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**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of:	:	Docket No. 50-423-LA-2
DOMINION NUCLEAR	:	ASLBP No. 00-771-01-LA
CONNECTICUT, INC.	:	
(Millstone Nuclear Power Station,	:	
Unit No. 3; Facility Operating	:	
License NPF-49)	:	December 21, 2001

**CONNECTICUT COALITION AGAINST MILLSTONE AND
LONG ISLAND COALITION AGAINST MILLSTONE
REPLY TO OPPOSITIONS TO MOTION TO REOPEN THE RECORD
AND REQUEST FOR ADMISSION OF LATE-FILED
ENVIRONMENTAL CONTENTION**

I. INTRODUCTION

Pursuant to the Licensing Board's Memorandum and Order (CCAM/CAM Motion for Leave to Reply to Responses of Licensee and Staff) (December 10, 2001) ("Memorandum and Order"), Connecticut Coalition Against Millstone ("CCAM") and the Long Island Coalition Against Millstone ("CAM") (collectively "CCAM/CAM" or "Intervenors") hereby reply to oppositions filed by Dominion Nuclear Connecticut, Inc. ("DNC") and the Nuclear Regulatory Commission ("NRC" or "Commission") Staff to CCAM/CAM's motion to reopen the record of this proceeding and admit a late-filed environmental contention.¹ This Reply provides corrections to factual errors by DNC and

¹ See Connecticut Coalition Against Millstone and Long Island Coalition Against Millstone Motion to Reopen the Record and Request for Admission of Late-Filed Environmental Contention (November 1, 2001) (hereinafter "CCAM/CAM Motion"); Dominion Nuclear Connecticut, Inc.'s Response to Connecticut Coalition Against Millstone and Long Island Coalition Against Millstone Motion to Reopen the Record and

the Staff, and also responds to questions by the ASLB. As demonstrated below, DNC's and the Staff's opposition to CCAM/CAM's motion to reopen the record and late-filed environmental contention are without merit. The motion should be granted and the contention should be admitted.

II. RESPONSE TO FACTUAL ERRORS BY DNC AND THE NRC STAFF

The responses filed by DNC and the NRC Staff contain a number of factual errors and misrepresentations, which are addressed herein.

A. Factual Issues Regarding Scope of Contention.

At the outset, it is important to clarify the scope of CCAM/CAM's contention. CCAM/CAM's contention asserts that "acts of malice and insanity" are foreseeable and therefore their consequences should be described in an Environmental Impact Statement ("EIS"), which also examines the costs and benefits of alternatives and mitigative measures. *See* CCAM/CAM Motion at 6. The bases for the contention address various potential causative mechanisms for a loss of water from spent fuel pools as a result of acts of malice or insanity, including but not limited to attack by a heavy aircraft. *Id.* Thus, DNC errs in characterizing the contention as based only on a deliberate aircraft crash. DNC Response at 1-2.

In the Memorandum and Order granting CCAM/CAM's motion for leave to reply, the ASLB also characterizes the contention in an overly narrow way, asserting that the

Request for Admission of Late-Filed Environmental Contention and Motion for Directed Certification (November 13, 2001) (hereinafter "DNC Response"); NRC Staff Response Opposing the Motion of Connecticut Coalition Against Millstone/Long Island Coalition Against Millstone to Reopen the Record to Admit a Late-filed Environmental Contention (November 16, 2001) (hereinafter "Staff Response").

contention deals with “the effects of terrorism (‘destructive acts of malice or insanity’) at Millstone.” Memorandum and Order at 1. The word “terrorism” is not defined in NRC regulations, but the dictionary definition appears to be too narrow to encompass the intent of CCAM/CAM’s contention. “Terrorism” is defined in Webster’s Dictionary as “the use of violence and threats to intimidate or coerce, esp. for political purposes.” *Random House Webster’s College Dictionary* (New York: 1997). This definition would appear to encompass acts of malice, but not necessarily acts of insanity. While the attacks of September 11 appear to be malicious in their nature, CCAM/CAM believes it would be inappropriate to disregard the potential for acts of insanity, which may have no apparent rational purpose but which may also be extremely destructive.

B. Factual Issues Regarding Timeliness

Both DNC and the NRC Staff argue that CCAM/CAM is inexcusably late in filing its contention. DNC Response at 11-12, NRC Staff Response at 10-13. This is relevant to the standard for both late-filed contentions and reopening the record.

