

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

Before Administrative Judges:

Thomas S. Moore, Chairman
Dr. Paul Abramson
Dr. Anthony J. Baratta

In the Matter of

PA'INA HAWAII, LLC

(Material License Application)

Docket No. 30-36974-ML

ASLBP No. 06-843-01-ML

August 31, 2007

MEMORANDUM
(Certifying Question to the Commission)

As we stated in posing questions to the parties, "this otherwise ordinary irradiator licensing proceeding is unique because the issues presented by the proffered contentions raise several fundamental and overarching issues that appear to fall squarely in the cracks of the Commission's environmental and safety regulatory scheme for irradiators."¹ Accordingly, the Board certifies to the Commission the question whether, in the circumstances presented, 10 C.F.R. § 30.33(a)(2) requires a safety analysis of the risks asserted to be endemic (i.e. aircraft crashes and natural phenomena) to the proposed irradiator site at the Honolulu International Airport? We certify this question to the Commission at this late date in the proceeding because of the Staff's only recently articulated position that no safety siting analysis is required and, therefore, it has not done one.

The Commission's regulations in 10 C.F.R. Part 36 contain the specific safety requirements applicable to irradiators. Additionally, Part 20 provides the relevant standards for

¹ Licensing Board Order (Posing Questions to the Parties) (Apr. 30, 2007) at 2 (unpublished).

protection against radiation for the proposed facility. In describing the requirements for irradiators, Section 36.13(a) states that “[t]he applicant shall satisfy the general requirements specified in § 30.33 of this chapter and the requirements contained in this [Part 36]” (emphasis added). The relevant “general requirement” involved here is found at Section 30.33(a)(2) and states that an application will be approved if, “[t]he applicant’s proposed equipment and facilities are adequate to protect health and minimize danger to life or property.” Part 36 does not contain specific regulatory provisions addressing safety considerations with regard to the proposed site of an irradiator; however, the Intervenor in this proceeding has proffered contentions addressing safety risks of the proposed location, relying on Section 30.33(a)(2).

The only purported assessment of such “safety” risks performed in the proceeding was conducted by a contractor for the NRC Staff. The Applicant, while acknowledging its lack of expertise in the area, claims to have “incorporated” that analysis into its application.² Subsequently, the Intervenor filed new/amended contentions addressing alleged omissions in that analysis. However, the Staff now maintains that the analysis in the topical report “was not intended to support the Staff’s safety review” and that no such safety analysis is required.³ Thus, it appears that there is no existing documentary support evidencing that any safety review of the proposed site has been performed. The Staff’s recent insistence that analysis of safety

² Applicant Pa’ina Hawaii, LLC’s Motion to Dismiss Safety Contention #7 (Jan. 8, 2007) [hereinafter Motion to Dismiss]; see infra note 13. In its motion the Applicant states that “[t]he STR [Safety Topical Report] is highly technical and wide-ranging, and is in all likelihood beyond the technical expertise of Applicant. Consequently, insofar as is appropriate, Applicant incorporates the completed STR as part and parcel of its Application.” Id. at 4 n.2. Prior to the Applicant’s “incorporation” of the Topical Report, it appears that the Applicant, in accordance with NRC guidance, was essentially required, without more, to fill out an application form that did not indicate the need for any safety analysis of the issues raised by the Intervenor’s safety contentions.

³ NRC Staff Second Response to the Licensing Board’s April 30, 2007 Order (May 21, 2007) at 3 [hereinafter Staff May 21 Response].

issues with respect to irradiator siting, including risks from natural phenomena and aircraft crashes, is not required, and that the previously performed analysis does not represent a safety review, raises a fundamental question regarding safety review of irradiators that we believe requires Commission resolution.

Background

The presence of this underlying regulatory question might explain the odd progression of the Staff's position regarding the admissibility of the Intervenor's safety contentions challenging the proposed site of this irradiator. In any event, a brief recitation of the chronology of the proceeding and description of the winding path of the Staff's positions will help frame and clarify the certified question.

