

March 16, 2007

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE COMMISSION

In The Matter of	)	Docket No. PRM	DOCKETED USNRC
Proposed Amendment to 10 CFR Part 51	)		March 21, 2007 (10:13am)
(Rescinding finding that environmental	)		OFFICE OF SECRETARY
impacts of pool storage of spent nuclear	)		RULEMAKINGS AND
fuel are insignificant)	)		ADJUDICATIONS STAFF

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

**I. INTRODUCTION**

Pursuant to the Administrative Procedure Act ("APA"), 5 U.S.C. § 553, subdivision (e), the National Environmental Policy Act ("NEPA"), 42 U.S. C. § 4332, *et seq.*, and the Nuclear Regulatory Commission's ("NRC") regulations, the State of California, acting by and through its chief law officer, Attorney General Edmund G. Brown Jr., petitions the NRC to undertake rule making to do the following: 1) rescind NRC regulations found at 10 C.F.R. Part 51, that declare the potential environmental effects of the approval, construction, and operation of high-density pool storage of spent nuclear fuel are not and cannot be significant for purposes of NEPA and NEPA analysis; 2) adopt and issue a generic determination that approval of such storage at a nuclear power plant or any other facility does constitute a major federal action that may have a significant effect on the human environment; and 3) order that no NRC licensing decision that approves high-density pool storage of spent nuclear fuel at a nuclear power plant or other storage facility may issue without

the prior adoption and certification of an environmental impact statement that complies with NEPA in all respects, including full identification, analysis, and disclosure of the potential environmental effects of such storage, including the potential for accidental or deliberately caused release of radioactive products to the environment, whether by accident or through acts of terrorism, as well as full and adequate discussion of potential mitigation for such effects, and full discussion of an adequate array of alternatives to the proposed storage project.

California believes that the regulatory actions it requests are necessary to comply with the holding of the Ninth Circuit Court of Appeals in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9<sup>th</sup> Cir. 2006), *cert. denied* 127 S.Ct. 1124 (2007), \_\_\_ U.S. \_\_\_, and are warranted by the facts and legal arguments set out in Petition for Rulemaking No. PRM-51-10, filed with the NRC by the Attorney General of the Commonwealth of Massachusetts, and with the Massachusetts Attorney General's Request for a Hearing and Petition to Intervene With Respect to Entergy Nuclear Operation Inc.'s Application for Renewal of the Pilgrim Nuclear Power Plant Operating License, etc., Docket No. 50-293, which petitions and exhibits the California Attorney General hereby incorporates by reference.

Our petition asks that the current regulations be amended because the current regulations determine that the effects of high density storage of spent fuel rods may never be significant for purposes of NEPA, despite two major new and significant threats that have developed since these regulations were implemented. First the NRC has not properly evaluated the significance of storing spent fuel assemblies in pools that were designed for a much smaller number of spent nuclear fuel assemblies, thereby greatly increasing the possibility of catastrophic accidents involving fire. Second, the current regulations bar a finding of significance for high density storage despite the

threats posed by potential acts of terrorism, as we now understand them, and as the President of the United States and various other federal officials have articulated those threats after the September 11, 2001 attacks.

## **II. FACTUAL AND PROCEDURAL BACKGROUND**

The State of California has a strong interest in the NRC's regulation of commercial nuclear power plants and the management of the threats posed to them by accident or acts of terrorism. California has two operating nuclear plants, Diablo Canyon Units 1 and 2, and San Onofre Units 2 and 3. In addition, the State also receives power from the Palo Verde nuclear plant in Arizona, which consists of three units and is partially owned by California utilities. There are also three decommissioned nuclear plants in California that currently store nuclear waste, namely Humboldt, Rancho Seco, and San Onofre Unit 1. Currently, the Diablo Canyon units store more than three times as many spent fuel assemblies in spent fuel storage pools as those pools were originally designed to hold.<sup>1/</sup> Because the Yucca Mountain repository has not become available for long term storage of the spent nuclear fuel, and dry cask storage is not yet available, and might not be safe, to relieve the crowding at all of the California nuclear plants, the dense storage of spent fuel assemblies in pools will continue for the foreseeable future. As is detailed below, the dense storage of spent nuclear fuel greatly increases the chance of a catastrophic fire and release of radioactivity to the environment.