Both parties insist that the timeliness of the contention should be measured from September 11, 2001, when the terrorist attacks on the World Trade Center and the Pentagon occurred. These arguments ignore the importance of subsequent pronouncements and actions by the NRC and other arms of the federal government, which establish the government’s view that additional terrorist attacks, including attacks on nuclear facilities, are foreseeable. *See* Motion to Reopen at 12-14, 22, 30; Exhibits to Motion to Reopen.

The NRC Staff argues that CCAM/CAM’s claim that pronouncements and initiatives by the government in the weeks following September 11 provide new and

relevant information about the foreseeability of a terrorist attack is a “specious” attempt to excuse an “inordinate delay” after September 11. NRC Staff Response at 10. The Staff’s argument is disingenuous, in light of the fact that the Staff itself has previously stated that the events of September 11, by themselves, did not cause the Staff to change its previous position that terrorist attacks on nuclear facilities are not foreseeable. In the proceeding for approval of construction of a proposed Mixed Oxide Fuel Fabrication Facility, ASLBP No. 01-790-01-ML, the Staff submitted a legal pleading on September 12, 2001, arguing that terrorist attacks on that facility are not foreseeable. *See* NRC Staff’s Response to Contentions Submitted by Donald Moniak, Blue Ridge Environmental Defense League, Georgians Against Nuclear Energy, and Environmentalists, Inc. at 22 (September 12, 2001). The Staff reiterated this position several weeks later, in an oral argument held in North Augusta, South Carolina, on September 21, 2001. Thus, the Staff has no grounds to attack CCAM/CAM for relying on additional information demonstrating that the government treats a terrorist attack on nuclear and other facilities as foreseeable.

The Staff also misrepresents the facts by arguing that the “pronouncements and initiatives to which CCAM/CAM refers are described in a number of *newspaper articles* provided as exhibits to CCAM/CAM’s motion.” NRC Staff Response at 10 (emphasis added). In fact, in addition to news articles, CCAM/CAM attached official press releases from the NRC and the Federal Bureau of Investigation (“FBI”). *See* Exhibits 2, 4, and 6. These press releases constitute official agency documents. Moreover, the NRC Staff completely fails to respond to CCAM/CAM’s assertion that circumstances required CCAM/CAM to rely to some extent on press articles, because the NRC failed to formally

issue more than a minimal amount of information regarding its response to September 11. *See* Motion to Reopen at 28. Indeed, the NRC's website was closed down for a time following the September 11 events.²

The NRC Staff also argues that CCAM/CAM's contention is untimely because the contention and its bases are "largely based on information identical to that submitted by CCAM/CAM in their supplemental petition for intervention and Dr. Thompson's supporting document also submitted at that time." NRC Staff Response at 11. According to the Staff, CCAM/CAM's new contention "is a mere restating of everything CCAM/CAM and Dr. Thompson said in trying to gain admission of Contentions 7-11 in the proceeding and which the Board correctly rejected." *Id.* at 11-12. Later, the Staff argues that "the issue of sabotage has been raised and rejected." *Id.* at 12.

These assertions are patently false. Neither CCAM/CAM's previous contentions, nor their bases, posited acts of malice or insanity as causative scenarios for spent fuel pool accidents. Although Dr. Thompson discussed the vulnerability of fuel pools to acts of malice or insanity in the expert report that CCAM/CAM submitted in support of the contentions, the issue was not specifically pled in the contentions themselves, nor was it ruled on by the ASLB. CCCAM/CAM did not attempt to directly present the potential

² The NRC Staff criticizes CCAM/CAM for failing to explain "why Dr. Thompson's understanding of newspaper articles should be given any more credence than that of a layman." NRC Staff Response at 17. CCAM/CAM does not believe that any particular scientific expertise is required to deduce from newspaper articles and government press releases that the federal government considers additional terrorist attacks on the United States to be reasonably foreseeable, if not imminent. However, Dr. Thompson does rely on these articles and press releases, among other sources, for his professional opinion that it is possible to make a qualitative assessment of the foreseeability of a terrorist attack. *See* Thompson 31 October Declaration, par. V-11.

for acts of malice or insanity as the basis of a contention until the November 1, 2001, filing.

Moreover, the Staff ignores the significance of the fact that NUREG-1738, the Staff's Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants, was not available to CCAM/CAM until January 2001, well after CCAM/CAM's first set of environmental contentions had been submitted. This Staff study, which makes major concessions regarding the potential for spent fuel pool accidents, forms an important part of the basis for CCAM/CAM's late-filed contention. Thus, the Staff's argument that CCAM/CAM's late-filed environmental contention is a mere rehash of its previous environmental contentions is entirely without merit.