A. Chronology of the Proceeding

On January 24, 2006, we issued LBP-06-04, 63 NRC 99 (2006), admitting two environmental contentions and granting the hearing request of the Intervenor, Concerned Citizens of Honolulu, on the application of Pa'ina Hawaii, LLC to build and operate a commercial pool-type irradiator. Subsequently, on March 24, 2006, we issued a separate memorandum and order admitting, inter alia, Safety Contention 7, challenging the application's failure to analyze the probabilities and consequences of aircraft crashes at the proposed site.⁴

⁴ See LPB-06-12, 63 NRC 403 (2006). The initial rulings bifurcated the admissibility of contentions portion of the proceeding to develop procedures for dealing with portions of the license application not publicly disclosed. The Board also admitted Safety Contentions 4 and 6, which were contentions of omission challenging the application's lack of emergency procedures required by 10 C.F.R. § 36.53. See id. at 412-18. Once the Applicant cured the asserted omissions, we dismissed Safety Contentions 4 and 6 as moot. See Licensing Board Order (Ruling on Admissibility of Two Amended Contentions) (June 22, 2006) (unpublished).

The third admitted safety contention, Safety Contention 7, was also a contention of omission asserting that the application "fails completely to address the likelihood and consequences of an air crash involving the facility." Id. at 418 (internal quotations omitted). As detailed subsequently, infra pp. 13-14, in opposing the admission of Safety Contention 7, the Applicant relied upon the regulatory history of Part 36 to argue that challenges to the siting of

(continued...)

After the admission of the Intervenor's two originally proffered environmental contentions, the NRC Staff and the Intervenor filed a Joint Motion to Dismiss the two environmental contentions pursuant to a joint stipulation in which the Staff agreed to perform an Environmental Assessment concerning the Pa'ina application.⁵ As a result of this settlement, which we accepted, the environmental contentions were dismissed.⁶ Thereafter, on December 21, 2006, the Staff issued: (a) a Draft Environmental Assessment Related to the Proposed Pa'ina Hawaii, LLC Underwater Irradiator in Honolulu, Hawaii ("Draft EA")⁷; and (b) a

⁴(...continued)

irradiators had been preemptively ruled out by the Commission. In admitting Safety Contention 7, however, we noted that the "lack of a regulatory prohibition against siting an irradiator at an airport does not affirmatively establish that any airport location satisfies the general requirement of 10 C.F.R. § 30.33(a)(2) that an irradiator facility be 'adequate to protect health and minimize danger to life or property.'" *Id.* at 419. Further, we pointed to crucial differences between the irradiator discussed in the Commission's Statements of Consideration, and the one proposed by the Applicant.

It should be noted that the Staff did not rely on the Part 36 rulemaking in opposing Safety Contention 7, see infra p. 7, and did not argue that site-related safety issues were outside the scope of the proceeding. Nor did the Staff appeal our decision on those, or any other, grounds. Only after questioning did the Staff, some 19 months later in May of 2007, turn to the Part 36 rulemaking language relied upon by the Applicant from the outset. See Staff May 21 Response at 2.

⁵ See NRC Staff and Concerned Citizens of Honolulu Joint Motion to Dismiss Environmental Contentions (Mar. 20, 2006).

⁶ See Licensing Board Order (Confirming Oral Ruling Granting Motion to Dismiss Contentions) (Apr. 27, 2006) (unpublished). The Applicant appealed the Board's decision and the Commission rejected its appeal. See CLI-06-18, 64 NRC 1 (2006).

⁷ See Draft Environmental Assessment Related to the Proposed Pa'ina Hawaii, LLC Underwater Irradiator in Honolulu, Hawaii (Dec. 21, 2006), ADAMS Accession No. ML063470231.

Draft Topical Report on the Effects of Potential Natural Phenomena and Aviation Accidents at the Proposed Pa'ina Hawaii, LLC, Irradiator Facility (December 2006) ("Draft Topical Report"),⁸ prepared for the Staff by the Center for Nuclear Waste Regulatory Analyses, San Antonio, Texas.

Subsequently, on January 8, 2007, the Applicant filed a motion to dismiss the remaining Safety Contention 7, arguing that "because the NRC Staff (through an outside contractor) has now filed its Safety Topical Report (STR) addressing the likelihood and consequences of an aircraft crash involving the Applicant's proposed facility," the omission in the contention was cured and Safety Contention 7 was moot.⁹ The Staff filed a response supporting the Applicant's motion, referring to its Draft Topical Report using the shorthand description "Safety Topical Report."¹⁰ The Staff asserted that because the "EA and Safety Topical Report include an analysis of the probability of an aircraft crash at the proposed facility and discuss expected impacts from an aircraft crash," the Intervenor's safety contention was now moot.¹¹ Finding that the Applicant failed to comply with the consultation requirements of 10 C.F.R. § 2.323(b), we denied its motion; however, we also concluded that the Draft Topical Report had cured the "originally alleged failure requiring the dismissal of the contention."¹² Because the Intervenor now had the opportunity to challenge the previously nonexistent and newly produced analysis in

⁸ See Draft Topical Report on the Effects of Potential Natural Phenomena and Aviation Accidents at the Pa'ina Hawaii, LLC Irradiator Facility (Dec. 31, 2006), ADAMS Accession No. ML063560344.