In addition, California is concerned about the threat of terrorist attacks on densely packed pools of spent nuclear fuel assemblies. A successful terrorist attack on a California nuclear facility,

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1. "*Nuclear Power in California: Status Report, Final Consultant Report*" at p. 112, California Energy Commission March 2006, CEC 150-2006-001-F.

depending on its severity, could kill or injure thousands of people, permanently contaminate valuable California natural resources, and devastate the economies of both the state and the nation. The San Onofre Nuclear Generating Station is near an area, Southern Orange County, that is rapidly being converted to subdivisions. A successful terrorist attack that causes any release of radioactive products could expose the population of San Clemente and other Southern Orange County cities to significant amounts of deadly radiation, close the major north-south highway corridor in Southern California, Interstate 5, and permanently damage the fragile coastline and marine near-shore environment. Such an attack, moreover, would require California state and local government agencies to spend substantial sums -- potentially in the tens of millions of dollars or more -- responding to the attack, conducting decontamination activities, providing health services for the injured and their future offspring, and repairing damaged infrastructure. California thus has an obvious interest in insuring that the significance of the risks from terrorism be considered in any NEPA decision-making documents and that there is opportunity for meaningful public participation on this issue, consistent with national security concerns, throughout the NEPA process.

### **III. STANDARD FOR RULEMAKING PETITIONS**

10 C.F.R. § 2.802(c)(3) allows any person to petition the NRC to issue, amend or rescind a regulation. 10 C.F.R. § 2.802(c)(3) requires the petition to include the specific issues involved, the petitioner's views or arguments with respect to those issues, relevant, scientific or other data involved which is reasonably available to the petitioner, and such other pertinent information as the petitioner deems necessary to support the action sought.

The instant petition seeks to have the NRC: (1) consider new and significant information about threats to the environment caused by dense storage of spent nuclear fuel; (2) rescind

regulations that bar the consideration of spent fuel storage impacts in NEPA documents, regardless of the reasonable foreseeability of such effects; (3) make a generic determination that environmental impacts from spent fuel storage are significant; and (4) order that any decision to permit high density pool storage of nuclear fuel at any facility be accompanied by an Environmental Impact Statement (“EIS”) that complies with NEPA. The California Attorney General believes that such actions are mandated by the Ninth Circuit decision in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (supra), and the new information regarding the threats of terrorism and potential for catastrophic fires in high density pool storage of spent nuclear fuel.

**IV. THE NRC SHOULD AMEND ITS CURRENT REGULATIONS (10 C.F.R. § 51.23(a) and (b)) THAT FIND THAT THERE ARE NO ENVIRONMENTAL IMPACTS FROM HIGH DENSITY POOL STORAGE AND THAT STORAGE OF SPENT NUCLEAR FUEL NEED NOT BE DISCUSSED IN ANY ENVIRONMENTAL REPORT.**

NEPA is the basic national charter for protection of the environment and is implicated whenever a federal action has the potential for “significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1500.1(a). NEPA “ensures that the agency ... will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger [public] audience.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9<sup>th</sup> Cir. 1998), *cert. denied* 527 U.S. 1003 (1999) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)).

NEPA requires that federal agencies, before taking a major action, take a hard look at new and significant information bearing on the impacts of an action. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989). Accordingly, in light of the new information about significant

impacts that can occur from high density pool storage of spent nuclear fuels, NEPA requires that the NRC amend its regulations that currently state that temporary storage of spent nuclear fuels at nuclear plants does not have a significant environmental impact 10 C.F.R. § 51.23(a), and that no discussion of any environmental impact from spent fuel storage is required. 10 C.F.R. § 51.23(b). These regulations conflict with and violate NEPA's mandate, in light of the new information about significant impacts that can occur from high density pool storage of spent nuclear fuels. An EIS done in accordance with current NRC regulations could not identify, analyze, or disclose the dangers to the environment posed by potential accidents or terrorist attacks on spent fuel pools, even if the NRC discovered or was presented with evidence that such dangers were reasonably foreseeable. In such a circumstance, the NRC's regulations would prevent the NRC from fully complying with NEPA. However, Section 102(2)(C) of NEPA requires all agencies to administer their laws in accordance with NEPA "to the fullest extent possible" 42 U.S.C. § 102(2)(C)., in order to further NEPA's action-forcing mandate. *Flint Ridge Dev. Co. V. Scenic Rivers Ass'n of Oklahoma*, 426 U.S. 776, 787-89 (1976). It is well settled law that full compliance with NEPA is part of every agency's mandate. *Calvert Cliffs' Coordinating Comm. v. United States Atomic Energy Comm'n.*, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

The regulations interpreting NEPA adopted by the Council on Environmental Quality (CEQ) provide at 40 C.F.R. section 1507.3, subdivision (a) (emphasis added):

Agencies shall continue to review their policies and procedures  
and in consultation with the Council to revise them as necessary  
to ensure *full* compliance with the purposes and provisions of the Act.

