UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC AND UNISTAR NUCLEAR OPERATING SERVICES, LLC	)	Docket No. 52-016-COL
	)	
(Calvert Cliffs Nuclear Power Plant, Unit 3)	)	

APPLICANTS' ANSWER TO PETITION TO INTERVENE

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December 15, 2008

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December 15, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC AND UNISTAR NUCLEAR OPERATING SERVICES, LLC	)	Docket No. 52-016
	)	
(Calvert Cliffs Nuclear Power Plant, Unit 3)	)	

APPLICANTS' ANSWER TO PETITION TO INTERVENE

I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h), Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC ("UniStar" or "Applicants"), applicants in the above-captioned matter, hereby answer the Nuclear Information and Resource Service ("NIRS"), Beyond Nuclear, Public Citizen Energy Program, and Southern Maryland Citizen's Alliance for Renewable Solutions (collectively "Petitioners") "Petition to Intervene in Docket 52-016, Calvert Cliffs-3 Nuclear Power Plant Combined Construction and License Application" ("Petition"), dated November 19, 2008.

On July 13, 2007, and March 14, 2008, as supplemented by numerous letters and as revised on August, 20, 2008, UniStar submitted an application for a combined license ("COL") for one U.S. EPR reactor at the Calvert Cliffs site in Calvert County, Maryland. The NRC accepted the two parts of the application for docketing on January 25, 2008, and June 3, 2008. 73 Fed. Reg. 5877; 73 Fed. Reg. 32606. The NRC published the "Notice of Hearing and

Opportunity to Petition for Leave to Intervene" on September 26, 2008 (73 Fed. Reg. 55,876) ("Hearing Notice"). Petitioners timely filed the petition to intervene on November 19, 2008.

As discussed below, Petitioners have not satisfied the Commission's requirements to intervene in this proceeding because they do not have standing and because they have failed to proffer at least one admissible contention. Therefore, in accordance with 10 C.F.R. § 2.309, the Petition should be denied.

II. REGULATORY BACKGROUND

A. Standing Requirements

Any person who requests a hearing or seeks to intervene in a Commission proceeding must demonstrate that he or she has standing. 10 C.F.R. § 2.309(a). The Commission's regulations in 10 C.F.R. § 2.309(d)(1) provide that a request for hearing or petition to intervene must state:

> (i) The name, address and telephone number of the petitioner;
>
> (ii) The nature of the requestor's/petitioner's right to be made a party to the proceeding;
>
> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding; and
>
> (iv) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest.

The Commission has long applied contemporaneous judicial concepts of standing to determine whether a party has a sufficient interest to intervene as a matter of right. Y*ankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998). To establish standing, there must be an "injury-in-fact" that is "fairly traceable to the challenged action" and redressible in the proceeding. *Sequoyah Fuels Corp. & Gen. Atomics* (Gore,

Oklahoma Site), CLI-94-12, 40 NRC 64, 71-72 (1994), *citing Lujan v. Defenders of Wildlife*, 504 U.S. 505 (1992) and *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Unit1), CLI-93-21, 38 NRC 87, 92 (1993).

The "injury-in-fact" must be either actual or threatened. *Id*., *citing Wilderness Soc'y v. Griles*, 824 F.2d 4, 11 (D.C. Cir. 1987). The injury must be "concrete and particularized," not "conjectural" or "hypothetical." *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72. As a result, standing will be denied when the threat of injury is too speculative. *Id.* Furthermore, the alleged "injury-in-fact" must lie within the "zone of interests" protected by the Atomic Energy Act or the National Environmental Policy Act ("NEPA"). *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998).

A petitioner must also establish a causal nexus between the alleged injury and the challenged action. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 & 2), LBP-98-27, 48 NRC 271, 276 (1998), *aff'd,* CLI-99-4, 49 NRC 185 (1999). A determination that the injury is fairly traceable to the challenged action depends, in part, on whether the chain of causation is "plausible." *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75. Judicial and Commission standing jurisprudence requires a "realistic threat . . . of direct injury." *Int'l Uranium (USA) Corp*. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 254 (2001).

Finally, a petitioner must establish redressibility — that is, that the claimed actual or threatened injury could be cured by some action of the decisionmaker. *Sequoyah Fuels Corp*. (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 14 (2001).

An organization may establish standing to intervene based on organizational standing (showing that its own organizational interests could be adversely affected by the

proceeding) or representational standing (based on the standing of its members). Where an organization seeks to show organizational standing, the organization must meet the same requirements of injury, causation, and redressibility as an individual. *Warth v. Seldin*, 422 U.S. 490, 498 (1975). Where an organization seeks to establish "representational standing," it must show that at least one of its members may be affected by the proceeding, it must identify that member by name and address, and it must show that the member "has authorized the organization to represent him or her and to request a hearing on his or her behalf." *See, e.g.*, *Consumers Energy Co.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 409 (2007).

B. Contention Admissibility Requirements

In addition to establishing standing, petitioners must proffer at least one contention that meets the admissibility standards in 10 C.F.R. § 2.309(f)(1)(i)-(vi).[1] A proposed contention must contain:

(i) A specific statement of the issue of law or fact raised;

(ii) A brief explanation of the basis for the contention;

(iii) A demonstration that the issue is within the scope of the proceeding;

(iv) A demonstration that the issue is material to the findings that the NRC must make regarding the action which is the subject of the proceeding;

(v) A concise statement of the alleged facts or expert opinions supporting the contention; and

(vi) Sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact.

[1] The seventh contention admissibility requirement—10 C.F.R. § 2.309(f)(1)(vii)—is only applicable in proceedings arising under 10 C.F.R. § 52.103(b), and therefore has no bearing on the admissibility of the Petitioners' contentions in this proceeding.

The purpose of these six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision." "Changes to Adjudicatory Process; Final Rule," 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). The NRC will deny a petition to intervene and request for hearing from a petitioner who has standing but has not proffered at least one admissible contention. *Fla. Power & Light Co.* (Turkey Point Nuclear Power Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 26 (2001). The Commission has stated that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to resolution in an NRC hearing." 69 Fed. Reg. at 2202. As a result, the contention admissibility standard is "strict by design." *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001). Failure to comply with any one of the six admissibility criteria is grounds for rejecting a proposed contention. 69 Fed. Reg. at 2221.

In support of a contention, a petitioner must provide "a specific statement of the issue of law or fact to be raised or controverted." 10 C.F.R. § 2.309(f)(1)(i). The petitioner must "articulate at the outset the specific issues [it] wish[es] to litigate as a prerequisite to gaining formal admission as [a party]." *Oconee*, CLI-99-11, 49 NRC at 338. Namely, an "admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." *Millstone*, CLI-01-24, 54 NRC at 359-60. The contention rules "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'" *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2), CLI-03-17, 58 NRC 419, 424 (2003).

A petitioner must provide "a brief explanation of the basis for the contention." 10 C.F.R. § 2.309(f)(1)(ii). This includes "sufficient foundation" to "warrant further exploration." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-942, 32 NRC 395, 428 (1990) (citation omitted). The petitioner's explanation serves to define the scope of a contention, as "[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom.*, *Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991).

As the Commission has observed, "[i]t is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions and demonstrate that a genuine dispute exists within the scope of this proceeding." *Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-14, 48 NRC 39, 41 (1998). In other words, "[a] contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions." *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

A petitioner must demonstrate "that the issue raised in the contention is within the scope of the proceeding." 10 C.F.R. § 2.309(f)(1)(iii). The scope of the proceeding is defined by the Commission's notice of opportunity for a hearing. *See Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-825, 22 NRC 785, 790-91 (1985). Any contention that falls outside the specified scope of the proceeding must be rejected. *See Portland Gen. Elec. Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979).

Moreover, a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding." *See* 10 C.F.R. § 2.335(a). Furthermore, a contention that raises a matter that is, or is about to become, the subject of a rulemaking, is also outside the scope of this proceeding. *See Oconee*, CLI-99-11, 49 NRC at 345. This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking. *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159, *aff'd*, CLI-01-17, 54 NRC 3 (2001).

Similarly, any contention that collaterally attacks applicable statutory requirements or the basic structure of the NRC regulatory process must be rejected by the Board as outside the scope of the proceeding. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 65 NRC 41, 57-58 (2007), *citing Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974). Accordingly, a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue.

A petitioner must also demonstrate "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." 10 C.F.R. § 2.309(f)(1)(iv). The standards defining the findings that the NRC must make to support issuance of a COL in this proceeding are set forth in 10 C.F.R. §§ 51.107 and 52.97. As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of the licensing proceeding.'" *Oconee*, CLI-99-11, 49

NRC at 333-34. In this regard, each contention must be one that, if proven, would entitle the petitioner to relief. *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2), CLI-02-26, 56 NRC 358, 363 n.10 (2002). Additionally, contentions alleging an error or omission in an application must establish some significant link between the claimed deficiency and protection of the health and safety of the public or the environment. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89, *aff'd*, CLI-04-36, 60 NRC 631 (2004).

A petitioner bears the burden to present the factual information or expert opinions necessary to support its contention adequately, and failure to do so requires the Board to reject the contention. *See* 10 C.F.R. § 2.309(f)(1)(v); *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 262 (1996). The petitioner's obligation in this regard has been described as follows:

> [A]n intervention petitioner has an *ironclad obligation* to examine the *publicly available documentary material pertaining to the facility in question* with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a. of the Act nor Section [2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.[2]

Where a petitioner neglects to provide the requisite support for its contentions, the Board may not make assumptions of fact that favor the petitioner or supply information that is lacking. *See Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Station, Units 1, 2, & 3), CLI-91-12, 34

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[2] *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-687, 16 NRC 460, 468 (1982), *vacated in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983) (emphasis added).

NRC 149, 155 (1991). The petitioner must explain the significance of any factual information upon which it relies. *See Fansteel, Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 204-05 (2003).