⁹ Motion to Dismiss 4 (quotation omitted).

¹⁰ NRC Staff Response to Applicant Pa'ina Hawaii, LLC's Motion to Dismiss Safety Contention #7 (Jan. 19, 2007) at 1.

¹¹ Id. at 2, 3.

¹² Licensing Board Order (Rejecting Motion to Dismiss) (Jan. 25, 2007) at 2 (unpublished).

the Safety Topical Report, we did not dismiss the admitted contention at that time. Thus, Safety Contention 7, challenging the application's lack of any siting safety analysis of the probabilities and consequences of aircraft crashes, remains outstanding. Because the Staff now asserts that the "Draft Topical Report was produced with only the requirements of NEPA in mind" and claims that it "has not drawn safety conclusions from [it]," the resolution of the contention must now await the Commission's ruling on this certified question.¹³

The resolution of Safety Contentions 13 and 14 must also await the Commission's ruling. Those two safety contentions were filed in response to the Staff's release of the Draft Topical Report and the Draft EA, and challenge the adequacy of the analysis and certain alleged omissions in the Topical Report regarding aircraft crash risks and the risks posed by natural phenomena at the proposed irradiator site.¹⁴

¹³ Staff May 21 Response at 4 n.3. Despite the Applicant's "incorporation" of the safety analysis in the Draft Topical Report into its application, see supra note 2, its concession that such analysis is beyond its grasp makes clear that the Topical Report does not represent the work of the Applicant. As a practical matter, to the extent that any safety analysis has been done – a question that is at the crux of this certification – it has been done by or at the behest of the Staff.

¹⁴ See Intervenor's Contentions Re: Draft Environmental Assessment and Draft Topical Report (Feb. 9, 2007). The Intervenor also filed two amended safety contentions in response to the Staff's release of the Final Topical Report on the Effects of Potential Natural Phenomena and Aviation Accidents at the Proposed Pa'ina Hawaii, LLC, Irradiator Facility (May 2007). See Intervenor Concerned Citizen's of Honolulu's Amended Safety Contentions #13 and #14 (June 1, 2007).

After the issuance of the Final Topical Report, on August 13, 2007, the NRC Staff gave notice of the availability of its Final Environmental Assessment and Finding of No Significant Impact concerning the Pa'ina Application. See NRC Notification of Availability of Final Environmental Assessment (Aug. 13, 2007) [hereinafter Board Notification].

Because the issuance of the Final Environmental Assessment might resolve the disputes at issue in the Intervenor's outstanding proffered environmental contentions, or create cause for the filing of additional new or amended contentions, we informed the parties that we would "refrain from ruling on the Intervenor's currently pending environmental contentions until receipt of the Final Environmental Assessment and any amended contentions derived therefrom." Licensing Board Order (Regarding Environmental Contentions) (Jul. 18, 2007) at 2 (unpublished).

B. NRC Staff's Positions Regarding Safety Review of Irradiator Siting

As previously noted, supra note 4, Safety Contention 7, filed with the Intervenor's initial hearing request, was admitted as a contention of omission challenging the complete lack of safety analysis in the application regarding the probability and consequences of an aircraft crash at the proposed site.¹⁵ In opposing the admission of Safety Contention 7, the Staff insisted that the contention failed to demonstrate a genuine dispute on a material issue of law or fact because it failed to cite a specific regulatory provision requiring such an analysis.¹⁶ Further, the Staff argued that because the regulations do not specifically mandate a site-related safety analysis, to add such a requirement would be an impermissible attack on the NRC's regulations.¹⁷ The Staff did not address the Intervenor's reliance on 10 C.F.R. § 30.33(a)(2) or even intimate that the Commission had preemptively ruled out site-related safety issues in its Part 36 rulemaking.

After admitting, among others, Safety Contention 7, we held a teleconference to discuss the March 20, 2006, joint motion of the Intervenor and the Staff to dismiss the Intervenor's two admitted environmental contentions and to discuss a schedule for concluding the proceeding.¹⁸ During that teleconference we questioned the Staff specifically about Safety Contention 7 and its review plan. In that discussion, Staff counsel explicitly acknowledged that the Intervenor had raised, and the Board had admitted, two distinct issues with respect to aircraft crashes, i.e. a

¹⁵ See LPB-06-12, 63 NRC at 418-20. The Intervenor argued that the proposed site posed safety risks due to an alleged high frequency of aircraft crashes at the location.

