

January 31, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
PA'INA HAWAII, LLC)	Docket No. 30-36974
)	
Material License Application)	ASLBP No. 06-843-01

NRC STAFF'S RESPONSE TO
BOARD'S JANUARY 24, 2008 ORDER

INTRODUCTION

On January 24, 2008, the Board issued an order directing the parties to file briefs addressing how, if at all, the Commission's January 15, 2008 decision on parallel contentions in *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-01, 67 NRC __ (slip op.), impacts the admissibility of contentions in the present proceeding.¹ Specifically, the Board directed the parties to address how *Diablo Canyon* affects the admissibility of the fourth segment of amended environmental contention 3, in which Concerned Citizens of Honolulu (Intervenor) alleges various deficiencies in the Staff's analysis of potential terrorist attacks involving Pa'ina's proposed irradiator. As explained below, the Commission's reasoning in *Diablo Canyon* supports rejecting the vast majority of the Intervenor's terrorism-related claims and does not provide a basis for admitting any claim.

BACKGROUND

On March 20, 2006, the Staff entered into a settlement agreement under which it agreed to prepare an environmental assessment (EA) for the irradiator proposed by Pa'ina

¹ Licensing Board Order (Requiring Parties to File Responsive Pleadings) (January 24, 2008) (unpublished).

Hawaii, LLC (Licensee).² Thereafter, in June 2006, the Ninth Circuit held that the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321–4437, requires a consideration of the environmental impact of terrorist attacks. *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1035 (9th Cir. 2006). Because the Licensee’s irradiator will be located within the Ninth Circuit, the Staff supplemented its EA with an analysis of potential terrorist attacks involving the irradiator. On August 10, 2007, the Staff issued its Final EA, which included, as Appendix B, the Staff’s “Consideration of Terrorist Attacks on the Proposed Pa’ina Irradiator.”³

On September 4, 2007, the Intervenor filed amended environmental contentions based on the Final EA. In the fourth segment of amended contention 3, the Intervenor argued that Appendix B is inadequate because it omits certain information required by NEPA.⁴ Both the Staff and the Licensee filed responses opposing this part of amended contention 3 in its entirety.⁵

In December 2007, this Board issued an order ruling on the other parts of amended environmental contention 3, as well as on amended environmental contention 4. Licensing Board Order (Ruling on Admissibility of Intervenor’s Amended Environmental Contentions) (December 21, 2007) (unpublished). However, the Board deferred ruling on the Intervenor’s terrorism arguments, noting that the Commission had pending before it closely analogous

² “NRC Staff and Concerned Citizens of Honolulu Joint Motion to Dismiss Environmental Contentions” (March 20, 2006) (ADAMS ML060820592).

³ “Final Environmental Assessment for Proposed Pa’ina Hawaii, LLC Underwater Irradiator in Honolulu, Hawaii” (August 10, 2007) (ADAMS ML071150121).

⁴ “Intervenor Concerned Citizens of Honolulu’s Amended Environmental Contentions #3 through #5” (September 4, 2007) (ADAMS ML072530634) at 18–29.

⁵ “NRC Staff’s Response to Intervenor Concerned Citizens of Honolulu’s Amended Environmental Contentions #3 through #5” (September 20, 2007) (ADAMS ML072670495) at 11–16; “Applicant Pa’ina Hawaii, LLC’s Answer to Intervenor Concerned Citizens of Honolulu’s Amended Environmental Contentions #3 through #5” (September 18, 2007) (ADAMS ML072680394).

issues in *Diablo Canyon*. *Id.* at 19–20. The Board stated that it would await the Commission’s ruling in *Diablo Canyon* before resolving the terrorism-related issues raised by the Intervenor in this case. *Id.*

DISCUSSION

A. Legal Standard

I. Contention Requirements

A contention cannot be admitted unless the intervenor satisfies each of the requirements in 10 C.F.R. § 2.309(f)(1). For each contention, the intervenor must provide: (1) a specific statement of the issue of law or fact to be raised; (2) a brief explanation of the basis for the contention; (3) a demonstration that the issue raised in the contention is within the scope of the proceeding; (4) a demonstration that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) a concise statement of the alleged facts or expert opinions which support the requestor’s position; and (6) sufficient information to show that a genuine dispute exists on a material issue of law or fact, including references to specific portions of the application that the Petitioner disputes and the supporting reasons for each dispute or the identification of each failure to include necessary information in the application and the supporting reasons for the Petitioner’s belief. 10 C.F.R. § 2.309(f)(1)(i)–(vi).⁶ In the context of an EA, this requires that the intervenor show, at a minimum, that there is a genuine dispute as to whether the Staff fulfilled its requirements under NEPA. *See Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004) (holding that, at the pleading stage, the petitioner must show a genuine dispute warranting a hearing and that it is not enough to suggest there may be undiscussed NEPA consequences).

⁶ In addition, the requirements for amended contentions at 10 C.F.R. § 2.309(f)(2) apply to the Intervenor’s contentions here.