With respect to factual information or expert opinion proffered in support of a contention, "the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention." *Private Fuel Storage*, LBP-98-7, 47 NRC at 181. Any supporting material provided by a petitioner, including those portions thereof not relied upon, is subject to Board scrutiny, "both for what it does and does not show." *See Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996). The Board must examine documents to confirm that they support the proposed contentions. *See Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990). A petitioner's imprecise reading of a document cannot be the basis for a litigable contention. *See Ga. Inst. of Tech.* (Georgia Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 300 (1995). Moreover, vague references to documents do not suffice—the petitioner must identify specific portions of the documents on which it relies. *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-03, 29 NRC 234, 240-41 (1989). The mere incorporation of massive documents by reference is similarly unacceptable. *Id.*; *see also TVA* (Browns Ferry Nuclear Plant, Units 1 & 2), LBP-76-10, 3 NRC 209, 216 (1976).

In addition, an expert opinion that merely states a conclusion (*e.g.*, the application is deficient, inadequate, or wrong) without providing *a reasoned basis or explanation* for why

the application is adequate cannot provide a basis for the contention because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion as it is alleged. *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (emphasis added and internal citations omitted). Conclusory statements cannot provide "sufficient" support for a contention, simply because they are made by an expert. *Id*. In short, a contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.'" *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000)).

With regard to the requirement that a petitioner "provide sufficient information to show . . . a genuine dispute . . . with the applicant . . . on a material issue of law or fact,"[3] the Commission has stated that the petitioner must "read the pertinent portions of the license application . . . [and] state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[4] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is deficient." "Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process; Final Rule," 54 Fed. Reg. 33168, 33170 (Aug. 11, 1989); *see also Palo Verde*, CLI-91-12, 34 NRC at 156. A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal. *See Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

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[3] 10 C.F.R. § 2.309(f)(1)(vi).

[4] 54 Fed. Reg. at 33,170; *see also Millstone*, CLI-01-24, 54 NRC at 358.

Similarly, a petitioner's oversight or mathematical error does not raise a genuine issue. For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine issue. *See Millstone*, LBP-04-15, 60 NRC at 95-96. An allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-90-16, 31 NRC 509, 521 and n.12 (1990).

C. The Nexus Between Standing and Contentions in NRC Proceedings

The Commission in CLI-96-1 discussed the nexus between standing and contentions, stating that "once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing." *See Yankee Atomic Electric Company* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1 (1996). The Commission went on to specifically state that an intervenor's contentions may be limited to those that will afford it relief from the injuries asserted as a basis for standing. *Id.*, at n.3.

The Supreme Court recently reaffirmed the principle that standing must be shown for every single claim in *Davis v. Federal Election Commission*.[5] The *Davis* Court reiterated

[5] The Commission has repeatedly and unambiguously stated that contemporaneous judicial concepts of standing should be applied by adjudicatory boards in determining whether a petitioner is entitled to intervene under Section 189a of the Atomic Energy Act. *See, e.g.*, *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976); *Atlas Corporation* (Moab, Utah), LBP-00-4, 51 NRC 53, 55 (2000); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995); *Duke Energy Corp.* (McGuire Nuclear

that "standing is not dispensed in gross," and remarked that a party "must demonstrate standing for each claim he seeks to press" and "for each form of relief that is sought." 554 U.S. __, slip op. at 7 (June 26, 2008), *citing DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 352 (2006) and *Friends of the Earth, Inc.* v. *Laidlaw Environmental Services, Inc.,* 528 U.S. 167, 185 (2000); *see also Rosen v. Tenn. Commissioner of Finance and Admin.*, 288 F.3d 918 (6th Cir. 2002) ("It is black-letter law that standing is a claim-by-claim issue."). According to the Court, standing for one claim does not suffice for all claims even where those claims arise from the same nucleus of operative fact. *DaimlerChrysler*, 547 U.S. at 352. The Court noted that Article III standing is rooted in the need for an actual "case or controversy," and holding otherwise would undermine important judicial principles and permit, for example, adjudication of moot or unripe claims. *Id*.

In articulating its reasoning for requiring standing for each claim, the Supreme Court explained that the actual-injury requirement would hardly serve its intended purpose of ensuring that there is a legitimate role for an agency adjudicatory body in dealing with a particular grievance if, once a party demonstrated harm from one particular inadequacy in government administration, the adjudicatory body were authorized to remedy all inadequacies in that administration. *Lewis v. Casey*, 518 U.S. 343, 357 (1996). As the Court emphasized in *Lewis*, "[t]he remedy must of course be limited to the inadequacy that produced the injury in fact that the [party] has established." *Id*. This statement echoes the description of the nexus between standing and contentions articulated by the Commission in *Yankee Atomic*: contentions must be limited to those that will afford relief from the injuries asserted as a basis for standing.

Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), LBP-02-4, 55 NRC 49, 62 (2002).

III. DISCUSSION

A. Petitioners Do Not Have Standing

In assessing whether a petitioner has set forth a sufficient "interest" within the meaning of the AEA and the NRC's regulations to intervene as a matter of right in a licensing proceeding, the Commission has long applied contemporaneous judicial concepts of standing. *See supra*, note 5. At one time, judicial concepts of standing were sufficiently flexible to permit a "presumption" of standing in cases where a petitioner lived within a certain geographic area near the plant. Thus, in proceedings involving nuclear power reactors, the Commission historically adopted a proximity presumption, whereby a petitioner could base its standing upon a showing that his or her residence, or that of its members, was within the geographical zone (usually taken to be 50 miles) that might be affected by an accidental release of fission products. *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), LBP-79-10, 9 NRC 439, 443 (1979); *see also*, *Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), LBP-79-1, 9 NRC 73, 78 (1979) ("A petitioner may base its standing upon a showing that his or her residence, or that of its members, is 'within the geographical zone that might be affected by an accidental release of fission products.' *La. Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-125, 6 AEC 371, 371 n.6 (1973).").

The Commission's "proximity presumption" has remained relatively unchanged since it was first developed in the late-1970s. However, judicial concepts of standing have changed dramatically since that time, effectively refuting the basis for the presumption. In *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992), the Supreme Court made clear that plaintiffs must suffer a concrete, discernible injury to be able to bring suit. This injury-in-fact requirement is

case-specific, "turn[ing] on the nature and source of the claim asserted"[6] and "whether the complainant has personally suffered the harm." *Wilderness Soc'y v. Alcock*, 83 F.3d 386, 390 (11th Cir. 1996). Moreover, the alleged harm must be "concrete and particularized" and "actual or imminent, not conjectural or hypothetical." *Lujan*, 504 U.S. at 560 (quoting *Whitmore v. Arkansas*, 495 U.S. 149, 155 (1990)) (internal quotations omitted). These qualifiers ensure that courts address only cases and controversies in which the plaintiff is "in a personal and individual way"[7] "immediately in danger of sustaining some direct injury,"[8] thus avoiding advisory opinions in matters "in which no injury would have occurred at all." *Lujan*, 504 U.S. at 564 n.2.

By requiring plaintiffs to demonstrate an injury in a concrete factual context, courts also avoid claims involving "only . . . generally available grievances" shared by other members of the public. *Valley Forge Christian Coll. v. Americans United for Separation of Church & State*, 454 U.S. 464, 472 (1982) This is typically not a concern when the plaintiff is himself an object of the action at issue because there is little question that the action or inaction has caused him injury. But when the "asserted injury arises from the government's allegedly unlawful regulation (or lack of regulation) of *someone else*" — such as when a petitioner challenges a COL application but is not itself regulated by the NRC — "standing . . . is ordinarily 'substantially more difficult' to establish." *Lujan*, at 562 (quoting *Allen v. Wright*, 468 U.S. 737, 758 (1984)). Indeed, the Supreme Court has held that "much more is needed" in terms of the "nature and extent of facts . . . averred" to show that the petitioner will be affected by the

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6 *Raynes v. Byrd*, 521 U.S. 811, 818 (1997).

7 *Id.* at 560 n.1.

8 *City of Los Angeles v. Lyons*, 461 U.S. 95, 102 (1983).

alleged injury "in such a manner as to produce causation." *Id*. The Supreme Court's threshold for demonstrating standing is plainly inconsistent with the Commission's now-outdated and overly simplified proximity presumption.

The D.C. Circuit has closely examined what constitutes injury-in-fact sufficient for purposes of establishing standing when an increased *risk of future harm* is the alleged injury. The Court has found that petitioners must demonstrate that the new challenged federal action will cause a concrete injury to their particularized interests — as opposed to their merely disagreeing with the agency's regulatory choices or having a generalized interest shared by the public. *See, e.g.*, *Florida Audubon Soc'y v. Bentsen*, 94 F.3d 658, 667 n.4 (D.C. Cir. 1996). Further, the DC Circuit has found that, to satisfy the standing requirements described in *Lujan*, petitioners must be able to adduce facts supporting both their asserted injury and each step of the purported causal path. *Id*., at 672.[9]

In *Florida Audubon*, the court specifically held that an increased risk of future harm must be "substantially probable" to constitute an injury-in-fact. The en banc D.C. Circuit found that "[a]ppellants . . . premise[d] their claims of particularized injury and causation on a lengthy chain of conjecture" insufficient for establishing standing. *Florida Audubon*, at 666. In reaching this conclusion, the court first articulated the injury-in-fact standard in terms of increased risk, equating "a particularized injury" to "an increased risk to a personal interest of a

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[9] Contrast this judicial requirement to demonstrate each step of the causal link with the NRC's now-outdated holding in *Armed Forces Radiobiology Research Institute* (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 153 (1982). There, the Appeal Board held that a petitioner who resided near a nuclear facility did not even need to show a causal relationship between injury to its interest and the licensing action being sought in order to establish standing. Clearly, causation is a required element of any judicial standing determination.

plaintiff." Citing "well established . . . precedent," the court said that the plaintiff must show that the challenged action or decision is "*substantially probable* to cause th[e] demonstrated particularized injury." *Id*. (emphasis added). Next, the court explained that cases involving *procedural* NEPA claims, as opposed to claims under other statutes alleging violations of substantive rights, did not ease the "particularized" element of the injury-in-fact requirement. In such cases, plaintiffs must show "demonstrable risk" to their particularized interests arising from an inadequate EIS, as opposed to merely "some general environmental harm." *Id.* at 666-67 (stating that the need for a "demonstrable" injury is "necessitated by the well-established rule that a plaintiff must *demonstrate* standing").