“The CEQ regulations are binding on all federal agencies and provide formal guidance to the courts for interpreting NEPA requirements.” *Trustees for Alaska v. Hodel* 806 F.2d 1378, 1382 (9<sup>th</sup> Cir. 1986). The Attorney General of California believes that NEPA thus requires that the NRC amend its regulations to enable itself to prepare an EIS or other appropriate NEPA document regarding approvals or licenses for spent fuel pool storage that will fully comply with NEPA. “[A]n agency’s decision [to proceed without the benefit of an EIS that addresses all potential environmental consequences of a proposed project] will be considered unreasonable if the agency fails to supply a convincing statement of reasons why potential effects are insignificant.” *Blue Mountains Biodiversity Project*, 161 F.3d at 1211 (quoting *Save the Yaak*, 840 F.2d at 717).) The NRC’s unwillingness to comply with the Ninth Circuit ruling and its failure to consider the new information is not a reasonable position and violates NEPA and CEQ regulations.

**A. The NRC Should Amend Its Regulations and Issue New Findings in Light of New and Significant Information on the Risk From Accidental Fires.**

The National Academy of Sciences has pointed to the dense storage of spent nuclear assemblies in pools as a major new development that needs to be considered. NAS Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, *Safety and Security of Commercial Spent Fuel Storage* at p. 53-4 (The National Academies Press 2006), attached as Ex. 4 to Massachusetts Attorney General’s Request for a Hearing and Petition to Intervene With Respect to Entergy Nuclear Operation Inc.’s Application for Renewal of the Pilgrim Nuclear Power Plant Operating License, etc., Docket No. 50-293. This overcrowding increases the potential for severe accidents if water is partially lost from the pool.<sup>2/</sup> If the water drops to the point where the top of the

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2. This risk is much greater than previously assumed by NRC, see for instance, NUREG/CR-0649, *Spent Fuel Heatup Following Loss of Water During Storage* (March 1979).

spent fuel assemblies are exposed to the air, they will burn and the fire may spread to other assemblies in the pool, potentially leading to a catastrophic fire and release of radioactive aerosols. Because the California plants are operating in active earthquake fault zones, an incident that could involve loss of water from the pools is a reasonable possibility. Case in point, a moderate earthquake caused damage to the Humboldt Bay Nuclear Plant in Eureka, California, which was then closed because a seismic retrofit was not economical.<sup>3/</sup>

This information concerning the risk caused by high density pool storage is new and significant information that must be considered by the NRC.

**B. The NRC Should Amend Its Regulations and Issue New Findings in Light of the New and Significant Information About the Potential for Fires and Threats of Terrorism.**

In addition to the failure to consider the impacts from an accidental fire caused by high density storage, the NRC's regulations do not address the need to evaluate the significant environmental impacts that would stem from a successful terrorist attack on a California nuclear facility. Such attacks, contrary to the current finding of the NRC, are reasonably foreseeable and not speculative. In his State of the Union Address on January 9, 2002, President Bush noted that U.S. intelligence agencies had uncovered plans of U.S. nuclear power plants at Al-Qaeda bases in Afghanistan, indicating that attacks at those facilities may have been planned. "We have found diagrams of American nuclear power plants and public water facilities, detailed instructions for making chemical weapons, surveillance maps of American cities, and thorough descriptions of

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3. "Nuclear Power in California: Status Report, Final Consultant Report" at p. 31 California Energy Commission March 2006, CEC 150-2006-001-F

landmarks in America and throughout the world,” said the President. Gertz, *Nuclear Plants Targeted*, The Washington Times, January 31, 2002.

On January 31, 2002, former Defense Secretary Rumsfeld said that the U.S. Armed Forces must prepare for potential surprise attacks that could be worse than those inflicted on the United States on September 11, 2001. “These attacks could grow vastly more deadly than those we suffered on September 11, 2001,” said Rumsfeld. *Al-Qaeda: U.S. Nuclear Power Plant Attack?*, CNN, MSNBC, January 31, 2002. The same day, the NRC released an alert that it had issued to the nation’s nuclear power plants on January 23, 2002. The NRC alert warned of the potential for an attack by terrorists who planned to crash a hijacked airliner into a nuclear facility. While the NRC alert stressed that the threat of a kamikaze plane attack was not corroborated, the alert said that “the attack was already planned” by three suspected Al-Qaeda operatives “already on the ground,” who were trying to recruit non-Arabs for the terrorist mission. Bazinet and Sisk, *Plant Attacks Feared*, The New York Daily News, February 1, 2002.