¹⁶ See NRC Staff Response to Request for Hearing by Concerned Citizens of Honolulu (Oct. 28, 2005) at 11.

¹⁷ See id.

¹⁸ See Licensing Board Order (Scheduling a Telephone Conference) (Apr. 11, 2006) (unpublished); Tr. at 27-50.

safety issue and an environmental issue. The Staff explained to us that a contractor would “do the complete analysis encompassing both environmental effects and the safety side of the contention.”¹⁹ The Staff did not at that time state or suggest that the Commission intended in promulgating Part 36 that safety analyses of proposed sites for irradiators would never be performed, or that here the Staff would not perform such a safety analysis. In fact, we engaged in a lengthy discussion with the parties about the anticipated Staff review documents such as a Safety Evaluation Report (SER) and the role the SER would play in the timing and resolution of the rest of this proceeding.²⁰

The Staff’s January 19, 2007, response supporting the Applicant’s motion to dismiss Safety Contention 7 marked its first legal pleading addressing the Draft Topical Report.²¹ In that pleading, the Staff insists that the Applicant’s motion to dismiss “Safety Contention #7” should be granted “because the EA and Safety Topical Report provide the information allegedly omitted from the application.”²² Thus, it was our understanding that the Staff viewed the Draft Topical Report as a safety review document that, among other things, addressed site-related safety issues regarding the proposed site’s alleged susceptibility to aircraft crashes and natural phenomena and their consequences.

The Staff’s March 12, 2007, written response to the new contentions filed by the Intervenor regarding the Draft EA and Draft Topical Report reinforced our impression that the

¹⁹ Tr. at 33.

²⁰ See Tr. at 38-46. Interestingly, despite numerous references to an “SER” by the members of this Board and a discussion of deadlines for late-filed contentions stemming from the Staff release of such a document, the Staff counsel never informed us that the Staff did not intend to produce an SER or any other documentation of its safety review. See id.

²¹ See NRC Staff Response to Applicant Pa’ina Hawaii, LLC’s Motion to Dismiss Safety Contention #7 (Jan. 19, 2007).

²² Id. at 3.

Staff viewed the Draft Topical Report as a safety review document that addressed, inter alia, safety issues related to the siting of irradiators.²³ Noting that the Intervenor's Safety Contention 13 "is closely related to the Intervenor's original Safety Contention #7," the Staff stated that "the issue of aviation accident probability is within the scope of the proceeding and is material to the finding Staff must make under NEPA."²⁴ While the Staff stated that the issue is "material to the finding [it] must make under NEPA," the Staff did not argue that the issue is admissible only as an environmental contention.²⁵ Up to and including this point, the Staff had left us with the impression that it acknowledged the admissibility of challenges to siting safety analyses.

Furthermore, in opposing the admission of a second safety contention proffered in response to the Draft Topical Report and Draft EA (Safety Contention 14), that also addressed safety issues with respect to siting of the irradiator — here, risks associated with natural phenomena — the Staff insists that because "the existence of natural phenomena is not something the Intervenor discovered as a result of the Draft EA and the Draft Topical Report[,]
[t]he need for a safety analysis of events caused by natural phenomena could and should have been raised at the outset of the proceeding."²⁶ With this argument, the Staff appears to be conceding that the safety issues related to the siting of an irradiator are litigable if proffered in a timely fashion.

²³ NRC Staff Response to Intervenor Concerned Citizens of Honolulu's Contentions RE: Draft Environmental Assessment and Draft Topical Report (Mar. 12, 2007) at 2. Again in this document the Staff referred to the "Draft Topical Report" in shorthand as the "Safety Topical Report."

²⁴ Id. at 4.

²⁵ Id.

²⁶ Id. at 5 (emphasis added).

Thus, in light of the Staff's arguments, we determined in April 2007 that it was necessary to pose questions to the parties to develop further our understanding of how the Staff addresses "dangers posed by irradiator siting issues" in both the safety and environmental contexts.²⁷ The Staff's response did little to educate us as to how to handle the issues presented. Instead, the Staff's response appeared to mark a fundamental change in the Staff's position with regard to the role of the Draft Topical Report and the Staff's review of safety issues.