Recent D.C. Circuit decisions have added a quantitative aspect to standing determinations. Specifically, in *Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency* ("NRDC I"), the court found that petitioners lacked standing to challenge an EPA rulemaking where the probability of fatality from the rule is 1 in 4.2 billion per person per year, describing the risk as "infinitesimal."[10] The court also characterized "other risks" — including a much-greater 1 in 21 million chance of contracting nonfatal skin cancer — as "similarly small." *Id*. at 482. n.8. On rehearing, the court reversed itself based, in part, on a mathematical error in the court's risk calculations that significantly understated the risk of harm to NRDC's members from the EPA's Rule. In *NRDC II*,[11] the court simply noted that the

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[10] 440 F.3d 476, 481-482 (D.C. Cir. 2006), *withdrawn*, 2006 U.S. App. LEXIS 22512, *on reh'g*, 464 F.3d 1 (D.C. Cir. 2006).

[11] *Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency*, 464 F.3d 1, (D.C. Cir. 2006), *reh'g en banc denied*, 2007 U.S. App. LEXIS 3963 (D.C. Cir. Feb. 21, 2007) ("NRDC II").

"lifetime risk" of an individual developing nonfatal skin cancer as a result of EPA's Rule, is 1 in approximately 200,000. *Id.*, at 7. In light of these risk estimates, the court found that this probability constituted injury-in-fact sufficient to establish standing. Thus, under contemporaneous standing jurisprudence, the increased risk of harm needed to establish injury-in-fact falls somewhere between "1 in 200,000" and "1 in 21 million."

Taken together, these relatively recent developments in judicial concepts of standing dictate a significantly increased level of scrutiny and an increased showing necessary to establish standing. These developments render the "proximity presumption" obsolete. Accordingly, the Licensing Board must assess the Petitioners' standing claims against contemporaneous standing principles rather than a rote "proximity presumption." As discussed below, under these standards, petitioners fail to demonstrate standing.

1. Michael Mariotte

In his declaration, Mr. Mariotte states that his residence is approximately 45 miles from the proposed site and expresses concern that the proposed Unit 3 could affect his health and safety and the integrity of the environment. Specifically, Mr. Mariotte states that he is concerned about the risk of accidental releases to the environment and the potential harm to groundwater and surface water supplies. That, however, is the extent of the alleged injury. There is no information regarding frequency of use or extent of contacts with areas potentially impacted by Unit 3, other than his distant residence and his generalized fear of health or environmental impacts. By not providing any specific information, or by describing activities only using vague terms such as "near," "close proximity," or "in the vicinity" of the facility at issue, a petitioner fails to carry his burden of establishing the requisite "injury in fact." *Atlas Corp.* (Moab, Utah

Facility), LBP-97-9, 45 NRC 414, 425-26 (1997). Moreover, any injury asserted based on future accidental releases is entirely speculative and hypothetical.[12] Other than a general opposition to nuclear power plants, Mr. Mariotte has established no direct personal interest in the construction or operation of the proposed new unit.

Likewise, there is no discussion about how construction and operation of Unit 3 might *cause* any harm to Mr. Mariotte. There is no discussion of potential release mechanisms or accident sequences. These is simply no information regarding causation. Conclusory allegations about potential radiological harm from the facility in general are insufficient to establish standing. *White Mesa*, CLI-01-21, 54 NRC at 251.

Licensing Boards have consistently interpreted the Commission's intent to be firmly directed to deciding what is "remote and speculative" by examining the probabilities inherent in a proposed accident scenario. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-00-19, 52 NRC 85, 97 (2000). And, as discussed above, judicial concepts of standing require a showing that the challenged action or decision is "*substantially probable* to cause th[e] demonstrated particularized injury." *Florida Audubon*, at 666 (emphasis added). Even if Mr. Mariotte had made the argument, the risk of an accidental release of radioactive material to the environment is too small to support a showing that harm to Mr. Mariotte is substantially probable. The total core damage frequency ("CDF") for the U.S. EPR is 5.3E-

[12] Likewise, mere "concern" about the "risk" of accidental releases is insufficient injury for standing. *See, e.g.*, *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983) (holding that fear of an accident is not a cognizable injury under NEPA); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), CLI-85-14, 22 NRC 177, 180 (1985) (holding that mere exposure to the risk of full power operation of a facility does not constitute irreparable injury when the risk is so low as to be remote and speculative).

7/year. *See* U.S. EPR DCD, Tier 2, Section 19.1.8.1; *see also*, ER Section 7.3.2. The Large Early Release Frequency ("LERF") from internal events is 2.6E-8/year. EPR DCD, at Section 19.1.8.1. These risks are one to two orders of magnitude less than the risks that the D.C. Circuit found too small to support standing. Accordingly, in accordance with contemporaneous judicial concepts of standing, the risk of the alleged harm is simply too speculative to support a concrete injury for standing purposes.

Even with the proximity presumption, a petitioner that bases its standing on its proximity to a nuclear facility must still describe the nature of its property or residence and its proximity to the facility, and should describe how the health and safety of the petitioner may be jeopardized. *Northern States Power Co.* (Pathfinder Atomic Plant), LBP-89-30, 30 NRC 311, 315 (1989). A bare claim that a challenged licensing action will impact the health, safety and financial interests of petitioners who reside within 50 miles of the facility fails to "set forth with particularity" a statement that could grant standing. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 & 2), CLI-00-5, 51 NRC 90, 98 (2000). Here, the instant declaration does not describe how health and safety might be jeopardized by construction and operation of new unit. There is nothing more than conclusory and unsupported statements and no explanation as to how or why such injuries might occur. In the absence of any concrete injury or causation, there can be no standing.

2. Roma Mauro

The declaration for Roma Mauro is substantially the same as that for Mr. Mariotte. The primary difference is that the Mauro residence is within 25 miles of the proposed new unit. This declaration also lacks any discussion of frequency of use or location of use, or

direct, concrete, and particularized injuries. Likewise, there is no discussion of causation or redressibility. Thus, for the same reasons discussed above, there is no standing.

3. Nuclear Information and Resource Service

In order to establish organizational standing, an organization must allege: (1) that the action will cause an "injury in fact" to either (a) the organization's interests or (b) the interests of its members; and (2) that the injury is within the "zone of interests" protected by either the AEA or NEPA. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 102 n.10 (1994). For organizational standing, an organization must demonstrate a discrete institutional injury to the organization itself. *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001).

Here, NIRS provides little information regarding impacts to its interests and no information that satisfies the injury-in-fact or causation prong of the standing inquiry. Other than having offices just within 50 miles of the plant, there is no information regarding NIRS' interests. Allegations that a plant will affect employees' health or adversely impact the value of property, without more, are too remote and too generalized to provide a basis for standing to intervene. *See Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1449 (1982). There is no discussion of a causal mechanism or any discussion of redressibility.

Finally, NIRS cannot have standing based on standing of its members (Michael Mariotte and Roma Mauro) since, as discussed above, neither of those members have standing in their own right.

4. Kevin Kamps

Kevin Kamps' declaration is substantially similar to that of Mr. Mariotte. For the same reasons as those discussed *supra*, Mr. Kamps also lacks standing in this proceeding.

5. Cynthia B. Peil

Cynthia Peil's declaration is substantially similar to that of Mr. Mariotte, except that she asserts that she lives within 30 miles of the proposed new unit. For the same reasons as those discussed *supra*, Ms. Peil also lacks standing in this proceeding.

6. William Louis Peil

William Peil's declaration is substantially similar to that of Ms. Peil. For the same reasons as those discussed *supra*, Mr. Peil also lacks standing in this proceeding.

7. Beyond Nuclear

The statement of Beyond Nuclear's interests are identical to those of NIRS, including the location of their respective offices. For the same reasons discussed *supra*, Beyond Nuclear also lacks standing as an organization.

8. Bruce Boxwell

Bruce Boxwell's declaration is substantially similar to that of Mr. Mariotte, except that he asserts that he lives within 7 miles of the proposed new unit. For the same reasons as those discussed *supra*, Mr. Boxwell also lacks standing in this proceeding.

9. Public Citizen

The statement of Public Citizen's interests are substantially similar to those of NIRS and Beyond Nuclear, excepting the location of the Public Citizen office, which is not

specified in the petition. For the same reasons discussed *supra*, Public Citizen also lacks standing as an organization.

10. Steven W. Warner

Steven Warner's declaration is substantially similar to that of Mr. Mariotte, except that he asserts that he lives within 6 miles of the proposed new unit. For the same reasons as those discussed *supra*, Mr. Warner also lacks standing in this proceeding.

11. Southern Maryland CARES

Southern Maryland CARES bases its standing on that of its member, Mr. Warner. Because Mr. Warner lacks standing in his own right, Southern Maryland CARES cannot rely on Mr. Warner as the basis for representational standing. Accordingly, Southern Maryland CARES lacks standing in this proceeding.

B. Petitioners Have Not Submitted One Admissible Contention

Applying the legal standards summarized above, each of Petitioner's seven proposed contentions is deficient on one or more grounds. As a result, the Petition should be denied for failure to proffer an admissible contention in accordance with 10 C.F.R. § 2.309(c).

1. Contention 1: Contrary to the Atomic Energy Act and NRC Regulations, Calvert Cliffs-3 Would Be Owned, Dominated and Controlled by Foreign Interests.

