient to prevent...zirconium fires at a point much earlier following fuel

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 46,208.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 46,209.

offload from the reactor than previously considered (e.g., in NUREG-1738). Thus, the fuel is more easily cooled, and the likelihood of [a SFP] fire is therefore reduced.”¹⁷⁰

Moreover, since the Current GEIS was published, the NRC has taken measures to ensure that the Current GEIS’s conclusions related to SFP impacts remain valid and apply to all plants. For example, following September 11, 2001, mitigation enhancements contained in Commission orders helped ensure that the impacts of SFP storage and accidents would be small by making SFP fires less likely.¹⁷¹ Specifically, on February 5, 2002, the Commission ordered licensees to “develop guidance and strategies to maintain or restore [SFP] cooling capabilities using existing or available resources if cooling is lost for *any* reason.”¹⁷² The Sandia studies confirmed that these mitigation strategies are effective in maintaining spent fuel cooling in the event the pool is drained and its initial water inventory is reduced or lost entirely.¹⁷³ These mitigation measures include internal and external SFP coolant makeup and spray systems that will provide additional water to the SFP, in the event of an accident.¹⁷⁴

The Commission also required licensees to implement heightened measures for all

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at 46,206.

¹⁷² See NRC Review of Paper on Reducing Hazards From Stored Spent Nuclear Fuel,” at 6 *available at*: <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/reducing-hazards-spent-fuel.html> (emphasis added) (“Alvarez Fact Sheet”) . Notably, “spent fuel generates orders of magnitude less heat than an operating reactor, so that emergency cooling of the fuel in the case of an attack could probably be accomplished using ‘low tech’ measures that could be implemented without significant exposure of workers to radiation.” *Id.* at 5.

¹⁷³ Draft GEIS at E-36 (discussing Sandia studies). See *also* 10 C.F.R. § 50.54(hh) (codifying these new mitigation requirements).

¹⁷⁴ 73 Fed. Reg. at 46,204, 09.

nuclear power plants following September 11, 2001.¹⁷⁵ These heightened security measures include “[a]ugmented security forces and capabilities; increased patrols; additional security posts and physical barriers; vehicle checks at greater standoff distances; enhanced coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough initial and follow-on screening of power reactor and Category I fuel cycle facility employees.”¹⁷⁶ These measures help validate the Staff’s conclusions that the environmental impacts from on-site SFP storage during the PEO will be small.¹⁷⁷

Further the design features of nuclear power plants also help ensure that the Current GEIS’s conclusions related to SFP storage during the PEO are valid. Specifically, all nuclear power plants have been designed to withstand earthquakes of a magnitude up to and including that of a hypothetical “Safe Shutdown Earthquake” (“SSE”).¹⁷⁸ This robust design includes structures constructed of “thick, reinforced, concrete walls and floors lined with welded, stainless-steel plates to form a leak-tight barrier.”¹⁷⁹ This design ensures that the environmental impacts of SFP storage during the PEO are small.¹⁸⁰ Moreover, the NRC “regularly inspects the

¹⁷⁵ *Id.* at 46,207. Notably, “[e]ven prior to September 11, 2001, licensees had multiple barriers and sensors,[and] well-armed and trained guards, ready to defend from prepared positions.” Alvarez Fact Sheet at 3.

¹⁷⁶ Final Rule: Design Basis Threat, 72 Fed. Reg. 12,705, 12,705-06 (Mar. 19, 2007).

¹⁷⁷ 73 Fed. Reg. 46,204, 08, 12; See Current GEIS at 6-85 – 6-86; Draft GEIS, at E-36, E-37.

¹⁷⁸ See *SLOMFP v. NRC*, 751 F.2d 1287, 1307 (D.C. Cir. 1984). See also *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant Units 1&2), ALAB-644, 13 NRC 903, 910 (1981).

¹⁷⁹ 73 Fed. Reg. at 46,206.

¹⁸⁰ *Id.*

design, construction, and use of spent fuel pools... to ensure licensees and vendors meet NRC's radiation safety and security requirements."¹⁸¹ These seismically-qualified physical structures, and the operational measures and security measures noted above, help ensure that SFP storage and accidents have small environmental impacts at all reactors.¹⁸²

Importantly, all of the safety and security mitigation requirements discussed in the Commission's denial of the rulemaking petition, and validated by the Sandia studies, are in place at DCNPP¹⁸³ to ensure that the impacts of SFP storage during the PEO are small. Further, DCNPP's SSE has been calculated to lie at 7.5 on the Richter scale.¹⁸⁴ This SSE was chosen "with reference to the *region's maximum earthquake potential*, [so] the probability that an earthquake *greater* than the SSE will occur is so low as to be legally insignificant."¹⁸⁵ DCNPP's SSE provides assurance that DCNPP is built to safely withstand the region's maximum potential earthquake. Additionally, DCNPP's SFPs are seismically qualified to help ensure that the impacts of SFP storage are small.¹⁸⁶ Thus, DCNPP has all of the mitigation

¹⁸¹ OPA Fact Sheet, "Storage of Spent Nuclear Fuel," at 1 (April 2005), *available at* <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/storage-spent-fuel-fs.pdf>.

¹⁸² 73 Fed. Reg. at 46,208.