II. Diablo Canyon

In *Diablo Canyon*, the Petitioner in that proceeding challenged the terrorism analysis prepared by the Staff as part of its EA for an independent spent fuel storage installation (ISFSI) proposed for the Licensee's facility. In its January 15, 2008 decision, the Commission found three of the Petitioner's terrorism-related NEPA contentions wholly inadmissible and admitted only limited portions of two contentions alleging deficiencies in the Staff's terrorism analysis, which was set forth in a supplemental EA.⁷ At the outset, the Commission explained that, in evaluating what can and cannot be litigated in further NEPA-terrorism proceedings, it would use as a guidepost the Supreme Court's decision in *Weinberger v. Catholic Action of Hawaii*, 454 U.S. 139, 145 (1981):

[*Weinberger*] makes it clear that protecting national security information overrides ordinary NEPA disclosure requirements, and this consideration factors heavily in our decision today.

Our inability to disclose information based on the confidentiality of that information does not mean, however, that the NRC Staff (and the Commission, on review) has not performed the evaluation the Ninth Circuit directed, consistent with *Weinberger* — it simply means that certain information cannot be made public for security reasons.

Diablo Canyon, CLI-08-01, 67 NRC ___ (slip op. at 9).

Applying the NRC's contention admissibility requirements and *Weinberger*, the Commission rejected the Petitioner's contention 1(a), which alleged that the Staff's supplemental EA for the Diablo Canyon ISFSI did not adequately explain terms or methodology. The Petitioner raised eight separate issues, including claims that the supplemental EA:

- i. failed to provide a clear description of the NRC's process for identifying plausible or credible attack scenarios and assessing their consequences to determine whether they are significant;
- ii. provided no explanation of what the NRC means by the word "plausible";

⁷ "Supplement to the Environmental Assessment and Draft Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation" (May 29, 2007) (ADAMS ML071500033).

- iii. provided no description of the criteria used by the NRC to distinguish between scenarios that are “plausible” and those that are “remote and speculative”;
- iv. failed to demonstrate that the NRC considered the wider scope of scenarios required by NEPA compared to the narrower scope of scenarios required under the Atomic Energy Act (AEA);
- v. provided a poor description of the process used in what the Petitioner referred to as the NRC’s 2002 threat scenario analysis;
- vi. failed to explain how the AEA-based generic security assessments that led to the Staff’s conclusion that no additional security measures were required for ISFSIs have any relevance to a NEPA determination of whether environmental impacts are significant;
- vii. failed to explain how the NRC’s determination that the assumptions in the generic security assessments were “representative” or “conservative” in relation to the Diablo Canyon facility factored into its NEPA analysis; and
- viii. failed to provide any analysis of the radiological impacts of threat scenarios, including any documented estimate of the radiation dose arising from release of radioactive material.⁸

The Commission found that none of these arguments justified admitting the Petitioner’s contention. The Commission concluded that the Staff’s use of the term “plausible” in the EA was consistent with the word’s ordinary usage and that, because the Staff’s usage was clear, it did not have to further define that term. CLI-08-01, 67 NRC __ (slip op. at 11). The Commission also concluded that the Staff’s qualitative description of the criteria for distinguishing between “plausible” and “remote and speculative” threat scenarios was sufficiently clear, consistent with information security constraints, and in keeping with the *Weinberger* decision. *Id.* The Commission additionally found that, taking into account the requirement to protect sensitive information, the Staff sufficiently described its scenario identification process and the significance of associated consequences. *Id.* Further, the Commission rejected the Petitioner’s claims that the Staff failed to comply with NEPA when it reviewed prior AEA-based security assessments for pertinent information on the effects of

⁸ “San Luis Obispo Mothers for Peace Request for a Hearing Regarding Diablo Canyon Environmental Assessment Supplement” (June 29, 2007) (ADAMS ML071910169) at 5-9.

terrorist attacks. *Id.* (slip op. at 13). The Commission noted that it had “clearly expected the NRC Staff to use existing information, as appropriate,” when it directed the Staff to prepare the supplemental EA in *Diablo Canyon*. *Id.*

In contention 1(b), the Petitioner alleged that the Staff failed to fully reference the sources of scientific data used in the supplemental EA. The Petitioner noted that the initial supplemental EA listed only three sources, while certain language in the EA suggested that the Staff consulted additional sources. The Commission directed the Staff to prepare a complete list of the documents on which it relied in preparing its EA, together with a Vaughn index (or its equivalent) for any document for which the Staff claimed an exemption from disclosure under the Freedom of Information Act. *Id.* (slip op. at 18).

In contention 2, the Petitioner alleged that the Staff’s analysis ignored consequences of a terrorist attack other than early fatalities and improperly assumed that unspecified emergency planning measures would mitigate those consequences. The Commission agreed with the Staff that the Petitioner had taken out of context the EA’s reference to early fatalities resulting from a terrorist attack and that, contrary to the Petitioner’s assertion, the EA made clear that the Staff did not assume early fatalities would be the only consequence of an attack. *Id.* (slip op. at 20). The Commission also rejected the Petitioner’s claim that the EA lacked clarity about the role emergency planning would play in mitigating harm. *Id.* (slip op. 21). The Commission noted that the EA says merely that “[i]n some situations, emergency planning and response actions could provide an additional measure of protection,” and the Commission concluded that “there is no reason to convene an NRC hearing to debate that self-evident, and unexceptionable, proposition.” *Id.* On the other hand, the Commission found the Petitioner raised an admissible contention with respect to whether the Staff considered land contamination and non-fatal health effects linked to a terrorist attack. *Id.* (slip op. at 20–21).