In proposed Contention 1, Petitioners assert that issuance of a COL to the Applicants would be contrary to the foreign ownership, domination, or control restrictions of Section 103.d of the Atomic Energy Act (42. U.S.C. § 2133(d)). The contention is based on factual assertions regarding the ownership of Calvert Cliffs 3 Nuclear Project 3, LLC, the proposed owner-licensee of Calvert Cliffs 3. (UniStar Nuclear Operating Services, LLC is the

proposed operator-licensee of Calvert Cliffs 3, and the proposed contention also vaguely addresses the ownership of "UniStar Nuclear"). The proposed contention cites the foreign participation of Electricite de France ("EDF") in the project, arguing that EDF will have the "ability to dominate and control this project" by virtue of ownership interests above an asserted "50% plateau." Petitioners assert based on this fact alone that the proposal "runs afoul on all counts for a foreign corporation." Pet. at 7. Secondarily, Petitioners argue that EDF is a much larger company than Constellation Energy Group (the other partner) — based on market capitalization and revenue — and that this will somehow make EDF the "dominant and controlling partner" in the relationship. Pet. at 8. The proposed contention and bases fail as a matter of law to establish a genuine dispute on any matter that would entitle Petitioners to relief.

The ownership structure of the applicants is described in detail in Section 1.1 of Revision 3 of the COL application.[13] Fuller discussion of the foreign ownership, control or domination implications are discussed in Section 1.4 of the application. The Petitioners do not acknowledge, much less engage, any of this discussion. While the basic fact of EDF's ultimate 50% participation in the Calvert Cliffs 3 project is not in dispute, the important issue for licensing purposes is the issue of governance structure and control. This issue the Petitioners completely ignore. The fact of the matter, as described in the application, is that various measures are in place such that, notwithstanding the participation of EDF, the Applicants will not be owned, dominated, or controlled by foreign interests within the meaning of the Atomic Energy Act. The ownership and financial considerations identified by the Petitioners as the basis

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[13] *See* "UniStar Nuclear – Calvert Cliffs Power Plant Unit 3 COLA Rev. 3 – Chapter 01-General Information," dated August 20, 2008 (ADAMS No. ML082400701).

for the proposed contention simply do not implicate the dispositive issue of governance and control. Therefore, the proposed contention fails to demonstrate a genuine dispute on a material issue.

As described in the COL application, Sections 1.1 and 1.4, the two applicants are both domestic entities. Both applicants, after various intermediary parents, are ultimately owned on an equal (50-50) basis by Constellation Energy Group, Inc. (a domestic entity) and EDF (a French company). As noted by Petitioners, EDF does have a stake in Constellation Energy Group by virtue of beneficial ownership of 9.51% of Constellation Energy common stock (as of September 8, 2008). However, neither EDF's 50% equal interest in the Applicants nor its minority beneficial interest in Constellation Energy Group common stock establishes control that would be contrary to the Atomic Energy Act.

First, with respect to the EDF interest in Constellation Energy Group stock, relied upon by Petitioners to assert that EDF's interest would exceed a 50-50 "plateau" (a "plateau" that, as described below, does not exist in NRC precedent and guidance), a cursory review of the documents submitted by Petitioners demonstrates the falseness of the claim. Petitioners' Exhibit 11 is a Form SC 13D filed with the Securities and Exchange Commission by EDF on September 8, 2008, regarding the acquisition of a beneficial interest in common stock in Constellation Energy Group. The filing includes as an exhibit an Investor Agreement which, in Section 3.2, plainly specifies that EDF "shall" vote its shares in accordance with the recommendations of the Constellation Energy Group Board of Directors. Thus, a necessary premise for the proposed contention is flawed. There is no showing that EDF has a controlling interest over the

Applicants based on the beneficial ownership of 9.51% of Constellation Energy Group common stock.[14]

Second, with respect to the 50% participation of EDF as a parent of the Applicants, this fact alone also does not establish a genuine dispute that would lead to relief in this proceeding. By longstanding Commission precedent, the NRC has applied the Atomic Energy Act to focus on the issue of control. In *General Electric Co. & Southwest Atomic Energy Associates,* 3 AEC 99 (1966) ("*SEFOR*"), the Atomic Energy Commission addressed a case of foreign participation in a test reactor (subject to comparable foreign ownership restrictions under Section 104.d of the Act). The administrative board rescinded a construction permit on the grounds that a foreign part owner caused the applicants to be in violation of the prohibition on foreign ownership, control, or domination. The Commission, however, reversed the board, ruling:

> . . . the limitation [on foreign ownership, control, or domination in AEA Section 104.d] should be given an orientation toward safeguarding the national defense and security. We believe that the words "owned, controlled, or dominated" refer to relationships where the will of one party is subjugated to the will of another, and that the Congressional intent was to prohibit such relationships where an alien has the power to direct the actions of the licensee.

SEFOR, 3 AEC 101.

The principle that the Commission will focus on the ability of any foreign power to direct actions of the licensee is reflected in the Standard Review Plan ("SRP") on Foreign

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[14] Moreover, even if EDF could control the votes of 9.51% of the shares of Constellation Energy Group, this would not give EDF control of Constellation Energy Group and would not alter the 50-50 relationship of Constellation Energy Group and EDF relative to the Applicants. With respect to the issue of *control*, the 9.51% does not add to EDF's 50% share of the Applicants as Petitioners seem to assume.

Ownership, Control or Domination referenced by the Petitioners.[15] An applicant is considered to be foreign owned, controlled or dominated "whenever a foreign interest has the 'power,' direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the applicant." SRP, Section 3.2. While the SRP is clear that a foreign parent may not seek 100% of an applicant or interest in a power reactor, it is equally clear that where, as here, the foreign parent owns less than a 100% interest, the issue is whether the foreign entity will have control over management and operations of the power reactor. *Id*. There is no 50-50 plateau or threshold in the SRP and, in any event, Petitioners cannot rely on mere 50-50 participation to establish a genuine dispute regarding control.

Further, Section 1.4 of the COL application specifically addresses the governance structure that will preclude foreign control over Calvert Cliffs 3 management and operations. The common parent of the two applicants that will be jointly owned by Constellation Energy Group and EDF will be UniStar Nuclear Energy, LLC ("UNE"). UNE will be managed by an eight-member Board of Directors, with four members appointed by each of the two owner companies. The Chairman of the Board of Directors of UNE will be one of the directors appointed by Constellation Energy Group; will be a U.S. citizen; and will have the deciding vote on matters involving nuclear-related classified information and the care of special nuclear material. Similarly, the President and Chief Executive Officer of UNE will be a U.S. citizen; will be selected from the directors appointed by Constellation Energy Group; and will be

[15] "Final Standard Review Plan on Foreign Ownership, Control, or Domination," 64 Fed. Reg. 52, 355 (Sept. 28, 1999).

responsible for day-to-day operations.[16] Additional controls are also described in Section 1.4 of the COL application. For example, the limited liability company agreement for UNE establishes a nuclear advisory board of U.S. citizens to advise on measures necessary to assure that a foreign government could not interfere with the safe and reliable operation of UNE nuclear assets.

In the full context of the information that is in fact provided in the COL application, Petitioners' simplistic reference to EDF's participation is completely inadequate to demonstrate a genuine dispute with respect to ultimate control over Calvert Cliffs 3. Petitioners do not attack the adequacy of the governance provisions, acknowledge the additional controls proposed, or propose any additional measures. Petitioners do briefly discuss relative market capitalization and revenues of the two parents, but do not establish how these financial measures are relevant to the issue of operating authority and control. In total, the proposed contention should be rejected for failure to establish that relief could be granted based on EDF's participation alone, and for failure to demonstrate any genuine dispute regarding governance and control of the applicants.

Finally, as discussed *supra*, Section II.C, Petitioners must establish standing for each contention that they raise. *See Yankee*, CLI-96-1, 43 NRC at 1, n.3. Here, none of the alleged "injuries" that purported to supply the basis for standing relate to foreign ownership or control. In the absence of any injury related to foreign ownership, Petitioners lack standing to pursue proposed Contention 1.

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[16] As explained in Section 1.4 of the COL application, similar controls have been established for the applicants and other intermediate parent entities that are beneath UNE and above the applicants in the organization chart.

2. Contention 2: The Decommissioning Funding Assurance Described in the Application Is Inadequate to Assure Sufficient Funds Will Be Available to Fully Decontaminate and Decommission Calvert Cliffs-3.

In proposed Contention 2, Petitioners argue that the decommissioning funding assurance described in the application is inadequate to ensure that funds will be available to decommission Unit 3. Pet. at 8. Petitioners argue that UniStar must use the prepayment method of decommissioning funding assurance. *Id*. At its core, the basis for this contention is the flawed assumption that a decline in stock price adversely impacts UniStar's ability to rely on a parent guarantee. *Id*. at 10. As discussed below, this contention fails to establish a genuine dispute with the application and impermissibly challenges existing NRC regulations.

First, Petitioners reference Sections 1.3 through 1.3.4 of the COL application for the proposition that UniStar intends to rely on a parent company guarantee from Constellation Energy Group. Petitioners, however, mistakenly refer to Revision 2 of the application. In fact, Revision 3 was submitted on August 1, 2008 (subsequently re-submitted on August 20, 2008 to resolve formatting difficulties) and made available on ADAMS on September 16, 2008. *See, e.g.*, "UniStar Nuclear – Calvert Cliffs Power Plant Unit 3 COLA Rev. 3 – Chapter 01-General Information," dated August 20, 2008 (ADAMS No. ML082400701) (ADAMS release date September 16, 2008). Revision 3 states that UniStar intends to use a combination of parent company guarantee, letters of credit, and a sinking fund.[17] A contention that does not directly

[17] As described in Section 1.3.2 of the application, the Applicants' parent company guarantee and/or letter of credit method will be implemented consistent with the requirements of 10 C.F.R. § 50.75(e)(1)(iii)(A) and (B). The external sinking fund will be established consistent with the requirements of 10 C.F.R. § 50.75(e)(1)(ii). The parent company guarantee and/or letter of credit will provide the principal assurance for decommissioning funding, at least initially. As the amount of decommissioning funds in the external sinking fund grows over the life of the plant, the amount of the parent

controvert a position taken by the applicant in the application is subject to dismissal. *See Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992). Thus, the proposed contention fails to specifically engage and call into question the actual application currently being reviewed by the NRC Staff.