The Staff also argues that CCAM/CAM is late in coming forth with a contention that relies on NUREG-1738, because the report was issued many months before, in January of 2001.³ See NRC Staff Response at 11. This argument ignores the fact that CCAM/CAM relies on *both* NUREG-1738 *and* the events that occurred on and after September 11. These two new pieces of information must be viewed together, because they drastically change the commonly held understanding regarding *both* the causes of a loss of water from spent fuel pools, and the behavior of the pools once that happens. Whether or not NUREG-1738 or the events surrounding September 11 would, by themselves, constitute a sufficient basis for reopening the record and admitting a late-filed contention, taken together they provide overwhelming evidence that the NRC must take a new look at the potential for spent fuel pool accidents in this proceeding.

C. Factual Errors Regarding Behavior of Fuel Pool Accidents.

In footnote 14, the NRC Staff mischaracterizes NUREG-1738 and CCAM/CAM's reliance on it. On page 17 of the Motion to Reopen, CCAM/CAM summarizes a series of concessions that the NRC Staff has made regarding the behavior of spent fuel pools under accident conditions. The Staff mischaracterizes CCAM/CAM's motion by claiming that CCAM/CAM attributes all of these concessions to NUREG-1738. The citations provided by CCAM/CAM for these concessions also include Dr. Thompson's October 31, 2001, Declaration, which recounts various concessions made by the Staff during the course of the license amendment proceeding for expansion of the Harris spent fuel pools, ASLBP No. 99-762-02-LA. *See* Motion to Reopen at 17, *citing* Thompson 31 October Declaration at pars. II-10; IV-3 – IV-6; and NUREG-1738.

Each of the Staff's arguments regarding the veracity of the concessions claimed by CCAM/CAM are discussed below.

First, according to the Staff, "NUREG-1738 does not conclude that loss of water in a spent fuel pool can lead to the onset of an exothermic reaction for spent fuel of any age." NRC Staff Response at 11, note 14. Instead, the Staff argues, NUREG-1738 "stated that [the Staff] could not determine at what age of fuel a fire would be precluded."

The exact language of the report is as follows:

While the February 2000 [draft] study indicated that for the cases analyzed a required decay time of 5 years would preclude a zirconium fire, the revised analyses show that it is not feasible, without numerous constraints, to define a generic decay heat level (and therefore decay time) beyond which a zirconium fire is not physically possible.

³ DNC' argument, that the report was issued in October of 2000, is incorrect. *See* DNC Response at 12. As the Staff recognizes, the report was not released publicly until January of 2001.

See NUREG-1738 at 2-1, which is quoted in Dr. Thompson's October 31 Declaration at paragraph II-10. In other words, the Staff has not been able to identify a fuel age at which a zirconium fire will not occur. In the absence of such information, it must be presumed that a zirconium fire will occur in fuel of any age.

Second, the Staff asserts that NUREG-1738 "does not state that the onset of exothermic reactions can be assumed if the water level falls to the level of the top of the spent fuel racks." NRC Staff Response at 11, note 14. According to the Staff, this was a "bounding assumption" that was "not modeled." *Id.* In fact, as stated in Dr. Thompson's Declaration, the assumption that if the water level declines to the top of the fuel assemblies a fire will occur was presented by the NRC Staff in an affidavit submitted in the license amendment proceeding for spent fuel pool expansion at the Harris nuclear power plant in November of 2000, ASLBP No. 99-762-02-LA. See Thompson 31 October 2001 Declaration, paragraph IV-6. According to the Staff, this assumption was considered to be "conservative." *Id.*, citing Affidavit of Gareth W. Parry, et al. (November 20, 2000). However, the Staff did not do any calculations or modeling that would justify any other assumption. Thus, CCAM/CAM was correct in stating that the NRC Staff has conceded that the onset of exothermic oxidation reactions can be assumed if the water level in a pool declines to the level of the top of the spent fuel racks.⁴

⁴ Similarly, it does not help the Staff to argue that the assumptions made by the Staff's technical experts in analyzing the potential for spent fuel pool accidents in the Harris case were merely "bounding." See NRC Staff Response at 12, note 16. In the absence of any cogent calculations or qualitative explanation as to what a reasonable, albeit less conservative working assumption would be, the so-called bounding assumption must be taken as reasonable for purposes of predicting spent fuel pool behavior.