In contention 3, the Petitioner argued that the Staff failed to consider credible threat scenarios with significant environmental impacts. The Petitioner argued that the Staff only considered “minimal damage” scenarios involving storage casks at Diablo Canyon’s ISFSI, but that scenarios with much larger releases of radiation were also plausible and should have been considered. In support of its claim, the Petitioner relied on the declaration of its expert, who stated that a release of radiation could contaminate up to 7,500 square kilometers of land, rendering it uninhabitable and causing cancers and other health problems as well as significant economic and social damage. In response, the NRC Staff denied that it had overlooked any credible threat scenarios with significant environmental impacts.

Observing that the EA explicitly stated that the Staff considered plausible threat scenarios with the potential for significant consequences—including “a large aircraft impact similar in magnitude to the attacks of September 11, 2001, and ground assaults using expanded adversary characteristics consistent with the design basis threat for radiological sabotage for nuclear power plants”—the Commission found that the Staff’s approach, “grounded in the NRC Staff’s access to classified threat assessment information, is reasonable on its face.” *Id.* (slip op. at 23). The Commission stated that it did not understand the Ninth Circuit’s remand decision in *San Luis Obispo Mothers for Peace* to require a contested adjudicatory inquiry into the credibility of various hypothetical terrorist attacks against the Diablo Canyon ISFSI. *Id.* (slip op. at 23–24). The Commission explained:

Adjudicating alternate terrorist scenarios is impracticable. The range of conceivable (albeit highly unlikely) terrorist scenarios is essentially limitless, confined only by the limits of human ingenuity. And hearings on such claims could not be conducted in a meaningful way without substantial disclosure of classified and safeguards information on threat assessments and security arrangements and without substantial litigation over their significance. Such information—disclosure of which is prohibited by law—would lie at the center of any adjudicatory inquiry into the probability and success of various terrorist scenarios.

The Supreme Court’s controlling *Weinberger* decision makes clear that NEPA does not contemplate such adjudications. In practical terms, this leaves

the matter of threat assessment under NEPA in the hands of the NRC, without judicial oversight or agency hearings. But that is exactly the result *Weinberger* calls for.

CLI-08-01, 67 NRC at ___ (slip op. at 24).

In contention 4, the Intervenor argued that the supplemental EA failed to comply with NEPA and NRC regulations because the Staff failed to address the National Infrastructure Protection Plan (NIPP), to which the NRC is a signatory. The Commission rejected this contention. *Id.* (slip op. at 27). Although the Commission agreed that the NRC should take account of the NIPP in implementing its security program, the Commission did not agree that the NRC must demonstrate compliance with the NIPP in its NEPA evaluation. *Id.* Accordingly, the Commission found this contention outside the scope of the proceeding. *Id.*

The Petitioner's fifth contention challenged the supplemental EA's failure to address the vulnerability of the ISFSI in relation to the entire Diablo Canyon spent fuel storage complex. The Petitioner argued that the EA failed to comply with NEPA because it did not consider the cumulative impact of storing spent fuel at the site in two locations—the ISFSI and the existing spent fuel pool—rather than in one location. The Commission rejected this contention, finding it was both outside the scope of the proceeding and, additionally, was inadequately supported. *Id.* (slip op. at 28). The Commission noted that the Petitioner provided no factual or even logical support for its view that licensing the ISFSI truly might have “cumulative impacts”; that is, a sum “greater than its parts.” *Id.* (slip op. at 28–29). The Commission concluded that examining the terrorism risk facing the spent fuel pool as an independent facility is not part of the proceeding to license a dry storage ISFSI, and it found no basis for expanding the proceeding to include testimony and arguments on the spent fuel pool. *Id.* (slip op. at 29).

B. *Diablo Canyon's Impact on the Present Case*

The Commission's ruling in *Diablo Canyon* confirms that the Board should reject the Intervenor's challenges to the Staff's analysis of terrorism risks involving Pa'ina's irradiator.

Diablo Canyon speaks directly to most of the issues raised by the Intervenor here, including the Intervenor's claims that Appendix B improperly fails to evaluate certain threat scenarios, disclose underlying analysis or data, and further define certain qualitative terms. Following the approach in *Diablo Canyon*, the Board should reject those arguments. Further, although the Commission admitted narrow portions of two contentions in *Diablo Canyon*, those rulings do not direct a similar result here. That is because the Commission based its rulings on sections of the *Diablo Canyon* EA that are distinguishable from the EA in Pa'ina.

I. The Intervenor Fails to Show there is a Material Issue as to Whether the Staff Properly Assessed the Risk of a Terrorist Attack.

Initially, the Intervenor challenges the methodology the Staff used when assessing the risk of a terrorist attack. Amended Environmental Contentions (hereinafter "Contentions") at 19. The Intervenor argues that the Staff must conduct a quantitative analysis of terrorism risks and disclose not only the specific threat scenarios it considered, but also the specific factors relevant to those scenarios. *Id.* at 19–23. Applying the Commission's reasoning in *Diablo Canyon*, the Board should reject each of the Intervenor's challenges.

a. The Staff Need Not Conduct a Quantitative Analysis of Terrorism Risks.