Specifically, in its May 21 response to our questions, the Staff asserted that it "has previously and continues to maintain" that the Commission has explicitly determined that "siting criteria were not necessary for irradiators from a safety standpoint."²⁸ Further, although the Staff had previously referred to the "Draft Topical Report" as the "Safety Topical Report" and found that the issuance of the report cured the alleged omission of a safety-related analysis, the Staff then, for the first time, argued that the Report was "not intended to support the Staff's safety review," and that it did "not draw[] safety conclusions from the [Report]."²⁹

With the Staff's responses to our April 30, 2007, questions in hand, it was clear to us that the Staff's currently stated position with respect to its safety review of siting issues was at odds with our previous understanding.³⁰ Accordingly, on June 6, 2007, we posed a series of

²⁷ Licensing Board Order (Posing Questions for the Parties) (Apr. 30, 2007) at 1, 7 (unpublished).

²⁸ Staff May 21 Response at 2. We find it troubling that the Staff would seem to suggest that it has always maintained that the site-related safety issues were outside the purview of this Board, as it did not provide us with this rationale until recently. See infra note 32.

²⁹ Id. at 3, 4 n.3.

³⁰ For example, we find it passing strange that, on the one hand, the Staff conceded the admissibility of Intervenor's Safety Contention 13 and, on the other hand, in its May 21 response to our questions, revealed its current position, which is at the heart of this certified question, that no safety review was performed regarding aircraft crash probabilities and consequences nor is any such review required. See Licensing Board Order (Posing Additional Questions) (June 6, 2007) at 3 (unpublished) [hereinafter June 6 Order].

follow-up questions to the Staff in an effort to resolve any misunderstanding or misapprehension regarding the Staff's position.

In its answers to the June 6, 2007, questions, the Staff reiterated that the Topical Report "did not form the basis for any of the conclusions reached with regard to the safety-related review of the application."³¹ Responding to our questions on the apparent inconsistencies in the positions taken by the Staff with respect to the Intervenor's safety contentions regarding irradiator siting, the Staff states that its response to the Intervenor's Safety Contention 13 (addressing siting safety issues with respect aircraft crashes) "was admittedly unclear."³² In an attempt to clarify its position, the Staff repeated its newly asserted position that "there are no litigable safety issues with regard to the Staff's analysis of the consequences of an aircraft crash at the proposed irradiator."³³

³¹ NRC Staff Response to the Licensing Board's June 6, 2007 Order (June 13, 2007) at 5 [hereinafter Staff June 13 Response].

³² Id. at 7. Although the Staff acknowledges that its response to the Intervenor's Safety Contention 13 was "unclear," in responding to the Intervenor's amended Safety Contention 13, which was filed in response to the issuance of the Final Topical Report, the Staff curiously insists that it "has maintained that no analysis of the consequences of an aircraft crash is required to be undertaken pursuant to the Staff's review of the safety aspects of the irradiator application. See Staff Response to Request for Hearing by Concerned Citizens of Honolulu at 11 (Oct. 29, 2005); see also May 21 Staff Response at 3. NRC Staff Response to Intervenor Concerned Citizens of Honolulu's Amended Safety Contentions #13 and #14 (June 27, 2007) at 5. The Staff's citation in this latest pleading to its initial filing in the proceeding, specifically its response to Safety Contention 7, strikes us as more than "unclear." No fair and reasonable reading of the Staff's original arguments concerning Safety Contention 7 could suggest that it has "maintained" a consistent position with respect to the issue of site-related safety analysis issues such as aircraft crashes in this proceeding. See supra pp. 6-7.

³³ The Staff concedes that challenges to the calculation of the probability of aircraft crashes at the proposed facility are admissible; however, it appears to suggest that this aspect is only litigable because the Staff had performed the calculation for its environmental review, and it believes that it would be "illogical" to deny its admissibility simply because it is labeled as a "safety contention." Staff June 13 Response at 6. Nevertheless, the Staff insists that the calculation was performed as a part of its environmental review, and no such calculation or review was performed with respect to safety.