Finally, the NRC Staff asserts that NUREG-1738 does not address the propagation of exothermic reactions from pool to pool. As discussed in Dr. Thompson's Declaration at paragraph IV-13, the NRC Staff conceded in the Harris proceeding that the onset of a pool fire in two of the pools would preclude the provision of cooling and makeup to the other two pools.⁵

D. Factual Issues Regarding Foreseeability of Acts of Malice or Insanity Against the Millstone Plant.

The Staff concedes that "the threat of a terrorist attack on a U.S. facility is neither idle nor speculative." NRC Staff Response at 13. Yet, it argues that "the risk to a particular facility is . . . speculative." *Id.* DNC also repeats the incantation that a terrorist attack against Millstone 3 is "speculative." DNC Response at 13, 16, 17.

⁵ Moreover, the Staff is incorrect in arguing that its statement in the Harris case, that all four pools would burn if one pool burned, is "entirely irrelevant" to this case because the Millstone pools are not all located in one building. NRC Staff Response at 12, note 16. To the contrary, as Dr. Thompson sets forth in his Declaration, the same considerations apply. As Dr. Thompson explains:

In the context of the spent fuel pools at the Harris plant, the NRC Staff has conceded (see paragraph IV-13) that a fire in one pool would preclude the provision of cooling and makeup to nearby pools. This situation would arise mostly because the initial fire would contaminate the site with radioactive material, generating high radiation fields. An analogous situation could arise in which the release of radioactive material from a damaged reactor precludes the provision of cooling and makeup to nearby pools. For example, an aircraft impact on the Millstone Unit 3 reactor could lead to a rapid-onset core melt with an open containment, accompanied by a raging fire. That event would create high radiation fields across the site, potentially precluding any access to the site by personnel. One can envision a variety of 'cascading' scenarios, in which there might eventually be fires in all three pools at Millstone, accompanied by core melt events at Unit 2 and Unit 3.

See Thompson Declaration, paragraph VI-12. Thus, there is no basis for the Staff's claim. For this reason, the Staff is also incorrect in asserting that Dr. Thompson is

The assertion that a terrorist attack against any nuclear facility but Millstone is foreseeable is patently illogical. If, as the Staff concedes, any nuclear facility is a reasonably foreseeable target of a terrorist attack, and Millstone is one such facility, then Millstone is a reasonably foreseeable target of a terrorist attack.

The Staff also argues that the contention should be rejected because the risk of a terrorist attack on the Millstone plant “is not capable of being quantified.” NRC Staff Response at 13. As CCAM/CAM pointed out in their Motion to Reopen, however, a risk does not need to be capable of quantification in order to be cognizable and worthy of discussion. *See* Motion to Reopen at 16, *citing* 10 C.F.R. § 51.72 (“To the extent that there are important qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms.”) As Dr. Thompson discusses in his Declaration:

[f]rom a qualitative perspective, the probability of a terrorist attack within the US homeland appears to be significantly greater in the current period than it was, for example, in the 1980’s. There is now a focused, well-organized, and well-financed threat. The United States is taking military action that may provoke further attacks. This new threat environment may persist for many years.

Thompson 31 October Declaration, par. V-11. Neither the Staff nor DNC has contradicted any of these assertions by Dr. Thompson regarding the qualitative probability of a terrorist attack. Instead, the Staff argues that Dr. Thompson’s analysis is “useless.” NRC Staff Response at 16. However, the Attorney General and the FBI do not appear to consider such information useless for purposes of predicting the foreseeability of terrorist attacks, and have issued various specific warnings based on

“assuming worst case consequences.” NRC Staff Response at 12 note 16. Dr. Thompson is postulating the reasonably foreseeable consequences of reasonably foreseeable events.

such information. These warnings belie the Staff's assertion that there is insufficient qualitative information to reasonably predict the foreseeability of an act of malice or insanity against the Millstone plant.⁶

The Staff is also incorrect when it argues that CCAM/CAM "has failed to provide a scenario with a specific initiating event concerning a threat posed to a spent fuel pool." NRC Staff Response at 14. This argument ignores the detailed discussion in Dr. Thompson's Declaration of various scenarios in which an act of malice or insanity could lead to a loss of water from the Millstone 3 fuel pool. *See* Thompson 31 October Declaration, Section VI, "Vulnerability of the Millstone Unit 3 Pool." This analysis includes specific features of the Millstone 3 design that make it vulnerable to such an attack, that are sufficient to provide a credible scenario.⁷

E. Factual Issues Regarding Dr. Thompson's Qualifications

Lacking any basis to criticize the substance of Dr. Thompson's opinions, the Staff grossly distorts the record regarding his credentials. Citing a less favorable early decision in the Harris spent fuel pool expansion case regarding Dr. Thompson's qualifications to testify on criticality prevention issues, the Staff conveniently ignores a later decision

⁶ The Staff also argues that Dr. Thompson's reasoning is deficient because he "has not demonstrated an ability to provide even a qualitative assessment of why acts of sabotage or malice are more likely at this particular facility." NRC Staff Response at 16. While this sentence is not very clear, we presume that the Staff means "more likely at this particular facility than at facilities in general." As discussed above at page 10, this is an illogical argument.