The Intervenor argues that Appendix B is deficient because it fails to provide a quantitative analysis of the likelihood of a terrorist attack on Pa'ina's Irradiator. Contentions at 19. According to the Intervenor, references to "possible effects" of a terrorist attack and "some risk" of an attack do not satisfy NEPA requirements. *Id.* The Intervenor cites *Klamath-Siskiyou Wilderness Center*, 387 F.3d 989, 1001 (9th Cir. 2004), for the proposition that "[g]eneral statements about possible effects and some risk . . . do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Id.*

The cited case is inapposite. In the context of a NEPA terrorism analysis, an agency is free to rely on a qualitative, rather than a quantitative, assessment of relevant data. As the

Ninth Circuit explained, a “numeric probability of a specific attack is not required in order to assess the likely modes of attack, weapons, and vulnerabilities of a facility, and the possible impact of each of these on the physical environment, including the assessment of various release scenarios.” *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1031 (9th Cir. 2006). Instead, an agency may “conduct a low probability-high risk consequence analysis without quantifying the precise probability of risk.” *Id.* In its recent *Diablo Canyon* ruling, the Commission confirmed the acceptability of this approach in NRC proceedings. CLI-08-01, 67 NRC __ (slip op. at 11).

b. The Staff Need Not Disclose its Analysis of Likely Modes of Attack, Weapons, and Vulnerabilities.

The Intervenor claims that even if the numeric probability of an attack cannot be quantified, the Staff still must “assess likely modes of attack, weapons, and vulnerabilities of the facility, and the possible impact of each of these on the physical environment, including the assessment of various release scenarios.” Contentions at 19–20. The Intervenor implies that, in addition to assessing these factors, the Staff had to identify in the EA specific vulnerabilities of Pa’ina’s irradiator, as well as plausible threat scenarios. *Id.*

The Board should reject the Intervenor’s arguments for the same reason the Commission rejected analogous arguments in *Diablo Canyon*. It is clear from the face of the EA that the Staff did, in fact, assess threat scenarios relevant to Pa’ina’s irradiator.⁹ In *Diablo Canyon*, the Commission concluded that the supplemental EA—which, like the EA in Pa’ina, states that the Staff considered “[p]lausible threat scenarios”—was “reasonable on its face.” *Id.* (slip op. at 23). The Board should also reject the Intervenor’s claim that the Staff was required to disclose the specific threat scenarios and vulnerabilities it considered. Pursuant to

⁹ See, e.g., EA at B-4 through B-6 (addressing threats, vulnerabilities and consequences of a terrorist attack).

Weinberger, litigation over the plausibility of particular threat scenarios simply is not contemplated under NEPA. CLI-08-01, 67 NRC __ (slip op. at 24). As the Commission explained, it did not understand the Ninth Circuit's remand decision in *Diablo Canyon* to require a contested adjudicatory inquiry into the credibility of various hypothetical terrorist attacks. *Id.* (slip op. at 23–24).

c. The Intervenor Incorrectly Asserts that the Staff Cannot Rely on Security Assessments it has Undertaken for other Facilities.

The Intervenor argues that the Staff cannot rely on a general discussion of security assessments it has undertaken for other facilities in the past. Contentions at 20. The Intervenor also argues that the Staff cannot simply conclude that Pa'ina's irradiator and its sources are too robust to succumb to terrorist sabotage. *Id.* According to the Intervenor, the Staff must disclose "hard data," such as calculations or modeling, to ascertain whether Pa'ina's irradiator would be vulnerable to a terrorist attack. *Id.*

As the Commission made clear in *Diablo Canyon*, the Staff can—and *should*—look to other assessments in evaluating terrorism risks. CLI-08-01, 67 NRC __ (slip op. at 13). The Staff considered such assessments in evaluating potential terrorist threats at Pa'ina's site, as explained in Appendix B. The Board should therefore reject the Intervenor's argument that the Staff improperly relied on prior security assessments. The Board should also reject the Intervenor's apparent claim that the Staff relied *solely* on the prior assessments in evaluating risks to Pa'ina's irradiator. Contentions at 20–21. That was not the case. As stated in Appendix B, the Staff compared the information in the prior security assessments to the relevant features of Pa'ina's irradiator and reached its conclusions based on that comparison. EA at B-5.

The Board should likewise reject the Intervenor's argument that the Staff had to disclose the data and calculations underlying its analysis of whether Pa'ina's irradiator would be

vulnerable to a terrorist attack. In *Diablo Canyon*, the Commission made clear that the Staff need not disclose such information. See CLI-08-01, 67 NRC __ (slip op. at 24) (explaining that “[s]uch information—disclosure of which is prohibited by law—would lie at the center of any adjudicatory inquiry into the probability and success of various terrorist scenarios”).

Further, the Board should reject the Intervenor’s argument that the Staff’s use of a qualitative term such as “robust” to describe the source and pool structure renders Appendix B deficient in any way. In *Diablo Canyon*, the Commission explained that the Staff need not further define a qualitative term where the Staff’s usage of that term is clear. *Id.* (slip op. at 11). In the context of Appendix B, it is clear that the Staff’s usage of the term “robust” is intended to convey that the source and irradiator pool are designed to withstand physical damage.¹⁰ The Staff would also note that, contrary to the Intervenor’s suggestion, the Staff clearly did not rely solely on the robustness of the source in reaching its conclusions; on its face, Appendix B reflects that this was only one of many factors that the Staff deemed relevant to its terrorism analysis.¹¹

d. The Intervenor Provides No Support for its Claim that the Staff Failed to Consider Features Specific to Pa’ina’s Irradiator.