Even assuming that the proposed contention is properly challenging UniStar's current decommissioning plan, the petition nonetheless fails to satisfy the Commission's strict standards for contention admissibility. Petitioners argue that because of a decrease in the total market capitalization of Constellation Energy, UniStar cannot rely on the parent guarantee method. Pet. at 10. Petitioners also argue that the combination of decommissioning liabilities from other proposed reactors, including Nine Mile Point Unit 3, and existing reactors would prevent use of a parent guarantee. *Id.* These statements are inconsistent with the regulations and fail to establish a genuine dispute with the application.

As specified in Appendix A to 10 C.F.R. Part 30, in order to rely upon a parent guarantee the guarantor must meet one of the following two financial tests:

> (a)(i) A current rating of its most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as rated by Moody's; and

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company guarantee and/or letter of credit will be adjusted to maintain the total amount of decommissioning funding at levels necessary to provide continuing assurance that decommissioning funds will be available for decommissioning CCNPP Unit 3 when needed. As funds accumulate in the external sinking fund, the fund balance will offset the required amount of the parent guarantee and/or letter of credit. This precise arrangement has been used previously. *See Niagara Mohawk Power Corporation, et al* (Nine Mile Point Nuclear Station Unit Nos. 1 and 2) (Order Approving Transfer of Licenses And Conforming Amendments) and the associated Safety Evaluation Report, Section 4.0, Decommissioning Funding, at 11-13 (ADAMS Accession No. ML011520030).

(ii) Tangible net worth is at least $10 million and at least six times the current decommissioning cost estimate or guarantee amount (or prescribed amount if a certification is used); and

(iii) Assets located in the United States amounting to at least 90 percent of its total assets or at least six times the current decommissioning cost or guarantee amount (or prescribed amount if certification is used).

or,

(b)(i) Net working capital and tangible net worth each at least six times the current decommissioning cost estimates or guarantee amounts (or prescribed amount if certification is used); and

(ii) Assets located in the United States amounting to at least 90 percent of its total assets or at least six times the amount of the current decommissioning cost estimates or guarantee amounts (or prescribed amount if certification is used); and

(iii) Meets two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities that is greater than 0.1; and a ratio of current assets to current liabilities that is greater than 1.5; and

(iv) Tangible net worth of at least $10 million.

Neither market capitalization nor share price are variables to be used in the financial test (nor are these values related to tangible net worth or other financial parameters that are used in the test). Petitioners have provided no other information to call into question the use of the parent guarantee on its own, much less in combination with other methods (external sinking fund and letter of credit).[18] The contention is therefore inadmissible because Petitioners

[18] Petitioners appear to argue that the costs for decommissioning all of Constellation's existing reactors and all of UniStar's proposed reactors must be included when addressing the availability of the parent guarantee. Pet. at 9-10. However, only unfunded decommissioning costs need to be "guaranteed." For the existing Constellation Energy fleet of reactors, so long as decommissioning funding is provided by an external trust fund maintained in accordance with NRC regulations, there is no need to provide any guarantee for additional funds. And, for proposed reactors, UniStar is not responsible for

"'ha[ve] offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation'" regarding UniStar's ability to use a parent guarantee. *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000)). A contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue. *General Public Utilities Nuclear Corp.* (Three Mile Island Nuclear Station, Unit 1), LBP-86-10, 23 NRC 283, 285 (1986), *citing Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974).

This challenge also amounts to a collateral attack on the basic structure of the NRC regulatory process and therefore must be rejected by the Board as outside the scope of the proceeding. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 65 NRC 41, 57-58 (2007) (citing *Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974)). At present, UniStar <u>is not required</u> to have in place the funding mechanisms to ensure adequate decommissioning funding. Instead, UniStar is required only to file a "decommissioning report" that contains a certification that financial assurance for decommissioning <u>will be</u> provided no later than 30 days after the Commission publishes notice of initial fuel loading in the *Federal Register* under § 52.103(a), using one of the specified methods. 10 C.F.R. § 50.75(b). Importantly, an applicant for or holder of a combined license need not obtain the actual financial instrument or submit a copy to the Commission until

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decommissioning funds for reactors that it will not own, *i.e.*, Callaway and Bell Bend. The owners will have that decommissioning obligation.

30 days after the Commission publishes the § 52.103(a) notice.[19] 10 C.F.R. § 50.75(e)(3). Thus, there is no legal requirement that a parent guarantee be authorized (and that the financial test be satisfied) at this point in time. The proposed contention therefore amounts to an impermissible attack on the Commission's regulations.[20]

Likewise, to the extent that Petitioners argue that UniStar must use the "prepayment method" for decommissioning funding (Pet. at 8, 11), the proposed contention is an impermissible challenge to NRC regulations. According to 10 C.F.R. § 50.75(b), each applicant for a combined license must submit a decommissioning report that contains a certification that financial assurance for decommissioning will be provided using one or more of the methods described in § 50.75(e). The authorized methods listed in § 50.75 specifically include prepayment; external sinking fund; a surety method, insurance, or other guarantee method; contractual obligations; and any other mechanism, or combination of mechanisms. The rule even notes that licensees who do not have certain sources of funding may use an external sinking fund in combination with another guarantee mechanism. 10 C.F.R. § 50.75(e)(1)(vi). Because the parent guarantee method is clearly authorized by NRC regulations — both on its own and in

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[19] This is notice is not published until 180 days prior to fuel load. 10 C.F.R. § 52.103(a).

[20] If the parent guarantee is not available when the necessary decommissioning funding assurance is required to be in place (for example, because the financial test could not be met), then UniStar could not use the parent guarantee. If, at that time, Petitioners believe that the NRC Staff should not permit use of whatever decommissioning funding mechanism UniStar intends to use (for whatever reason), then a petition for enforcement action under 10 C.F.R. § 2.206 would be appropriate. However, it is premature (and speculative) to litigate the current availability of a parent guarantee (based on future financial conditions) when no guarantee is required to be in place for several years.

combination with an external sinking fund — the Petitioners' broad challenge to its proposed use by UniStar must fail as a collateral attack on the Commission's regulations. 10 C.F.R. § 2.335.

Similarly, the proposed contention impermissibly challenges the current decommissioning funding amount provided in the application. As discussed in Section 1.3.1 of the General Information section of the application, for Unit 3 the minimum certification amount was computed using the formula provided in 10 CFR 50.75(c)(1) and (2) and appropriate escalation factors for energy, labor, and waste burial costs. The escalation factors for labor and energy were taken from regional data of the US Department of Labor, Bureau of Labor Statistics, and the escalation factor for waste burial was taken from NUREG-1307, "Report of Waste Burial Charges" (2007). The minimum certification amounts were calculated with the NRC decommissioning funding option assuming the disposition of low level radioactive waste ("LLRW") by waste vendors. The minimum certification amount calculated in 2007 dollars is $376 million, assuming the disposition of LLRW by waste vendors for the decommissioning of CCNPP Unit 3. Petitioners do not challenge UniStar's application of the formula or assert that any calculations were performed incorrectly. At bottom, Petitioners are simply challenging the use of the formula explicitly spelled out in NRC regulations. When a Commission regulation permits the use of a particular analysis, a contention which asserts that a different analysis or technique should be utilized is inadmissible because it attacks the Commission's regulations. *Metropolitan Edison Co.* (Three Mile Island Nuclear station, Unit No. 1), LBP-83-76, 18 NRC 1266, 1273 (1983).

Finally, as discussed *supra*, Section II.C, Petitioners must establish standing for each contention that they raise. *See Yankee*, CLI-96-1, 43 NRC at 1, n.3. Here, none of the

alleged "injuries" that purported to supply the basis for standing relate to decommissioning or decommissioning funding assurances. In the absence of any injury related to decommissioning costs, Petitioners lack standing to pursue proposed Contention 2.

For all of these reasons, proposed Contention 2 is based on a flawed premise, fails to satisfy the Commission's strict admissibility standards, and otherwise impermissibly challenges existing Commission regulations.

3. Contention 3: The ER is Unacceptably Deficient Because it Omits from the Analysis of CCNPP 3's Environmental Impact the New Reactor's Potential Adverse Contribution to the Cumulative and Potentially Synergistic Environmental Impact of 11 Operational Reactor Units and Two Proposed Additional Nuclear Power Projects on the Watershed of an Already Severely Degraded and Declining Chesapeake Bay Whose Recovery Plan Is Currently in Serious Doubt and the Focus of a Federal Lawsuit for Failure to Comply with Mitigation Actions.

In proposed Contention 3, Petitioners allege that the ER omits a discussion of the cumulative impact of Calvert Cliffs 3, eleven other operating reactors, and two proposed reactors on the Chesapeake Bay. Pet. at 11-17. Specifically, Petitioners assert that UniStar omits an analysis of the additional chemical and radiological discharges from the proposed new reactor in light of the existing and proposed reactors in the watershed. Pet. at 15. This proposed contention is inadmissible because the application contains a discussion of cumulative impacts and because Petitioners have not demonstrated that additional analysis would lead to any different conclusions.

Cumulative impacts to the Chesapeake Bay and associated natural resources are addressed in ER Section 10.5. That section summarizes the potential cumulative adverse environmental impacts to the CCNPP region. The application defines cumulative impacts as those that are incremental to past and ongoing activities on the site, along with those that are

reasonably foreseeable in the future. This evaluation of cumulative impacts is based on a comparison between the existing environmental conditions presented in Chapter 2[21] and the potential adverse environmental impacts of construction and operation detailed in Chapter 4 and Chapter 5, respectively. The evaluation also considers continued operation and license renewal of CCNPP Units 1 and 2.