¹⁸³ The NRC amended all nuclear power plant operating licenses to incorporate mitigation strategies for spent fuel pools. Diablo Canyon Nuclear Power Plant, Units 1, Facility Operating License, at 9 (Jul. 11, 2007) (ADAMS Accession No. ML053140349); Diablo Canyon Nuclear Power Plant, Unit 2, Facility Operating License, at 7 (Jul. 11, 2007) (ADAMS Accession No. ML053140353). The NRC recently codified these new generally applicable mitigation requirements in 10 C.F.R. § 50.54(hh). In addition, the security measures applied to all commercial nuclear power plants. NRC Orders Nuclear Power Plants to Enhance Security (Feb. 26, 2010) (ADAMS Accession No. ML0205904280).

¹⁸⁴ *SLOMFP v. NRC*, 751 F.2d at 1307.

¹⁸⁵ *Id.* at 1307-08, (emphasis added), *see also id.* at 1308 n. 115.

¹⁸⁶ While these mitigation measures are specific to DCNPP, this does not undermine the Staff's generic finding that the measures taken at every plant will help ensure the risks of SFP storage and accidents are small. 73 Fed. Reg. 46,204, 46,207-8, 46,212 (Aug. 8, 2008). *See also* NRC Staff's Answer at 10.

measures, seismically-qualified physical structures, and operational measures to ensure that SFP storage and accidents have small environmental impacts at DCNPP.

The Draft GEIS states that NUREG-1738 is a “key” document, but it is not the only document discussed in the Draft GEIS.¹⁸⁷ Although NUREG-1738 exempts DCNPP from its analysis, the other documents discussed in the Draft GEIS do not.¹⁸⁸ The NRC has considered studies completed since the Current GEIS that further confirm the low risk of a SFP fire. Specifically, the Sandia studies demonstrate that more advanced modeling of heat transfer mechanisms substantially reduces the likelihood of uncovered fuel igniting. Moreover, the Sandia studies demonstrate that there will be a significant amount of time to take operator actions to prevent a spent fuel pool fire, in the event of an earthquake. Additionally, the Sandia studies show that post-9/11 mitigative measures will be effective in preventing a SFP fire. This additional information provides a substantial basis for concluding that the chances of a SFP fire are low and the environmental impacts of on-site fuel storage during the PEO are small for all plants. As a result, SLOMFP has not shown that a waiver is necessary to reach an issue of regulatory significance.

CONCLUSION

For any major Federal action significantly affecting the quality of the human environment, Section 102(2)(C) of NEPA requires Federal agencies to prepare an environmental statement that addresses the environmental impacts of the proposed action. NEPA requires the NRC to take a “hard look” at the environmental impacts of license renewal

¹⁸⁷ Draft Revised GEIS at E-33.

¹⁸⁸ *Id.*

when preparing its EIS.¹⁸⁹ The Current GEIS contains the NRC's analysis and generic determinations as to the environmental impacts of SFP storage for the PEO and concludes that the environmental impacts of SFP storage during license renewal term are insignificant for all reactors.¹⁹⁰

The 2009 Draft GEIS, updated with more recent studies and information, confirms the Current GEIS's supporting basis, and concludes that if anything, the Current GEIS is a conservative estimate of the impacts of SFP storage and accidents for all reactors. While the Draft GEIS relies in part on an analysis in NUREG-1738 that excludes DCNPP, that analysis addressed safety regulations for decommissioning plants, a very different inquiry than whether the environmental impacts from the SFP will be small during the PEO. As a result, NUREG-1738's exclusion of DCNPP does not invalidate the NRC's generic conclusions in the Current or Draft GEIS related to SFP storage for the PEO. Instead, the Staff has satisfied its NEPA obligation to take a "hard look" at the environmental impacts associated with SFP storage during the PEO.¹⁹¹ Based on the Staff's "hard look," there is no basis for conducting a site-specific analysis of the environmental impacts of SFP storage, as the environmental impacts of SFP

¹⁸⁹ *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 348 (internal quotations omitted). See also *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-09-10, 69 NRC ____ (Jun. 4, 2009)(slip op. at 5)(noting that NRC acted reasonably in using a "generic method" of conducting required NEPA "hard look" at impacts).

¹⁹⁰ Current GEIS at 6-85 - 6-86.

¹⁹¹ For Category 2 issues, the Staff will satisfy NEPA and NRC requirements by preparing the site-specific SEIS for DCNPP. See *Massachusetts v. NRC*, 522 F.3d at 120 ("The GEIS, combined with a site-specific EIS, constitutes the complete EIS required by NEPA for the major federal action of a [nuclear power] plant's renewal").

storage during the PEO, including accidents, are small for *all* plants given, among other things, the low probability of a SFP fire.¹⁹² Therefore, the Commission should deny the Waiver Petition.

/Signed (electronically) by/

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¹⁹² 73 Fed. Reg. 46,204 (Aug. 8, 2008).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)
)
PACIFIC GAS AND ELECTRIC COMPANY) Docket Nos. 50-275-LR/ 50-323-LR
)
(Diablo Canyon Nuclear Power Plant,)
Units 1 and 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S BRIEF IN OPPOSITION TO WAIVER OF 10 C.F.R. §§ 51.53(C)(2) AND 10 C.F.R. PART 51, SUBPART A, APPENDIX B AS TO CONTENTION EC-2," dated September 24, 2010, have been served upon the following by the Electronic Information Exchange, this 24th day of September, 2010:

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