The Intervenor argues that the Staff failed to consider specific features of Pa’ina’s irradiator site and its surroundings that make the irradiator particularly vulnerable to terrorist attack, such as “iconic value, complexity of planning required, resources needed, execution risk, and public protective measures.” Contentions at 20–21. The Intervenor proceeds to list a number of factors it believes the Staff should have considered. *Id.* at 21. These factors include

¹⁰ The Commission itself used the term “robust” during its Part 36 rulemaking when discussing irradiator design. See *License and Radiation Safety Requirements for Irradiators*, 55 Fed. Reg. 50,008, 50,021 (December 4, 1990).

¹¹ See, e.g., EA at B-5 through B-6 (referring to “the passive nature and location of the sources and the source design and construction,” as well as security compensatory measures).

the irradiator's proximity to Honolulu International Airport, Pearl Harbor, and other military bases; the possibility that Co-60 would be an attractive material for dirty bombers; the amount of Co-60 to be used at Pa'ina's irradiator; and geographic factors that, in the Intervenor's view, could render the irradiator facility susceptible to terrorist attacks. *Id.*

Although the Intervenor alleges that the Staff "failed to consider" the specified factors, the Intervenor's real argument appears to be that the Staff should have disclosed the role these factors played in its terrorism analysis. To do so, however, would require that the Staff disclose either the threat scenarios it considered in its terrorism analysis or the data underlying its analysis. The Staff was not required to make such disclosures. CLI-08-01, 67 NRC __ (slip op. at 23–24).

To the extent the Intervenor is merely alleging the Staff ignored pertinent information, it should be apparent on the face of the EA that the Staff considered the factors identified by the Intervenor. For example, the Staff specifically discussed potential threats associated with a dirty bomb in Appendix B. EA at B-6. The other factors identified by the Intervenor—the irradiator's location and proximity to other sites and the Co-60 source—are all noted by the Staff in either the body of the EA, in the appendices, or in the Final Topical Report, which is incorporated in the EA.¹²

e. The Intervenor Fails to Demonstrate that the Staff Must Disclose all Threat Scenarios and Modes of Attack it Evaluated.

The Intervenor next addresses threat scenarios directly, claiming the EA improperly fails to discuss such scenarios and identify the likely modes of attack on Pa'ina's irradiator. Contentions at 21–22. For the reasons stated by the Commission in *Diablo Canyon*, this argument must fail. While it is true that the Staff must *consider* threat scenarios and modes of

¹² "Final Topical Report on Aircraft Crash and Natural Phenomena Hazard at the Pa'ina Hawaii, LLC Irradiator Facility" (May 1, 2007) (ADAMS ML071280833).

attack in its terrorism analysis, this does not require that the Staff *disclose* such sensitive information in a publicly available document. CLI-08-01, 67 NRC __ (slip op. at 24). Further, an adjudicatory proceeding into the Staff's threat assessment process simply is not contemplated under NEPA. *Id.* As the Commission explained, this result—"leav[ing] the matter of threat assessment under NEPA in the hands of the NRC"—is consistent with both the Supreme Court's decision in *Weinberger* and the Ninth Circuit's decision in *San Luis Obispo Mothers for Peace*. *Id.* (slip op. at 23–24).¹³

- f. The Intervenor Erroneously Asserts that the Staff Must Disclose its Conclusions Regarding Vulnerabilities and Likely Modes of Attack, Including the Data underlying its Conclusions.

According to the Intervenor, the EA is deficient because the Staff failed to disclose: "(1) hard data regarding the physical vulnerability of the proposed irradiator, (2) analysis of the specific features that make the irradiator and its environs susceptible to attack, and (3) an assessment of the likely modes of attack on the Pa'ina irradiator." Contentions at 22–23. These claims are merely variants of the Intervenor's prior arguments. As explained above, under *Diablo Canyon*, the Staff need not disclose such information in its EA. CLI-08-01, 67 NRC __ (slip op. at 23–24).

- g. The Intervenor is Unable to Prove there is a Material Dispute Regarding the Staff's Consideration of Prior Security Assessments.

The Intervenor acknowledges that, according to the EA, the Staff evaluated a spectrum of threat scenarios as part of its security assessment framework. Contentions at 22 n. 5. However, the Intervenor claims this analysis is not enough to satisfy NEPA. *Id.* The Intervenor

¹³ The Intervenor provides several specific examples of threat scenarios it believes the Staff did not consider, but should have considered. Contentions at 20, 22. The Staff submits that any analysis of such specific scenarios is precisely the type of information that, pursuant to *Diablo Canyon* and *San Luis Obispo Mothers for Peace*, the Staff need not disclose in publicly available document like an EA.

argues that the Staff improperly failed to discuss which scenarios were considered and how these scenarios were screened for "plausibility." *Id.*

The Intervenor fails to show that the Staff omitted required information from the EA or that there is any other genuine dispute on a material issue. As stated previously, the Staff need not disclose the specific threat scenarios it considered. CLI-08-01, 67 NRC __ (slip op. at 23–24). To the extent the Intervenor is arguing that the Staff had to further explain why it determined various scenarios were or were not "plausible," that claim should likewise be rejected. As in *Diablo Canyon*, the Intervenor fails to establish there is a genuine issue as to whether the Staff provided a sufficient description of its scenario identification process. *Id.* (slip op. at 11).