⁷ As discussed in Dr. Thompson's Declaration, the level of detail needed for a full evidentiary presentation on the issue may not be appropriate for public discussion. *See* Thompson 31 October Declaration at paragraph VI-4 and Section IX. However, the level of detail provided in Dr. Thompson's Declaration is sufficient to support the admissibility of the contention.

endorsing Dr. Thompson's qualifications to testify on issues relating to spent fuel pool and reactor accident analysis.

In support of its attack on Dr. Thompson's qualifications, the Staff cites a ruling on criticality prevention issues, in which the Licensing Board declared Dr. Thompson to be a qualified expert, but also noted that it:

would assign his testimony appropriate weight commensurate with his expertise and qualifications. [Tr.] at 441. In this regard, we note that by reason of his experience and training, his expertise relative to reactor technical issues seems largely policy-oriented rather than operational.

Carolina Power & Light Co., (Shearon Harris Nuclear Power Plant), LBP-00-12, 51 NRC 247, 267 (2000). Remarkably, the Staff completely fails to cite the Licensing Board's subsequent and much more relevant decision in the Subpart K proceeding regarding the intervenor's environmental contention regarding the potential for a severe accident in the spent fuel pools at Harris:

In the present phase of this proceeding, BCOC [the intervenor] reaffirms the expert qualifications of Dr. Thompson, and argues that the Board should re-evaluate its finding in LBP-00-12 that Dr. Thompson's opinions were largely 'policy oriented' in that: (1) the Board overlooked his extensive knowledge relating to nuclear power plant operation and design; and (2) the contention now at hand involves new technical topics – probabilistic risk assessment and the phenomenology of spent fuel storage – that were not addressed in the previous phase of the proceeding. *See* BCOC Summary at 16. In support of the former assertion, BCOC delineates Dr. Thompson's various qualifications relating to those subjects.

According to BCOC, Dr. Thompson is highly qualified to give expert testimony relative to contention EC-6 based on his education, training, and experience. BCOC points out that Dr. Thompson received a bachelor's degree in mechanical engineering, mathematics, and physics from the University of New South Wales and later received a doctoral degree from Oxford University in the area of applied mathematics. . . . BCOC stresses that Dr. Thompson has more than 20 years of experience relating to nuclear facilities and their associated risks, noting that, in addition to the year he has become intimately familiar with the Shearon Harris plant, Dr. Thompson also evaluated design and accident risk considerations for an

array of nuclear facilities around the world. And of particular importance to this proceeding, BCOC declares, is his familiarity with probabilistic risk assessments (PRAs), including both general studies using PRA analysis and numbers of studies regarding accident risks posed by plant operations and SFP [spent fuel pool] storage. . . .

While Dr. Thompson may have little experience in the actual operation of a nuclear power plant or in PRA preparation, . . . given his education and experience relating to nuclear facility and SFP design, particularly his experience with spent fuel storage issues and his previous activities with probability assessments, we cannot say that his testimony will not aid the Board in determining and/or understanding the probability of the seven-step accident sequence. Therefore, we give Dr. Thompson's testimony due weight in the subject areas in which we believe he possesses knowledge and experience that can aid the Board in its determination regarding [Contention] EC-6.

Carolina Power & Light Co., (Shearon Harris Nuclear Power Plant), LBP-01-09, 53 NRC 239, 250-51 (2001). Given that one of the counsel who signed the Staff's response to CCAM's Motion to Reopen was counsel of record for the Staff in the Harris case, it can hardly be argued that the Staff was unaware of this precedent. Rather, it seems that the Staff will go to any length in its attempt to attempt to shift the focus of the debate from Dr. Thompson's legitimate criticisms to his qualifications to make them.⁸

F. Factual Issues Regarding Benefit to CCAM/CAM of a Hearing

Both DNC and the Staff argue that CCAM/CAM would be better served by awaiting any generic action the Commission may take with respect to protection against