In Section 10.5.2, the COL application specifically discusses the cumulative impacts of toxic and radioactive discharges associated with operation of the facility. For example, the application notes that blowdown from the cooling towers is returned to the Chesapeake Bay through a submerged multi-port diffuser. Modeling of this plume shows that its size and distribution will meet all State water quality criteria and will be sufficiently small that it is unlikely to cause impacts to marine benthos or motile organisms migrating through the area. ER Section 10.5.2. With respect to chemical discharges, ER Section 10.5.2 contains the following assessment:

> Included in the blowdown discharge are chemicals used in biocide treatment and in plant process control. The concentrations discharged will be in conformance with National Pollutant Discharge Elimination System (NPDES) permit conditions and applicable water quality criteria. Further the amount of water being discharge from the closed-cycle system will be small compared to tidal flow such that concentrations of chemicals discharged will rapidly disperse. Solids will be allowed time for settlement and chemical treatment in an onsite retention basin, if required.

Based on all of the above, the ER concludes that the incremental impact from operation of CCNPP Unit 3 should not result in cumulative adverse ecological impacts.

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[21] The environmental "baseline" described in Chapter 2 necessarily takes into account the condition of the Chesapeake Bay that is currently impacted by all existing reactor units. Petitioners have provided no information to suggest that any toxic or radiological conditions were not considered or were improperly described in the ER.

With respect to radioactive discharges, the ER states that doses from liquid and gaseous effluents and from direct radiation were assessed to ensure that applicable public health exposure limits are met. ER, at Section 10.5.3. The potential dose from the operation of CCNPP Unit 3 was combined with that predicted for CCNPP Units 1 and 2. The ER concludes that while there will be dose consequences resulting from routine releases during operation of CCNPP Unit 3, exposures will remain within applicable NRC dose limits and will not represent an adverse cumulative impact. Moreover, conservative estimates of radiological dose to biota also demonstrated that exposure to key selected species should result in no observable effects. Nevertheless, UniStar will continue an existing long-term radiological monitoring program to verify that dose consequences are as low as reasonably achievable. ER Section 10.5.2, at 10.0-42. Thus, contrary to the proposed contention, the application does contain a discussion of the cumulative impacts to the Chesapeake Bay from toxic and radioactive discharges from Unit 3.

Further, the environmental review mandated by NEPA is subject to a "rule of reason." As a result, an application need not include all theoretically possible environmental effects arising out of an action, but instead the analysis may be limited to effects which are shown to have some likelihood of occurring. *See Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 & 2), ALAB-455, 7 NRC 41, 48, 49 (1978). UniStar correctly included the cumulative environmental impact of existing Calvert Cliffs Units 1 and 2 and proposed Unit 3. Petitioners, however, argue that UniStar must include a discussion of discharges from other plants (all of which are located greater than 50 miles from Calvert Cliffs) even where discharges from those facilities are within permitted limits. Consideration of such geographically remote impacts is unreasonable and unnecessary.

Lastly, Petitioners have presented no expert or factual information to call into question the reasonable scoping and conclusions in the ER. Contentions alleging an error or omission in an application must establish some significant link between the claimed deficiency and protection of the health and safety of the public or the environment. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89, *aff'd*, CLI-04-36, 60 NRC 631 (2004). Here, the only support for the proposed contention is a non-specific reference to a "Notice of Intent to Sue." Pet. at 16; *see also* Pet. Ex. 14. That notice does not allege that toxic or radioactive discharges are causing harm to the bay. Instead, the notice is focused on issues such as low oxygen levels caused by elevated nutrient levels and limited water clarity. Thus, this document provides no support for the alleged contention.

For the above reasons, proposed Contention 3 is inadmissible.

4. Contention 4: The ER is Unacceptably Deficient Because it Omits from Analysis of CCNPP 3's Reactor Design and Safety of the CCNPP Facility, Additional Relevant Impacts Arising from the Expansion of the Dominion Cove Point Liquefied Natural Gas Facility Located 3.2 Miles South of the Proposed Reactor.

In this proposed contention, Petitioners assert that the ER is deficient because it omits analysis of certain issues. However, as discussed below, this proposed contention of omission is inadmissible because the application contains the allegedly omitted analysis and because the petitioners fail to demonstrate a genuine dispute on a material issue.[22] Although

[22] In the proposed contention, Petitioners variously describe the deficiency as being related to the ER or FSAR (or the "application"). In fact, as described further below, substantial information is provided in the COL application in both the ER and the FSAR. To the extent that Petitioners argue an omission in the ER as a matter of formality (*i.e.*, that a specific risk analysis that is in the FSAR is not in the ER), this is not a meaningful distinction. The key is that the issues related to the LNG facility are fully evaluated and the information is available for the NRC Staff to include in its review documents (either

Petitioners attempt to circumvent the requirement that a proposed contention provide a statement of the factual or expert support for the proposed contention by couching the contention as one of omission, many of the asserted bases implicitly argue that the application reaches an incorrect conclusion. However, because these challenges are unsupported, they cannot provide the basis for an admissible contention.

The following discussion identifies each of the alleged omissions and then discusses the reasons for rejecting the alleged omission as a basis for an admissible contention.

- The ER omits the effect of a LNG spill on water triggering a cumulative domino effect on the DCPLNG pipeline and storage tanks. Pet. at 18.

Petitioners acknowledge that the application addresses the DCPLNG pipeline and storage facilities, but argue that the analysis only addresses each risk in isolation and that it fails to discuss the potential for creating a "domino effect." Pet. at 18. Contrary to the petition, the analysis performed by the State of Maryland's Power Plant Research Program ("PPRP"), which is referenced throughout the application (*see, e.g.*, FSAR § 2.2.4) and submitted on the Unit 3 licensing docket,[23] explicitly addresses the potential for one event to trigger a larger incident with more severe consequences. Section 4.4 of the PPRP Study contains an overview of the "escalation study" that was performed to assess the potential for such interactions. The study splits the LNG terminal layout into eight distinct escalation zones and identifies nine escalation

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the Safety Evaluation Report or Environmental Impact Statement) as it deems appropriate.

[23] Cove Point LNG Terminal Expansion Project Risk Study, Maryland Power Plant Research Program Report PPRP-CPT-01/DNR 12-7312006-147, Maryland Department of Natural Resources, June 28, 2006 (ADAMS Accession No. ML080630231).

routes. The study also notes that the failure frequencies used in the risk assessment inherently include a proportion of releases caused by escalation. FSAR Table 2.2-9 also includes information regarding escalation events. Because the application reasonably accounted for the potential "domino effect," a contention of omission must be rejected. Petitioners provide no further basis to establish a genuine dispute with the conclusions in the application that are based on the PPRP Study.

- The ER omits analysis of the impact of temperature rise of the cooling water to CCNPP and the proposed Unit 3 due to the prolonged heating of the Chesapeake Bay cooling water from the radiant heat of this ignited LNG vapor cloud. Pet. at 18.

Petitioners argue that the application omits analysis of the increase in cooling water temperature that would occur in the event of an LNG fire. Pet. at 18. To the contrary, the application contains a discussion of cooling water that addresses this issue. As explained in FSAR Section 2.4.11.5, the Essential Service Water System ("ESWS") provides flow for normal operating conditions, for shutdown/cooldown, and for Design Basis Accident ("DBA") conditions. The ESWS pump in each train obtains water from the ESWS cooling tower basin of that train and circulates the water through the ESWS. Heated cooling water returns to the ESWS cooling tower to dissipate its heat load. Only a limited amount of make-up water is even drawn from the bay. The technical specifications for the ESWS impose a surveillance requirement to verify that the water temperature of ESW cooling tower basin be at or below 90°F (*see* SR 3.7.8.2 in Part 4 of the application). Otherwise, the plant would be forced to shut down.[24]

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[24] FSAR Section 2.4.1.1 states that ESWS cooling tower basins will serve as the Ultimate Heat Sink ("UHS") cooling water storage volumes for use during design basis accidents. The tower basin inventory provides cooling water for safety-related heat removal for the

Additionally, the contention is inadmissible because Petitioners have provided no information or basis to support the notion that an LNG fire would cause an increase in water temperatures in the Chesapeake Bay that would impact Calvert Cliffs 3. Given the location of the terminal and Coast Guard shipping channel restrictions, a postulated LNG fire would be expected to occur at some distance from Calvert Cliffs 3 (greater than 3 miles). And, in light of the circulation and flow of water in the bay (*see* ER Chapter 2.3, Section 1.3.1.1.2.2), petitioners have provided no information to show temperature impacts at that distance. Further, the intake cooling water intake structure for Unit 3 is located at a depth of 20.5 feet (*see* ER Section 3.4.2.1) and the Petitioners have not provided a basis for a contention that a surface fire would cause an increase in water temperature at that depth.

Because the application contains an analysis of the impact of increased water temperature on the facility, and because Petitioners have provided no information to call in question the information presented in the application, this portion of the proposed contention fails to demonstrate a genuine dispute on a material issue.

- The ER omits analysis and impact of a modification to the pier which will add 150 feet to each end of the offshore platform thereby increasing the "footprint" of the pier, support pilings and platform. Pet. at 18.

Petitioners argue that the application fails to discuss the impact of an additional 150 feet added to each end of the LNG pier. As an initial matter, the pier reinforcement project

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first 72 hours during DBA conditions without the need for additional makeup water from the Chesapeake Bay.

alluded to in the contention is still in the planning stages and is not yet a "concrete project."[25] The Commission has previously held that a licensing board should deny a basis for a contention that involves an inchoate plan. *Compare Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 293 (2002), *citing* 10 C.F.R. § 54.29(a). Future projects (*i.e.*, those that are "merely contemplated") are not sufficient to support admission of a contention. *Id*. at 294. Similarly, contentions involving plans of third parties that are not yet concrete proposals should be rejected. Whether Dominion will proceed with the pier reinforcement project is too speculative to support an admissible contention.[26] Simply stated, the issue is premature.