II. The Intervenor is Unable to Show that the Staff Improperly Withheld Data Underlying its Terrorism Analysis.

Next, the Intervenor claims that the EA is deficient because "[t]he reader is not told what data the conclusion [that terrorism-related impacts are insignificant] was based on or why objective data cannot be provided[.]" Contentions at 23 (citing *Klamath-Siskiyou Wildlands Center*, 387 F.3d at 994). The Intervenor alleges that Appendix B improperly omits any discussion of the aspects of prior security assessments that the Staff concluded were relevant to its analysis. *Id.* Further, the Intervenor alleges Appendix B is deficient because the Staff has not provided the public the opportunity to review these security assessments and assess the manner in which the Staff used them. *Id.* at 23–24.

The Board should reject the Intervenor's argument that Appendix B improperly fails to disclose security data that the Staff deemed relevant to its terrorism analysis. Under *Diablo Canyon*, the Staff need not disclose data underlying such an analysis when it is withheld for security reasons consistent with FOIA exemptions. CLI-08-01, 67 NRC __ (slip op. at 16–17, 23–24). For this same reason, the Intervenor also errs when it asserts that the EA is deficient

because the public has not been given the opportunity to review the security assessments upon which the Staff relied. *Id.*

The Intervenor further argues that the EA is deficient because it fails to disclose the assumptions regarding irradiator design and the source term on which the Staff based its conclusion that the consequences of a terrorist attack would not be significant. Contentions at 24. The Intervenor claims that Appendix B improperly fails to provide any scientific support for the Staff's conclusions that the proposed irradiator and source materials are "robust" and that a terrorist attack would result in "generally small radiological consequences." *Id.*

This argument must fail. The assumptions regarding irradiator design and the source term upon which the Staff based its conclusions are clearly set forth in the EA itself. The Staff's terrorism analysis is contained in an *appendix* to the EA, and the Intervenor points to no authority holding that an appendix needs to restate information contained in the EA itself. That the Staff relied on information in other parts of the EA is a self-evident proposition which should not be litigated further.¹⁴ As for the Intervenor's challenge to the Staff's use of qualitative terms like "robust" and "generally small," the Commission in *Diablo Canyon* found no fault with the Staff's use of similar terms.

III. The Intervenor is Unable to Demonstrate that the Staff Overlooked the Significance of Identified Effects.

The Intervenor claims that the Staff ignored the significance of two possible effects related to potential terrorist activity involving Pa'ina's irradiator: release of cobalt slugs to the pool water following an act of sabotage, and dispersal of Co-60 by way of a dirty bomb. Contentions at 25–27. The Board should reject both arguments.

¹⁴ *Cf. Diablo Canyon*, CLI-08-01, 67 NRC __ (slip op. at 21) (holding that "there is no reason to convene an NRC hearing to debate [a] self-evident, and unexceptionable, proposition. . .").

- a. There is No Dispute that the Staff Considered the Significance of Cobalt Slugs Being Released to Pool Water.

First, the Intervenor challenges the Staff's conclusion that, in the event of sabotage, there is a "low risk" of cobalt slugs being released to the water of the irradiator pool. Contentions at 25. Second, the Intervenor argues that the Staff failed to address the environmental impacts of this low-risk scenario. *Id.* at 26. The Intervenor contends that "if a terrorist group were to puncture the pool and damage the 'slugs,' radioactive materials could escape and contaminate the area surrounding the pool." *Id.*

Consistent with *Diablo Canyon*, the Staff's usage of the qualitative term "low-risk" is acceptable because it is sufficiently clear and in keeping with information security constraints. CLI-08-01, 67 NRC __ (slip op. at 11). Further, the Staff's conclusion is supported by analysis confirming that a cobalt slug is essentially non-soluble in water. EA at B-6; Final Topical Report at 1-3. The Intervenor's contention must be rejected because the Staff used appropriate qualitative language and, additionally, because the Staff explained the basis for that language in the EA.

In *Diablo Canyon*, the Commission admitted a portion of a contention alleging that the Staff may not have fully considered land contamination and other effects resulting from "more than minimal" damage to dry storage casks. CLI-08-01, 67 NRC __ (slip op. at 20-21). Here, by contrast, the EA on its face shows that the Staff considered a scenario where cobalt slugs sustain more than minimal damage; that is, where the slugs are separated from the source assembly and released to the pool water. The Staff concluded that, even in such a situation, there is unlikely to be an offsite release of radiological material. EA at B-5.