⁸ In footnote 16, the Staff gratuitously asserts that Dr. Thompson had no role in influencing its analysis in NUREG-1738. The record speaks for itself. Since the inception of the Harris proceeding, in which the NRC Staff openly mocked Dr. Thompson's views regarding key features of the behavior of spent fuel in high-density wet storage under accident conditions, the Staff has completely reversed itself on these issues. See Motion to Reopen at 17-18, Thompson 31 October Declaration, paragraph II-10. While the Staff couches these changes as "conservatisms" and "bounding assumptions," the fact remains that they are the operative assumptions used by the Staff. Thus, Dr. Thompson's influence has led to the reversal of the key assumptions on which the Staff once relied to say that spent fuel pool fires could not happen.

terrorist attacks. DNC Response at 12-13, NRC Response at 19. What CCAM/CAM seeks is an Environmental Impact Statement that specifically addresses the vulnerability of the Millstone 3 plant to a pool fire caused by acts of malice or insanity, a description of the potential environmental impacts of such an event, and a discussion of plant-specific alternatives that would avoid or mitigate those impacts. Unspecified generic action by the Commission would not meet CCAM/CAM's needs. Moreover, it is uncertain when such action would take place, or whether it would come remotely close to satisfying CCAM/CAM's concerns. There is no reasonable alternative to fulfillment of the NRC's obligations under NEPA in this particular case.

DNC also argues that there is no clear "nexus" between the relief requested by CCAM/CAM and the license amendment at issue. DNC Response at 13. The central basis for this rather confusing argument appears to be that spent fuel will be kept in high-density wet storage at Millstone "of necessity," whether the license amendment is granted or not. *Id.* To the contrary, there is no necessity involved in choosing high-density pool storage of spent fuel; rather, it is a matter of cost. Spent fuel can also be stored in casks. While cask storage is more expensive, it significantly reduces the consequences of acts of malice or insanity. The choice is a matter of cost. An EIS for the Millstone spent fuel pool expansion would have the public benefit of publishing for public review and discussion an analysis of the relative merits of pool and cask storage for purposes of avoiding the catastrophic consequences of a pool fire.

III. RESPONSE TO ASLB QUESTIONS

A. Applicability of 10 C.F.R. § 50.13

The ASLB has asked CCAM/CAM to address the applicability of 10 C.F.R. § 50.13, together with the Appeal Board decision in *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 697-701 (1985), *review declined*, CLI-86-5, 23 NRC 125 (1986), *aff'd sub nom. Limerick Ecology Action Inc. v. NRC*, 869 F.2d 719, 744 (3d Cir. 1989), “applying the rule to NEPA questions.” *See* Memorandum and Order at 3. As discussed below, CCAM/CAM do not believe that 10 C.F.R. § 50.13 precludes the ASLB from considering CCAM/CAM’s contention.

NRC regulations at 10 C.F.R. § 50.13 state that an applicant for an operating license amendment is not required to provide:

design features or other measures for the specific purpose of protection against the effects of (a) attacks and destructive acts, including sabotage, directed against the facility by an enemy of the United States, whether a foreign government or other person, or (b) use or deployment of weapons incident to U.S. defense activities.

The implicit question raised by the ASLB is whether 10 C.F.R. § 50.13 operates to automatically exclude the impacts of destructive acts of malice by an enemy of the United States from the category of environmental impacts that must be considered in an EIS.

At the outset, it is important to note that 10 C.F.R. § 50.13 was promulgated in 1967, under the general authority of the Atomic Energy Act. *See* Final Rule, Exclusion of Attacks and Destructive Acts by Enemies of the U.S. in Issuance of Facility Licenses, 32 Fed. Reg. 13,445 (September 26, 1967). At the time 10 C.F.R. § 50.13 was issued, Congress had not yet passed the National Environmental Policy Act of 1969. Thus, the

drafters of 10 C.F.R. § 50.13 could not have intended the regulation to govern NEPA considerations.

Section 50.13 of the NRC regulations essentially provides that an adequate protection finding under the Atomic Energy Act need not include a finding of adequate protection against the effects of attacks and destructive acts by an enemy of the United States. Satisfaction of safety requirements under the Atomic Energy Act, however, is not necessarily equivalent to compliance with the requirements of NEPA. As the U.S. Court of Appeals for the Third Circuit explained in *Limerick Ecology Action v. NRC*, 869 F.2d 719, 729 (3rd Cir. 1989):

[t]he language of NEPA indicates that Congress did not intend that it be precluded by the AEA. Section 102 of NEPA requires agencies to comply 'to the fullest extent possible.' 42 U.S.C. § 4332. Although NEPA imposes responsibilities that are purely procedural, *Vermont Yankee*, 435 U.S. at 558, 98 S.Ct. at 1219, there is no language in NEPA itself that would permit its procedural requirements to be limited by the AEA. Moreover, there is no language in the AEA that would indicate AEA precludes NEPA.