Moreover, Petitioners have provided no information to suggest that expanding the pier footprint would lead to potential impacts any different than those already considered. As discussed in the application, the greatest consequence range presented in the PPRP study was 2.64 miles for the scenario involving a total loss of the ship's tank. *See* 2.2-20. Moving the location of a postulated accident 150 feet closer to Unit 3 seemingly would not undermine the conclusions in the application.[27] The burden is on the petitioner to demonstrate the existence of

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[25] *See* http://www.dom.com/about/gas-transmission/covepoint/pier_reinforcement/index.jsp last accessed December 15, 2008. The webpage indicates that Dominion has submitted only a letter of intent to the Coast Guard and just begun a pre-filing process at the Federal Energy Regulatory Commission ("FERC").

[26] If, in the future, Dominion's plans are formalized, then UniStar, the NRC, and other regulatory agencies would evaluate the impacts of the project as part of the review of that application.

[27] 150 feet is approximately 0.03 miles. Thus, even considering the expanded pier footprint, the consequence range would only be a small fraction of a mile closer to Unit 3.

an actual issue. Petitioners have failed to provide a basis for a genuine dispute with the application on a material issue.

- Figure 2.2-1 of the FSAR omits from the site map, the offshore LNG pier, underground LNG loading tunnel and the submerged DCPLNG pipeline. Pet. at 19.

This alleged omission is not material to the findings that the NRC must make on the application. As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of the licensing proceeding.'" *Oconee*, CLI-99-11, 49 NRC at 333-34. Here, the application contains a narrative discussion of the location of the LNG facility and notes that it contains an offshore pier, an underground LNG loading tunnel, and a pipeline. *See* FSAR Sections 2.2.2.2.2, 2.2.2.4, and 2.2.2.4.2. Petitioners point to no regulatory or statutory requirement that the figures associated with an application contain information at the level of detail Petitioners apparently desire. Petitioners fail to provide any support for a contention that would alter the conclusions of the evaluation. Thus, this aspect of the proposed contention should be rejected.

- The ER omits risk analysis of the impact of LNG unloading operations which involve the pier, underground tunnel, and the LNG ship carrying capacity which affect volume and duration of risk exposure. Pet. at 19.

Petitioners again mistakenly allege that the application omits a desired analysis. In fact, the referenced PPRP study addresses the risks associated with the pier, the underground tunnel, and the ship's tank. For example, Section 5.1 of the PPRP Study identifies the hazard scenarios considered in the study. Those scenarios include partial and total losses of the ship's tank en route, partial and total losses of the ship's tank while at berth (whether unloading or not), rupture of the transfer line, partial or total loss of the storage tank, and rupture of the pipeline.

And, as discussed above, the PPRP analysis also addressed the potential for escalation. PPRP Study, at Section 4.4. Thus, contrary to the proposed contention of omission, the application does address the risk of LNG operations.

- The FSAR omits the possibility that the fast expanding vapor cloud could migrate before ignition to the CCNPP area and omits a total loss of LNG inventory from a large LNG tanker which could be 267,000 cubic meters or 148,000 cubic meters from a smaller ship. Pet. at 25.

Contrary to the proposed contention, the referenced study does evaluate the potential for migration of a vapor cloud. Appendix A, Section 1.1, of the PPRP Study describes the source models used in the risk assessment, including vapor releases and dispersion models. Appendix A, Section 1.3.3, discusses the vapor cloud explosion model. Appendix A, Section 2.2.1, describes the assumptions used in calculating pool spreading and evaporation rates. Appendix A, Section 2.3, discusses the gas dispersion models used to evaluate LNG releases. And, Appendix A, Section 3, describes the weather data used in the risk assessment model. Thus, contrary to the proposed contention, the application and associated analyses clearly included the possibility of a migrating vapor cloud. The proposed contention offers no substantive challenge.

With respect to Petitioners' arguments that the application omits a discussion of an accident involving a 267,000 cubic meter tanker, as discussed above that challenge is premature. Dominion has not yet advanced beyond the pre-application phase and thus there is not a concrete "proposal" to evaluate. Moreover, Petitioners have provided no evidence to suggest that the risks of an increased tanker size would be any greater than those already

evaluated.[28] As described in the PPRP Study, Section 6.7 at 47, the risks to Calvert Cliffs from the expansion project were projected at 6.6E-9. Accident scenarios involving probabilities of less than 1E-7 are "beyond-design basis" accidents, which cannot provide a proper basis for admission of a safety-related contention.[29] *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-876, 26 NRC 277, 283-85 (1987) *citing San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *aff'd on reh'g en banc*, 789 F.2d 26 (1986), *cert. denied*, 479 U.S. 923 (1986). Similarly, accidents with such a low probability are "remote and speculative" for NEPA purposes and thus need not be considered in the ER. *See*

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[28] The size of the ship is not necessarily relevant in assessing accident risks. Most postulated accidents contemplate puncture of a tank of certain size (one LNG ship may carry several individual, spherical LNG tanks). As such, the volume/quantity of LNG released is limited to the geometry of the hole, not the absolute size of the tank. The primary difference in impact, if the larger ship has larger tanks, is the duration of the event (*i.e.*, there is more LNG and it will take longer for it to escape through a fixed orifice). *See, e.g.*, PPRP Study, Section 2.1.1, at A-5. For such catastrophic failures, the hazard range is primarily dependant on the rate of release over the first few minutes of the incident rather than the ultimate duration. None of this is addressed by Petitioners.

[29] Section 2.2.3, "Evaluation of Potential Accidents," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," dated March 2007, describes the NRC's review of hazards associated with nearby industrial activities, such as manufacturing, processing, or storage facilities, and the hazards associated with nearby transportation routes (*e.g.*, navigable waters and pipelines). Section 2.2.3 provides the acceptance criteria for risk associated with nearby facilities and transportation routes, which are based on meeting the relevant requirements of 10 C.F.R. § 52.79(a)(1)(iv) as they relate to compliance with 10 C.F.R. Part 100. Specifically, the identification of design-basis events resulting from hazardous materials or activities in the vicinity of the plant is acceptable if all postulated types of accidents are included for which the expected rate of occurrence of potential exposures resulting in a radiological dose in excess of the 10 C.F.R. § 50.34(a)(1) limits (as it relates to the requirements of 10 C.F.R. Part 100) is estimated to exceed the NRC Staff objective of an order of magnitude of 10^{-7} per year.

Public Service Electric & Gas Co. (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43 (1981). Accordingly, this aspect of the proposed contention is inadmissible.

- Applicant omits in its analysis, the added radiant heat that could ensue when Calvert Cliffs acts as a fire fence. Pet. at 26.

As an initial matter, nowhere in the petition or attachments is there any discussion of a "fire fence" and this term does not appear to be common terminology. Petitioners do not describe how a "fire fence" could increase the radiant heat from an LNG accident, much less demonstrate that treatment of Calvert Cliffs as a "fire fence" would lead to any different conclusion than that presented in the application. In the absence of any factual or expert support for a proposed contention, there can be no genuine dispute with the application on a material issue.

To the extent that the reference to a fire fence is intended to refer to the situation where a vapor cloud explosion occurs due to obstructions in the path of a flame front, that scenario was taken into account in the PPRP study. *See* Appendix A, Section 1.3.3. At bottom, this aspect of the proposed contention is unsupported and mistakenly alleges an omission in the application. Thus, this basis for the proposed contention must be rejected.

- The ER omits the 2005 Sandia National Laboratories study (SAND2005-7339), that confirmed the range of LFL (Lower Flammability Limit) could be as far as 11,175 meters or 7 miles (page 24, Final Calculations, Table 5, Final Dispersion Results). Pet. at 26.

Petitioners assert that the application omits a 2005 Sandia study that concluded that the Lower Flammability Limit ("LFL") range could be as far as 11,175 m or 7 miles. Significantly, that 2005 Sandia study involved a site-specific assessment of a particular LNG facility, the proposed Cabrillo Liquefied Natural Gas Deepwater Port Project. *See* Pet. Ex. 17

("Review of the Independent Risk Assessment of the Proposed Cabrillo Liquefied Natural Gas Deepwater Port Project," SAND2005-7339 (January 2006)). As Petitioners note, that study involved a Floating Storage and Regasification Unit ("FSRU"), which was still in the preliminary design phase, and not the type of facility at Cove Point. Other than the simple fact that both facilities have an offshore component, Petitioners have provided no information to suggest that the type of activities at the Cabrillo FSRU are similar to those at the Cove Point facility in terms of accident risk, LNG volume, topography, or frequency.[30] Thus, Petitioners have failed to demonstrate the Cabrillo study establishes a genuine dispute with the application, which relies, in large part, on the site- and facility-specific PPRP study.

Moreover, the same analysis framework in the Cabrillo study is referenced in the PPRP Study. Sandia was asked to evaluate the Cabrillo Port based on the risk and safety analysis framework provided in the recent Sandia report, "Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill over Water" (Pet. Ex. 15, at 7). That same guidance was referenced in the PPRP Study for Cove Point. *See* PPRP Study, at Appendix B-2. In this context, there is inadequate basis for a specific challenge to the application.

At bottom, with respect to factual information or expert opinion proffered in support of a contention, "the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention." *Private Fuel Storage*, LBP-98-7, 47 NRC at 181. Any supporting material provided by a petitioner, including those portions thereof not relied upon, is subject to Board scrutiny, "both for what it does and

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[30] Indeed, the Cabrillo study notes that the model relied upon a symmetry plane and that including the terrain should result in a shorter distance to the LFL. Pet. Ex. 17, at 25.

does not show." *See Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996). Petitioners' overly-simplistic comparison of results from two different studies of two different types of facilities fails to establish a genuine dispute with the site-specific data presented in the application.

- Table 2.2-10 Toxic Vapor Cloud Analysis omits analysis of possible Toxic Air Pollution from rapid LNG vaporization and mass high combustion of gasified LNG on a catastrophic LNG spill over water. Pet. at 27.