In its May 21 responses, the Staff, in addressing whether 10 C.F.R. § 30.33(a)(2) could ever require evaluation of the proposed site with respect to safety issues, insisted that it “has found no extraordinary or unique circumstances that would require additional analysis to demonstrate that the applicant’s proposed equipment and facilities are adequate to protect health and minimize danger to life or property as required by 10 C.F.R. § 30.33(a)(2).”³⁴ After the probing in the June 6, 2007, Order, the Staff stated that it “has found that the application is consistent with the guidance in NUREG-1556, Volume 6, and therefore, that it complies with all applicable regulations, including 10 C.F.R. § 30.33(a)(2).”³⁵ Responding thereafter to our further questioning as to how the Staff determines whether additional safety analysis, beyond that detailed in NUREG-1556, Volume 6, is required, the Staff simply stated that “an irradiator application that conforms to NUREG-1556 will generally be found to comply with the regulatory requirements,” and that “[t]he Staff does not make a separate specific finding that extraordinary and unique circumstances are absent.”³⁶ While, in numerous instances up to this point in the proceeding, the Staff had described the safety review that the Staff now disclaims to be safety-related (i.e., all analysis contained in the Draft and Final Topical Reports, including analysis of

³⁴ Staff May 21 Response at 8.

³⁵ Staff June 13 Response at 2.

³⁶ Id. at 3 (emphasis added).

probability and consequences of aircraft crashes and natural phenomena at the proposed site), the Staff's answer provided only a generic one paragraph description of the alleged safety analysis it did complete, without any citations or references to the fruits of such reviews.³⁷

As should be evident from this chronology, the Staff's position regarding what safety review is required with respect to this irradiator appears to have changed materially late in the course of the proceeding. The Staff's current position, that site-related safety analyses are not required by 10 C.F.R. § 30.33(a)(2) and are never performed for proposed irradiators, appears to be attributable to its view of the Commission's intent in promulgating 10 C.F.R. Part 36 and its belief that Section 30.33(a)(2) cannot negate that intent or impose such a review. To support its current position, the Staff points to the Commission's 1993 Statements of Consideration for the Part 36 rulemaking. According to the Staff, the Commission "specifically declined to impose siting requirements for irradiators."³⁸ Further, the Staff asserts that the Commission chose to reject specific siting requirements with respect to possible flooding or tidal waves at irradiators and stated that a prohibition against siting irradiators at airports was "not justified on safety grounds."³⁹

While the Staff asserted this argument for the first time in response to the our recent questioning, the Applicant had put forth a similar argument more than one year earlier in opposition to Safety Contention 7 in the Intervenor's hearing request – an argument we

³⁷ See id. at 4-5. The June 13 Response refers generally to the "Staff's review" but does not direct us to any documentation of this review. The generic reference to a "safety review" appears again in the Board Notification issued by the Staff announcing the issuance of the Applicant's requested license. Board Notification at 1. In discussing the issuance of the license, the Board Notification states that "the Staff has performed a safety evaluation of the license application." Id. But absent from that memorandum and any other filing by the Staff is a reference to documents evidencing the fruits of the Staff's "safety evaluation." See id.

³⁸ Staff May 21 Response at 2 (citing 58 Fed. Reg. 7715, 7725-26 (Feb. 9, 1993)).

³⁹ Id. at 3.

rejected. In admitting Safety Contention 7 and rejecting the earlier arguments in LBP-06-12, 63 NRC at 419, we stated that:

Contrary to the Applicant's argument, the absence of siting prohibitions in 10 C.F.R. Part 36, or the fact that irradiator regulations do not categorically prohibit locating an irradiator at an airport, does not turn the Petitioner's contention, which is focused upon the likelihood and consequences of an aircraft crash involving the Applicant's proposed facility, into an impermissible attack on the Commission's regulations. Indeed, as the Petitioner states in its reply to the Applicant's argument, the comments relied upon by the Applicant are from the Statement of Considerations to the Part 36 rulemaking discussing panoramic irradiators in which "[t]he radioactive sources . . . would be relatively protected from damage because they are generally contained within 6-foot thick reinforced-concrete walls and are encapsulated in steel." As the Petitioner also points out, the sources in the Pa'ina Hawaii irradiator "would be in a pool with a liner consisting of 6 inches of concrete, with 1/4-inch steel on the inside and outside."

More importantly, however, the lack of a regulatory prohibition against siting an irradiator at an airport does not affirmatively establish that any airport location satisfies the general requirement of 10 C.F.R. § 30.33(a)(2) that an irradiator facility be "adequate to protect health and minimize danger to life or property." Because the Applicant's facility must meet the general requirement of 10 C.F.R. § 30.33(a)(2) to be licensed, the contention is not inadmissible, as argued by the Staff, for failing to cite a regulatory provision specifically requiring an analysis of the probabilities and consequences of an aircraft crash.⁴⁰

Furthermore, in its discussion rejecting the implementation of specific siting requirements for irradiators, the Commission did not exclude the possibility that the Staff might review irradiator siting safety issues. Rather, the Commission stated that because "[a]ll irradiator experience to date indicates that irradiators do not present a threat to people outside the facility. Therefore, the NRC believes that, in general, irradiators can be located anywhere that local governments would permit an industrial facility to be built."⁴¹ In fact, the Commission recognized that the "NRC may review facility siting, on a case by case basis, if a unique threat is

⁴⁰ LBP-06-12, 63 NRC at 419 (citations omitted).