In keeping with this reasoning, the Court also rejected the NRC's specific argument that issues excluded from consideration under the Atomic Energy Act must also be excluded under NEPA:

In *Citizens for Safe Power, Inc. v. NRC*, 524 F.2d 1291, 1299 (D.C. Cir. 1975), the court indicated that where the concerns under the AEA and NEPA are the same, conclusions reached on the basis of evidence received in 'environmental' hearings conducted under NEPA may be applied to 'health and safety' considerations under the AEA. As the Court stated, to hold otherwise would amount to 'stultifying formalism.' The court did not indicate, however, that when issues are excluded from consideration under the AEA they must also be excluded under NEPA. In contrast, the court noted, albeit in dictum, that it is 'unreasonable to suppose that [environmental] risks are automatically acceptable, and may be imposed upon the public by virtue of the AEA, merely because operation of a facility will conform to the Commission's basic health and safety standards.' *Id.* It is this automatic exclusion which the NRC seeks here and which we refuse to adopt.

Id., 869 F.2d at 730. Thus, the Court reversed an NRC decision refusing to consider the environmental impacts of severe accidents where the applicant was found to comply with Atomic Energy Act safety regulations.

In *Limerick Ecology Action*, the Court also affirmed the NRC's rejection of a contention seeking consideration of the impacts of sabotage in an EIS. However, the decision was not based on the exclusion in 10 C.F.R. § 50.13 or compliance with any other NRC safety regulation. Instead, the Court upheld the NRC on the following three challenges advanced by the petitioner, Limerick Ecology Action ("LEA"):

(1) that failure to consider sabotage violates the NEPA regulations as promulgated by the CEQ [Council on Environmental Quality], which provide requirements for consideration of 'worst case' scenarios; (2) that exclusion is based solely on policy statements, hence is not supported in the record; and (3) that LEA presented evidence that the risk of sabotage can be estimated.

Id., 869 F.2d at 742. The Court concluded that (a) CEQ regulations did not bind the NRC to consider worst case accidents; (b) the NRC's refusal to consider the impacts of sabotage was not based solely on policy statements, but on scientific judgment that current risk assessment techniques "could not provide a meaningful basis upon which to measure such risks," and (c) that LEA had "failed to undermine or rebut the NRC's conclusion." *Id.* None of these grounds relates to the question of whether the exclusion in 10 C.F.R. § 50.13 is also applicable under NEPA.⁹ Nor did the case below,

Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22

⁹ Moreover, none of the grounds relied on by the Court of Appeals in *Limerick Ecology Action* is applicable to this case. CCAM/CAM has not asserted any requirement to consider worst case accidents, but rather that pool fires resulting from acts of malice or insanity are foreseeable. Moreover, CCAM/CAM does not contend that the risk of a sabotage event is quantifiable, but rather that it can and must be assessed qualitatively.

NRC 681, 697-701 (1985), *review declined*, CLI-86-5, 23 NRC 125 (1986), apply 10 C.F.R. § 50.13 to exclude consideration of sabotage impacts under NEPA. Instead, ALAB-819 discussed the same considerations examined by the Court of Appeals in *Limerick Ecology Action*.¹⁰

The NRC did address the applicability of 10 C.F.R. § 50.13 to NEPA questions in *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973). Significantly, the Appeal Board did not conclude in ALAB-156 that 10 C.F.R. § 50.13 governs NEPA considerations as a matter of law. Indeed, such a holding would have placed the Appeal Board in conflict with the Court of Appeals' subsequent holding in *Limerick Ecology Action*. Instead, the Appeal Board examined the applicability of the rule's rationale under NEPA's "rule of reason." *Id.* As listed by the Appeal Board, the rule's underlying considerations regarding the feasibility and reasonableness of protection against "wartime sabotage," included:

(1) the impracticability, particularly in the case of civilian industry, of anticipating accurately the nature of enemy attack and of designing defenses against it, (2) the settled tradition of looking to the military to deal with this problem and the consequent sharing of its burdens by all citizens, and (3) the unavailability, through security classification and otherwise, of relevant information and the undesirability of ventilating what is available in public proceedings.