Consistent with *Diablo Canyon* and the NRC's contention rules, the Intervenor bears the burden of showing there is a genuine dispute over whether the Staff failed to consider any reasonably foreseeable impact of the proposed action. Here, all the Intervenor offers is

speculation that a damaged slug “*could* escape and contaminate the area surrounding the pool.” (Emphasis added.) The Intervenor alleges no facts, nor does it cite expert opinion, explaining why it is reasonably foreseeable that a metal slug would escape the 18’6”-deep irradiator pool. The Intervenor does not explain what it means by “area surrounding the pool,” and it does not explain why any contamination of that area, were it to occur, would have reasonably foreseeable impacts on the environment.¹⁵ Nor does the Intervenor explain why it is reasonably foreseeable that, in the wake of a terrorist attack, appropriate agencies would fail to take prompt action to control and remediate any possible contamination.

Significantly, the Intervenor also fails to address the Final Topical Report, which is expressly referenced in Appendix B. The Final Topical Report provides further support for the Staff’s conclusions regarding offsite release. See, e.g., Final Topical Report at 1-3 (concluding “it is not feasible that a significant amount of contamination can be released into the pool water and lead to contamination of the surrounding environment in the timeframe of days to weeks considered in the case of an aircraft accident or damage by natural phenomena”). The Intervenor fails to explain what, if any, dispute it has with this information, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Because the Intervenor fails to raise any genuine factual dispute as to whether the Staff neglected reasonably foreseeable effects related to an act of sabotage involving Pa’ina’s irradiator, its arguments must be rejected.

¹⁵ The Intervenor cites the 8/24/07 Resnikoff Declaration at ¶¶ 22-24 and 7/6/07 Resnikoff Report at 5 in support of its claim that, if the pool were punctured and Co-60 slugs damaged, radioactive materials could escape the pool and contaminate the surrounding area. However, the cited portions of Dr. Resnikoff’s Declaration and Report address the entirely different situation where the source is not merely “damaged,” but where terrorists convert the source into the equivalent of a dirty bomb. The Staff would emphasize that, even if Dr. Resnikoff’s assertion is correct, for this type of contamination to occur, it would require far more than a breach in the irradiator’s pool lining and damage to the source.

b. The Intervenor Fails to Identify any Material Issue Related to the Staff's Consideration of a Dirty Bomb Scenario.

The Intervenor acknowledges that the Staff considered certain impacts related to a dirty bomb containing Co-60 taken from Pa'ina's irradiator. Contentions at 26. The Intervenor argues, however, that the Staff provides no basis for finding that these impacts would be insignificant. *Id.* The Intervenor further argues that the Staff could, and should, have assessed the potential impacts of a dirty bomb using information specific to Pa'ina's irradiator, such as the source size and the irradiator's location. *Id.* at 27.

The Staff concluded that licensing Pa'ina's irradiator would not result in any significant environmental impacts related to potential terrorist actions. EA at B-7. The Staff did not necessarily conclude, as the Intervenor suggests, that any particular terrorist action, were it to occur, would cause only insignificant impacts. Rather, the Staff based its FONSI in part on its assessment of various threat scenarios, which included an assessment of which scenarios were and were not plausible. This approach is entirely consistent with *Diablo Canyon*, where the Commission found that the Staff's threat assessment process was "reasonable on its face." CLI-08-01, 67 NRC ___ (slip op. at 23). Moreover, as the Commission explained in *Diablo Canyon*, litigating the NRC's assessment of alternate threat scenarios is impracticable. *Id.* (slip op. at 24).

The Intervenor's claim that the Staff failed to take into account information specific to Pa'ina's irradiator is likewise without merit. As stated previously, the Staff obviously took into account information specific to Pa'ina's irradiator, including the source size and the irradiator's location, in conducting its terrorism analysis. The information that the Intervenor identifies is contained in the EA itself, to which the terrorism analysis is an appendix, or in other documents made available to the Intervenor. As in *Diablo Canyon*, there is no reason to convene a hearing to debate such a self-evident proposition. *Id.* (slip op. at 21).

IV. The Intervenor Does Not Identify Any Reasonably Foreseeable Impacts Overlooked by the Staff.

According to the Intervenor, the Staff failed to consider all reasonably foreseeable impacts of a terrorist attack involving a bomb containing material from Pa'ina's irradiator. Contentions at 27–28. The Intervenor argues that the Staff inappropriately focused on only the immediate impacts of a potential terrorist attack, failing to analyze the long-term effects of dispersed Co-60 persisting in the environment. *Id.* at 27.

It is the Intervenor who bears the burden of establishing there is a genuine dispute as to whether the Staff failed to consider any reasonably foreseeable impact. 10 C.F.R. § 2.309(f)(1)(vi); *Private Fuel Storage*, CLI-04-22, 60 NRC at 139. Here, the Intervenor argues that the Staff failed to consider a credible threat scenario—theft or diversion of radioactive material that is subsequently converted into a dirty bomb—with significant environmental impacts. Although the Intervenor claims that the environmental impacts of a dirty bomb attack would be significant, nowhere does the Intervenor make the threshold showing that this may be a credible threat scenario. The Intervenor cites to the Resnikoff Declaration at ¶ 26, which merely states in a conclusory manner that theft or diversion of a source is a “plausible mode[] of attack,” without providing any supporting information or analysis.