On May 14, 2002, Gordon Johndroe, a spokesman for the Office of Homeland Security, noted that “[W]e know that Al-Qaeda has been gathering information and looking at nuclear facilities and other critical infrastructure as potential targets.” *Security Boosted at Nuke Facilities*, The Washington Times, May 14, 2002. On May 24, 2002, the NRC reported that the Nation’s nuclear power plants had been placed on heightened alert, as a result of information gained by the intelligence community. *Wide-Ranging New Terror Alerts*, CBS News.com, May 26, 2002. On October 24, 2002, the Federal Bureau of Investigation (“FBI”) issued a Threat Communication, warning that debriefings of Al-Qaeda detainees as of mid-October 2002 indicated that the group planned “to weaken the petroleum industry by conducting sea based attacks against large oil tankers

and that such attacks may be part of more extensive operations against . . . energy related targets including oil facilities and nuclear power plants.” *Press Release*, United States Department of Justice, Federal Bureau of Investigation, October 24, 2002 . On November 15, 2002, the FBI sent a bulletin to law enforcement agencies, warning them that Al-Qaeda’s “highest priority targets remain within the aviation, petroleum, and nuclear sectors . . .” *Text of FBI Terror Warning*, CBS News.com, November 15, 2002.

On March 20, 2003, Energy Secretary Abraham announced that terrorists might have targeted the Palo Verde nuclear power plant in Arizona; Arizona Governor Napolitano sent National Guard troops to provide additional security at that plant. *Biggest U.S. Nuke Plant May Be Target*, CBS News.com, March 20, 2003. On April 29, 2003, the NRC strengthened the Design Basis Threat (i.e., “the largest reasonable threat against which a regulated private guard force should be expected to defend”) applicable to the nation’s nuclear power plants. *Press Release*, United States Nuclear Regulatory Commission, April 29, 2003. On May 1, 2003, the FBI issued a Threat Communication, warning the operators of the Nation’s nuclear power plants to remain vigilant about suspicious activity that could signal a potential terrorist attack. *FBI Warns of Nuke Plant Danger*, CBS News.com, May 1, 2003.

On September 4, 2003, the United States General Accounting Office (“GAO”) issued a report, noting that the nation’s commercial nuclear power plants are possible terrorist targets and criticizing the NRC’s oversight and regulation of nuclear power plant security. United States General Accounting Office, *Nuclear Regulatory Commission: Oversight of Security*, GAO-03-752 (September 4, 2003).

These statements demonstrate that federal agencies, including the NRC, do, in fact, routinely predict the degree and scope of the risk of terrorism confronting the nation, and particular infrastructure facilities -- including nuclear facilities -- within the nation, at specific points in time. In short, to this extent, the risk that a terrorist attack will be directed at a particular nuclear facility is quantifiable. Moreover, these statements indicate that, at a minimum, it is reasonably foreseeable that a terrorist attack will be attempted against at least one American nuclear facility. Given that spent fuel pools tend to have less structural protection than reactors themselves (e.g., no containment building at Diablo Canyon), it is surely reasonably foreseeable that any such attack could have devastating effects on the environment.

The reasonableness of the concern about terrorist threats is borne out by NRC's practice of conducting force-on-force exercises at the nation's nuclear power plants. In these exercises, people pretending to be terrorists simulate an attack on a nuclear power plant, in order to test the effectiveness of plant security procedures and personnel. The results of the pre-September 11, 2001 force-on-force exercises conducted at the nation's nuclear power plants show that a successful attack on a nuclear power plant is not an unreasonable concern:

According to the [plant security evaluation] reports, of the 45 plants that increased plant defenses beyond the level specified in the security plan, 10 (or 22 percent) failed to defeat the attackers in one or more of the exercises conducted during the [security evaluation]. *However, of the 35 plants that used only the security levels specified in the [plant security plan], 19 (or 54 percent) failed to defeat the attackers in one or more of the exercises conducted during the [security evaluation].*

United States General Accounting Office, *Nuclear Regulatory Commission: Oversight of Security* at 16-17 (emphasis added). Indeed, on February 15, 2004, the CBS television program “60 Minutes” reported that terrorists have in the past penetrated multiple levels of security at the Y-12 nuclear complex in Oak Ridge, Tennessee and at the Los Alamos National Laboratory in New Mexico. *Nuclear Insecurity*, CBS News.com, February 16, 2004.