Id., citing *Siegel v. AEC*, 400 F.2d 778 (1968). The Appeal Board concluded that this rationale was "as applicable to the Commission's NEPA responsibilities as it is to its health and safety responsibilities."¹¹

¹⁰ Therefore, the ASLB's suggestion that *Limerick Ecology Action* and ALAB-819 "appl[ie]d the rule to NEPA questions" is incorrect. See Memorandum and Order at 3.

¹¹ With respect to "industrial sabotage," the Appeal Board concluded that the issue need not be considered because the environmental impacts would be no worse than those of a design basis accident. As demonstrated in Dr. Thompson's Declaration, that is not the

Twenty eight years after the *Shoreham* case was decided, however, in a decade that has seen the destruction of a federal building in Oklahoma by a truck bomb, the near destruction of a U.S. destroyer by a boat bomb, and the destruction of the World Trade Center by a commercial airliner bomb, these considerations do not continue to hold up under the NEPA rule of reason. First, it cannot be considered impracticable to reasonably anticipate the nature of a serious attack on a nuclear power plant. Enough is known about the methods typically used by terrorists, and the vulnerabilities in the designs of nuclear facilities, to evaluate measures that could increase the effectiveness of protection against such an attack. Indeed, as discussed in Dr. Thompson's Declaration at paragraph V-2, the reactor vendor ASEA-Atom has developed a design for an "intrinsically safe" reactor.

Second, it is quite clear in the aftermath of September 11 and other terrorist attacks in recent years that the military is generally ineffective in preventing such attacks, because the military does not stand in constant readiness to counter serious domestic threats. The element of surprise gained by suicide bombers is another factor that makes ordinary military protection relatively ineffective. Thus, the "settled tradition" of relying on the military has no practical applicability in this context. Moreover, while the burden of supporting the military may be shared by all citizens, the costs and benefits of protecting against the extreme consequences of such attacks are not so evenly distributed. One of CCAM/CAM's principal concerns in this litigation is that a safer technology for storing spent fuel, dry storage, is being avoided because of its relatively high cost to the

case with respect to the effects of successful acts of malice or insanity on spent fuel pools, whose impacts may be catastrophic.

licensee. Yet, the cost to society of a spent fuel pool fire could be astronomical. An EIS would provide a vehicle for publicly assessing the cost-effectiveness to society of using dry storage in lieu of high-density wet storage for the additional fuel to be stored at Millstone.

Third, it simply is not the case that relevant information is unavailable. As discussed above at page 19, sufficient information is available about the means by which a nuclear power plant could be attacked, its vulnerability to attack, and the potential consequences of such an attack, that would permit this issue to be litigated. Although it is correct that some information should not be ventilated in public proceedings, CCAM/CAM has proposed a reasonable method for addressing this problem. *See* Thompson Declaration, Section IX.

Accordingly, the exclusion in 10 C.F.R. § 50.13 cannot be applied to NEPA considerations as a matter of law. Instead, consideration of the consequences of acts of malice or insanity against the Millstone plant may only be excluded *ab initio* if it would be consistent with NEPA's "rule of reason," *i.e.*, if the considerations that underlie § 50.13 are reasonably applicable in these circumstances. As discussed above, these considerations are not relevant or applicable here.

B. Whether a Waiver Should Be Granted

In its Memorandum and Order, the ASLB has raised the question of whether, if 10 C.F.R. § 50.13 is found to be applicable in this case, special circumstances are such that 10 C.F.R. § 50.13 and its environmental application would not serve the purposes for which the rule or regulation initially was adopted, within the meaning of 10 C.F.R. § 2.758. As discussed above, CCAM/CAM strongly believe that 10 C.F.R. § 50.13 cannot

be found to apply to this case as a matter of law. Therefore, we do not believe it is appropriate to treat this case as a request for a waiver.

Assuming for purposes of argument, however, that 10 C.F.R. § 50.13 is indeed applicable, CCAM/CAM believes that the considerations described above at pages 19-20 would operate to justify the issuance of a waiver in this case.

VI. CONCLUSION

For the foregoing reasons, the oppositions to CCAM/CAM's Motion to Reopen the Record and admit its late-filed environmental contention lack merit. The record should be reopened and the contention should be admitted.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that on December 21, 2001, copies of "CONNECTICUT COALITION AGAINST MILLSTONE AND LONG ISLAND COALITION AGAINST MILLSTONE REPLY TO OPPOSITIONS TO MOTION TO RE-OPEN THE RECORD AND REQUEST FOR ADMISSION OF LATE-FILED ENVIRONMENTAL CONTENTION" were served on the following by E-Mail and first-class mail, except for the Office of Appeals, which was served by first-class mail only.

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