⁴¹ 58 Fed. Reg. at 7726 (emphasis added). The quoted and referenced discussion is contained in a section of the Statements of Consideration entitled "Siting, Zoning, Land Use, and Building Code Requirements."

involved which may not be addressed by State and local requirements.”⁴² It appears to us that the Staff, in asserting its absolutist position with regard to Part 36 that safety siting reviews are not required and never done, has misapprehended the Commission’s intent. Because 10 C.F.R. § 36.13 requires that the applicant satisfy the general mandate of 10 C.F.R. § 30.33(a)(2), as well as the specific requirements in Part 36, we believe it is necessary for the Commission to clarify its intent in promulgating the irradiator regulations.

While the Staff now emphatically states that it did not perform a safety analysis of the proffered site concerns and “no such analysis is required,”⁴³ it also alludes to an “extraordinary and unique circumstances” exception that would require a safety analysis.⁴⁴ Such an exception, and its application by the Staff, does not seem unreasonable. The Staff, however, has failed to provide a regulatory basis or definition for an “extraordinary and unique circumstances” exception, even in the face of our direct question as to the meaning and genesis of the exception.⁴⁵

Although apparently asserting that such an exception plays a role in its decision to perform or forego such an analysis, the Staff does not “make a separate specific finding that extraordinary and unique circumstances are absent.” If an “extraordinary and unique circumstances” exception exists, however, it is necessary to understand whether the alleged risks from aircraft crashes, tsunamis, earthquakes, and hurricanes constitute “extraordinary and

⁴² Id.

⁴³ Staff May 21 Response at 4 n.3.

⁴⁴ Staff June 13 Response at 2-4. The Staff states that an applicant that demonstrates compliance with applicable specific regulations, such as 10 C.F.R. Part 36 or applicable provisions in 10 C.F.R. Part 20, has, absent extraordinary and unique circumstances calling for additional analysis, demonstrated compliance with 10 C.F.R. § 30.33(a)(2). See id.

⁴⁵ See June 6 Order at 2.

unique circumstances” here, and how that determination was made. When questioned about its conclusion that there was nothing extraordinary and unique about this site, the Staff simply replied that it had used its “collective experience and professional judgement” and had reviewed the proposed site in reference to “currently licensed irradiators in similar locations.”⁴⁶ Lacking is any reference or citation to an examination of whether or not such circumstances are present, and the concomitant criteria by which that determination has been made, a safety analysis document, or any other fruit of this purported review. If an “extraordinary and unique circumstances” exception exists, we would expect a demonstration that it was evaluated and assessed in this proceeding.

As a corollary, therefore, if the Commission determines that an “extraordinary and unique circumstances” exception exists, we believe that a necessary consequence of the exception is that an applicant must address such circumstances in its application and carry the burden that such circumstances are not present. In reviewing an application, the Staff would have an obligation to analyze the applicant’s assessment of extraordinary circumstances and provide a safety evaluation, not simply a qualitative assertion in a legal argument as was done here.

Certified Question

In light of the foregoing circumstances, we are left with three pending safety contentions, the resolution of which turns upon whether a safety analysis is required with respect to irradiator siting. The Intervenor’s admitted Safety Contention 7 asserts that the safety analysis regarding aircraft crash probability and consequences has been completely omitted, and proffered Safety

⁴⁶ Staff July 13 Response at 4-5. A simple comparison of the proposed site with “currently licensed irradiators in similar localities,” without more, cannot be the basis for any form of meaningful review. The Staff does not identify the specifics of any of the comparison sites or the parameters it used in its review.

Contention 13 challenges the adequacy of the analysis in the Topical Reports regarding aircraft crash probabilities and the omission of the required analysis regarding crash consequences.

Proffered Safety Contention 14, which closely mirrors proffered Contention 13, identifies alleged errors or omissions in the Topical Reports' discussion of safety risks posed by hurricanes, tsunamis, and earthquakes at the proposed irradiator site.