Whether the Staff must consider potentially significant impacts of a dirty bomb attack is an issue inextricably linked to the Staff's assessment of threat scenarios involving Pa'ina's irradiator. In *Diablo Canyon*, the Commission refused to admit contention 3, alleging that more-than-minimal damage to dry storage casks would cause significant environmental impacts, even though the Petitioner's expert submitted a report stating that such damage could contaminate up to 7,500 square kilometers of land, rendering it uninhabitable, and causing cancers and other health problems as well as significant economic and social damage. *Id.* (slip op. at 22). The

Commission made clear that there is no need to hold a contested adjudicatory inquiry into the credibility of various hypothetical terrorist attacks, recognizing that, “[i]n practical terms, this leaves the matter of threat assessment under NEPA in the hands of the NRC, without judicial oversight or agency hearings.” CLI-08-01, 67 NRC __ (slip op. at 23–25). In the present case, the Staff concluded that the allegedly significant effects identified by the Intervenor were not tied to credible threat scenarios and, for that reason, did not warrant inclusion in the EA.

The Intervenor next argues that the EA improperly omits any analysis of the potential for a terrorist attack on nuclear material in transit to Pa’ina’s irradiator. Contentions at 28. The Intervenor claims that, because these shipments are actions connected to the operation of Pa’ina’s irradiator, the Staff must address in the EA the potential effects of a terrorist attack on the shipments. *Id.*

Shipments of nuclear material to Pa’ina’s irradiator will be regulated under 10 C.F.R. Part 71, which prescribes detailed requirements for the packaging and transportation of radioactive material. Because terrorist acts on a source in transit would involve a Part 71 licensee rather than Pa’ina, a Part 36 licensee, and because the impacts of such an attack have already been considered by the Staff in the context of assessing risks to Part 71 licensees generally, the Staff properly concluded that the possibility of a terrorist attack on sources in transit to Pa’ina’s irradiator was an issue outside the scope of this proceeding. The Staff’s conclusion is consistent with *Diablo Canyon*, where the Commission found that the scope of the proceeding was limited to the analysis of NEPA-terrorism consequences of licensing the ISFSI. CLI-08-01, 67 NRC __ (slip op. at 28).

Even if the potential for terrorist acts involving sources in transit were an issue within the scope of this proceeding, the Intervenor would bear the burden of proving that the Staff failed to consider reasonably foreseeable impacts. *Private Fuel Storage*, CLI-04-22, 60 NRC at 139. The Intervenor does not make that showing here. Instead, the Intervenor merely speculates

that terrorists could attack the sources, which will be shipped to Pa'ina's irradiator only approximately once a year,¹⁶ somewhere in transit. The Intervenor provides no basis for concluding such an attack is plausible,¹⁷ much less that it would cause reasonably foreseeable impacts.¹⁸

V. The Intervenor Fails to Identify any Material Issue Related to the Staff's Analysis of Security Compensatory Measures.

Finally, the Intervenor argues that the Staff improperly relied on enhanced security compensatory measures to justify the FONSI in its terrorism analysis. Contentions at 28–29. The Intervenor claims that, under NEPA, a "[m]ere listing of mitigation measures, without supporting analytical data, is insufficient to support a finding of no significant impact." *Id.* at 28 (citing *National Parks & Conservation Ass'n*, 241 F.3d at 733). The Intervenor contends that, instead, the Staff must show "the mitigation measures will render [negative] impacts so minor as to not warrant an EIS." *Id.*

The Intervenor mischaracterizes the Staff's discussion of security compensatory measures. The Staff did not conclude that, in the case of Pa'ina's irradiator, security compensatory measures would render otherwise significant impacts "so minor as to not warrant an EIS." Rather, the Staff concluded that "these measures further reduce the already low probability of a successful terrorist attack on an irradiator facility and reduce the risks of potential radiological consequences if an attack was successful." EA at B-6. Thus, the case the Intervenor cites is inapposite. In *Diablo Canyon*, the Commission held that "there is no reason

¹⁶ EA at 8.

¹⁷ At ¶ 26 of his 8/24/07 Declaration Dr. Resnikoff states that diverting sources in transit is a "plausible mode[] of attack," but without providing any basis for his opinion.

¹⁸ Indeed, the Intervenor does not even identify a specific area in which impacts might occur, suggesting that the Staff should consider potential impacts in locations as remote as Canada or Russia. Contentions at 28.

to convene an NRC hearing to debate th[e] self-evident, and unexceptionable, proposition” that “[i]n some situations, emergency planning and response actions could provide an additional measure of protection[.]” CLI-08-01, 67 NRC __ (slip op. at 21). The Commission’s reasoning applies here.

CONCLUSION

Applying the Commission’s reasoning in *Diablo Canyon*, the Board should not admit any contention related to the fourth segment of Amended Environmental Contention 3.

Respectfully submitted,

/RA/
Michael J. Clark
Counsel for the NRC Staff

Dated at Rockville, Maryland
this 31st day of January, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)	
)	
PA'INA HAWAII, LLC)	Docket No. 30-36974
)	
Material License Application)	ASLBP No. 06-843-01

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSE TO BOARD'S JANUARY 24, 2008 ORDER" in the above-captioned proceedings have been Served on the following by deposit in the United States mail; through deposit in the Nuclear Regulatory Commission's internal system as indicated by an asterisk (*), and by electronic mail as indicated by a double asterisk (**) on this 31st day of January, 2008.

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