Recently, the Ninth Circuit held that the NRC is at least required under its own formulation of the rule of reasonableness to make determinations of the environmental effects of a terrorist attack consistent with its policy statements and procedures. *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 449 F.3d at 1031, (*supra*). In that case, the Plaintiff sued the NRC for refusing to consider environmental impacts of terrorist attacks on proposed interim spent fuel storage installations or the Diablo Canyon nuclear facility in general. The Court held that the NRC’s categorical refusal under NEPA to consider environmental effects of terrorist attack on the basis that terrorist attacks were “remote and highly speculative,” was not reasonable, since refusal was inconsistent with government’s efforts and expenditures to combat that type of attack against nuclear facilities. In fact, the Court noted, “The NRC’s actions in other contexts reveal that the agency does not view the risk of terrorist attacks to be insignificant.” *Id.* at 1032. Accordingly, the environmental impacts from the threats of terrorism are significant and must be considered in the NRC’s NEPA decision-making documents.

**V. CONCLUSION**

The NRC has an affirmative duty under NEPA and the CEQ regulations interpreting and implementing NEPA to amend its regulations to permit it to fully carry out NEPA's mandate for full public disclosure of reasonably foreseeable environmental effects that may result from federal actions or approvals. The current NRC regulations preclude the NRC from carrying out NEPA's action-forcing mandate by forbidding it from disclosing and analyzing reasonably foreseeable significant risks that will affect the environment that the President, the NRC itself, and many other federal agencies and public organizations recognize now exist and have existed since September 11, 2001. Under NEPA and the Administrative Procedure Act, the NRC has a duty to amend those regulations, and California petitions it to do so as described herein.

Dated: March 16, 2007

Respectfully Submitted,

EDMUND G. BROWN Jr.,  
Attorney General of the State of California  
TOM GREENE,  
Chief Assistant Attorney General  
THEODORA BERGER,  
Senior Assistant Attorney General  
SUSAN DURBIN,  
BRIAN HEMBACHER,  
Deputy Attorneys General

By:   
BRIAN HEMBACHER  
Deputy Attorney General

**DECLARATION OF SERVICE BY OVERNIGHT MAIL (FEDEX)**

**RE:** *In The Matter of Proposed Amendment to 10 CFR Part 51 (Rescinding finding that environmental impacts of pool storage of spent nuclear fuel are insignificant)*  
**Docket No.:** PRM

I, **Aimee Lopez**, declare:

I am employed in the City of Los Angeles, County of Los Angeles, State of California. I am over the age of 18 years and not a party to the within action. My business address is 300 S. Spring Street, Suite 1702, Los Angeles, California 90013. On **March 16, 2007**, I served the documents named below on the parties in this action as follows:

**DOCUMENT SERVED: CALIFORNIA ATTORNEY GENERAL'S PETITION FOR RULEMAKING TO AMEND 10 C.F.R. PART 51**

**SERVED UPON:**

\_\_\_\_\_ **BY MAIL:** I caused each such envelope, with postage thereon fully prepaid, to be placed in the United States mail at Los Angeles, California. I am readily familiar with the practice of the Office of the Attorney General for collection and processing of correspondence for mailing, said practice being that in the ordinary course of business, mail is deposited in the United States Postal Service the same day as it is placed for collection.

I hereby certify that I am employed in the office of a member of the Bar of this Court at whose direction the service was made.

**XX** **BY OVERNIGHT MAIL:** I am readily familiar with the practice of the Office of the Attorney General for collection and processing of correspondence for overnight delivery and know that the document described herein will be deposited in a box or other facility regularly maintained by FedEx for overnight delivery.

**SEE ATTACHED SERVICE LIST**

\_\_\_\_\_ **BY FACSIMILE:** I caused to be transmitted the document described herein via the following facsimile number:

I declare under penalty of perjury under the laws of the State of California that the above is true and correct. Executed on **March 16, 2007**, at Los Angeles, California.

Aimee Lopez

Declarant



Signature

**SERVICE LIST**

**RE:** *In The Matter of Proposed Amendment to 10 CFR Part 51 (Rescinding finding that environmental impacts of pool storage of spent nuclear fuel are insignificant)*  
**Docket No.: PRM**

Attn: Rulemakings and Adjudications Staff  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Attn: Rulemakings and Adjudications Staff  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

NRC Commissioners  
c/o Annette Vietti-Cook, Secretary  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

Matthew Brock  
Assistant Attorney General  
Office of the Massachusetts Attorney General  
Environmental Protection Division  
One Ashburton Place, Room 1813  
Boston, MA 02108-1598