At their root, the Intervenor's safety contentions challenge the adequacy of the design of the proposed irradiator facility to protect health and minimize danger to life or property because the proposed site might present risks from hurricanes, tsunamis, earthquakes or an aircraft crash into the facility. From the perspective of the Commission's regulations, the Intervenor asserts that 10 C.F.R. § 30.33(a)(2) requires an assessment of the proposed facility's site to determine whether it can withstand such consequences or the proposed facility must be sited elsewhere. Under the Intervenor's reading of 10 C.F.R. § 30.33(a)(2), the Staff would be required to assess compliance of the application and the proposed irradiator with the regulation by examining whether, in the case of a hurricane, tsunami, earthquake or aircraft crash, there would be offsite radiation beyond regulatory limits.

Accordingly, the Board certifies the following question to the Commission:

Whether, in the circumstances presented, 10 C.F.R. § 30.33(a)(2) requires a safety analysis of the risks asserted to be endemic (i.e. aircraft crashes and natural phenomena) to the proposed irradiator site at the Honolulu International Airport?⁴⁷

⁴⁷ If the Commission determines that safety issues associated with a proposed irradiator site, i.e. risks alleged to be endemic to a particular site – here, aircraft crashes and natural phenomena, are prohibited by Commission regulation from review because they are not required by Part 36 to be considered in the design basis for this type of facility then the Intervenor's admitted and proffered safety contentions are inadmissible as a matter of law. If 10 C.F.R. § 30.33(a)(2) may, under some circumstances require safety analyses for risks associated with a proposed irradiator site, i.e. risks alleged to be endemic to a particular site – here, aircraft crashes and natural phenomena, then the Intervenor's contentions present challenges to a failure of the application to set out appropriate safety analyses of the siting issues raised.

Should the Commission answer the certified question in the affirmative, i.e. safety issues related to irradiator siting are not, as a matter of law, outside the scope of this proceeding, then it should address the following corollary question:

What is the appropriate probability threshold (i.e., probability of an event for which consequences exceed regulatory limits) beyond which a site-related safety analysis is required?

Section 30.33(a)(2) requires that an “applicant’s proposed equipment and facilities are adequate to protect health and minimize danger to life or property,” but that regulation does not appear to provide a basis for establishing a specific numerical standard like those applied to other NRC-regulated facilities. In the case of most NRC-regulated facilities, the site of a proposed facility must “be evaluated to identify and assess the likelihood of possible accidents, both natural and manmade, that could affect the facility.”⁴⁸ This framework dictates that “[a] facility need not be designed to withstand every conceivable accident, but only those found to be ‘credible.’”⁴⁹ Credible accidents are labeled “design basis accidents,” and they establish the outer threshold for design criteria of the facility. Site characteristics affect what accidents are deemed credible at a particular site.

Employing this method, the Commission has adopted threshold probabilities of release of radiation beyond regulatory limits for design basis events for power reactors and independent spent fuel storage installations (ISFSI).⁵⁰ These thresholds were established after weighing the risks endemic to the type of facility at issue and, therefore, each class of facility has a different threshold for the same type of accident. In PFS, the Commission, acting on a ruling referred by

⁴⁸ Private Fuel Storage, LLC (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 258 (2001); see e.g., 10 C.F.R. Parts 50, 60, & 72.

⁴⁹ PFS, CLI-01-22, 54 NRC at 259.

⁵⁰ See 10 C.F.R. Parts 50, 72.

a licensing board, determined that when a threshold probability for a design basis event is not established in regulation or guidance, "the Commission must decide the threshold probability."⁵¹ If the Commission determines that 10 C.F.R. § 30.33(a)(2) does, under some circumstances, require a safety assessment of siting risks posed by events such as aircraft crashes and natural phenomena, then, as in PFS, because "no law or regulation establishes the threshold probability for design basis accidents" at the site, "the Commission must select a standard it finds sufficiently protective."⁵²

THE ATOMIC SAFETY
AND LICENSING BOARD*

/RA/

Thomas S. Moore, Chairman
ADMINISTRATIVE JUDGE

/RA/

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

/RA/

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 31, 2007

⁵¹ PFS, CLI-01-22, 54 NRC at 259.

⁵² Id. at 263.

* Copies of this memorandum were sent this date by Internet e-mail transmission to counsel for (1) Applicant Pa'ina Hawaii, LLC.; (2) Intervenor Concerned Citizens of Honolulu; and (3) the NRC Staff.