Although there is little discussion of this alleged omission, the Petitioners appear to be alleging that the discussion of toxic vapor clouds in FSAR Section 2.2.3.1.3 and in Table 2.2-10 ignore the potential for a toxic LNG vapor cloud. To the contrary, the application explains that no analysis of a toxic natural gas vapor cloud is necessary because there is no Immediately Dangerous to Life and Health ("IDLH") threshold value or other toxicity limit for natural gas. *See* FSAR Section 2.2.3.1.3 at 2.2-25; *see also* Table 2.2-3 and Table 2.2-7.[31] As a result, there is no need to conduct an analysis of a toxic natural gas vapor cloud.[32] Thus, the

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[31] The exhibits cited by Petitioners also explain that natural gas is non-toxic. *See* Pet. Ex. 15, at 28; Pet. Ex. 16, at 1.

[32] This conclusion is further buttressed by information in the Petitioners' exhibits. For example, Pet. Ex. 15 (at 133) notes that methane has a low toxicity to humans, but may be considered a simple asphyxiant. The report acknowledged the potential for LNG vapor concentrations in the air to be high enough to present an asphyxiation hazard to the ship's crew, pilot boat crews, emergency response personnel, or others that might encounter an expanding LNG vaporization plume. But, the study concluded that this is not a major issue because flammability limits and fire concerns are the dominant effects in most locations. *Id*. at 37; *see* Pet. Ex. 16, at 7 (noting that the Sandia National Laboratories study examined asphyxiation and concluded that asphyxiation did not pose a hazard to the general public).

purported omission does not exist and Petitioners have not provided any information to establish a genuine dispute with the conclusions in the application.

- The FSAR omits analysis of the appropriate method for evaluating damage due to explosions. Pet. at 27.

Contrary to the proposed contention, FSAR Section 2.2.3.1.1 contains a discussion of the methodology used to assess damage due to explosions, including explosions at the LNG facility. According to the application, the effects of explosions are a concern in analyzing structural response to blast pressures. The allowable and actual distances of hazardous chemicals transported or stored were determined in accordance with NRC Regulatory Guide 1.91, Revision 1, Evaluations of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plants. The specific methodology used was described as follows:

> Regulatory Guide 1.91 cites 1 psi (6.9 kPa) as a conservative value of peak positive incident overpressure, below which no significant damage would be expected. Regulatory Guide 1.91 defines this safe distance by the relationship $R \geq kW1/3$ where R is the distance in feet from an exploding charge of W pounds of TNT; and the value k is a constant. The TNT mass equivalent, W, was determined following guidance in NUREG-1805 (NRC, 2004a), where W=MVapor * ΔHC * Yf/2000 and MVapor is the flammable vapor mass, ΔHC is the heat of combustion and Yf is the explosion yield factor.
>
> Conservative assumptions were used to determine a safe distance, or minimum separation distance, required for an explosion to have less than 1 psi (6.9 kPa) peak incident pressure. In each of the explosion scenario analyses, an explosion yield factor of 100 percent was applied to account for an in-vessel confined explosion. The yield factor is an estimation of the available combustion energy released during the explosion as well as a measure of the explosion confinement (NRC, 2004a). This is a conservative assumption because a 100 percent yield factor is not achievable (FMIC, 2005).[33]

[33] FSAR Section 2.2.3.1.1, at 2.2-15 to 2.2-16.

Using this methodology, the FSAR concludes that overpressures from an explosion resulting from a complete tank failure at the DCPLNG facility would not adversely affect the operations of CCNPP Unit 3.

Therefore, because the application contains a discussion and explanation of the methodology used, there is no omission. Further, Petitioners have submitted no information to call into question the methodology used by the Applicants. There is no factual or expert support for the Petitioners' implicit conclusion that an incorrect methodology was used. Where a petitioner has done nothing more than state a conclusion (*e.g.*, the application is "deficient") without providing *a reasoned basis or explanation* for why the application is inadequate, the proposed contention must fail. *USEC*, CLI-06-10, 63 NRC at 472.

- The FSAR omits risk analysis of a catastrophic LNG spill over water. Pet. at 28.

As discussed *supra*, the application and associated PPRP Study clearly include an analysis of a full breach of LNG over water at or near the offshore LNG terminal. Section 5.1 of the PPRP study identifies the hazard scenarios considered, including partial and total losses of the ship's tank en route, and partial and total losses of the ship's tank while at berth. The PPRP analysis also addresses the potential for escalation. *See* PPRP Study, at Section 4.4. Thus, contrary to the proposed contention, the application does address the risk of an LNG spill over water.

Moreover, FSAR Section 2.2.3.1.2 specifically discusses a full breach over water. On page 2.2-20 (under the subheading of "Waterway Traffic"), the application explains that the greatest consequence range was for the scenario where a total loss of LNG tanker inventory occurred and notes that the maximum consequence range is less than the distance from the

postulated accident to the site. Therefore, because the application contains the allegedly omitted information, this aspect of the proposed contention should be rejected.

- PPRP study also omitted the LNG Spill Consequence Studies depicted in the GAO-07-316 February 2007 report. Pet. at 29-30.

Petitioners allege that the PPRP Study omitted discussion of the LNG spill consequence studies that were described in GAO-07-316. However, contentions alleging an error or omission in an application must establish some significant link between the claimed deficiency and protection of the health and safety of the public or the environment. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89, *aff'd*, CLI-04-36, 60 NRC 631 (2004). The Petitioners provide no factual or expert support to demonstrate that any of the various studies described in the GAO report are relevant to and call into question any of the conclusions in the PPRP Study. Nor do they point to any portion of the PPRP Study that is allegedly deficient. Where a petitioner has done nothing more than state a conclusion (*e.g.*, the application is "deficient") without providing *a reasoned basis or explanation* for why the application is inadequate, the proposed contention must fail. *USEC*, CLI-06-10, 63 NRC at 472.

Moreover, with respect to factual information or expert opinion proffered in support of a contention, "the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention." *Private Fuel Storage*, LBP-98-7, 47 NRC at 181. A closer look at the GAO Report shows that its conclusions are broadly consistent with the results of the PPRP study. For example, Table 1 of the GAO Report identifies six studies and summarizes the results. *See* Pet. Ex. 16, at 13. The distance to

the 5 kw/m^2 heat level in those studies ranged from 493 m to 2118 m.[34] This is actually less than the predicted distance to the 37.5 kw/m^2 heat level in the PPRP study, which ranged up to 4250 m. Thus, the PPRP Study actually predicts a greater impact range than the GAO studies.

Ultimately, Petitioners have provided no information to suggest that the studies in the GAO Report call into question the PPRP Study, particularly since the PPRP Study relied on site and facility-specific accident risks, LNG volume, topography, and frequency.

- The ER and the PPRP Study both omit analyses that size and spread of the flammable vapor cloud affects LNG pool fire size and duration, with heat flux greater than 350kW/m2 given "worst case conditions" for an LNG spill over water that could be different from the assumptions made for a "worst case conditions" that would occur on a nuclear power plant since only CCNPP has the unique siting of DCPLNG with an offshore unloading pier within its hazard inclusion zone. Pet. at 30.

In this aspect of the proposed contention, the alleged omission is not clearly articulated and the proposed contention does not appear to directly challenge any specific portion of the application. To the extent that the Petitioners are arguing that the ER and the PPRP Study must take into account the hazard range for a heat flux of 350 kw/m^2, the analyses in the application clearly bound the effects of the Petitioners' postulated "worst-case" spill. The PPRP Study concludes that the maximum hazard range at the 37.5 kw/m^2 heat flux level is 4250 m (2.64 miles) for a total loss of the ship's tank. *See* PPRP Study, at Section 5.2. The proposed new unit lies outside that range. Because the 350 kw/m^2 heat flux area lies within the 37.5

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[34] For LNG fires, the estimated thermal flux (typically given in units of kw/m^2) can be used to indicate level of impact. A thermal flux of 37.5 kw/m^2 for 10 minutes can damage process equipment and piping, while a heat flux of 5 kw/m^2 is commonly considered the heat flux level appropriate for protection of human health and safety. Pet. Ex. 17, at 25-26; *see also* PPRP Study, at 15; Pet. Ex. 15, at 38.

kw/m^2 heat flux range, there is necessarily no additional impact on Calvert Cliffs 3. Thus, Petitioners have failed to establish a genuine issue or a material omission.[35] This aspect of the proposed contention should be rejected.

- The ER and PPRP omit "risk analysis of secondary fires that would probably occur with instantaneous combustion from radiant heat of the LNG pool fire which will burn office paper, carpet, office furniture and computers and risk damaging sensitive equipment, negatively impacting safety and operations of CCNPP and the proposed reactor." Pet. at 30.

Petitioners fail to show that this alleged omission is material to the findings that the NRC must make and have also failed to provide any support for the alleged omission. Heat flux levels around 37.5 kw/m^2 heat flux range may cause damage to structures, equipment and machinery. *See, e.g.*, Pet. Ex. 17, at 25-26; Pet. Ex. 15, at 38. But, as discussed above, even under worst-case scenarios, the hazard range for the 37.5 kw/m^2 heat flux range would not reach Calvert Cliffs 3. Moreover, according to the PPRP Study, FERC requires the vapor cloud dispersion range to the LFL and the range to a thermal flux of 9.5 kw/m^2 to remain on the property for design basis accidents. PPRP Study, at 41 (Section 6.3); . Dominion also agreed to design the tanks such that the 9.5 kw/m^2 heat flux range remains on the property. *Id*. Thus, there is no information to support the Petitioners' implicit claim that an LNG accident would result in heat levels sufficient to cause instantaneous combustion of materials in Calvert Cliffs 3.

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[35] In addition, Petitioners are raising issues — "worst case" conditions — that do not need to be addressed under NEPA. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354-355 (1989) (holding that NEPA does not mandate a "worst case" analysis); *Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002) (same).

For all of the foregoing reasons, proposed Contention 4 is inadmissible and must be rejected.

5. *Contention 5: The ER Is Unacceptably Deficient Because it Omits the Combined and Cumulative Mechanical Stress to Chesapeake Bay Biota Caused by the Cooling Water Intake Pumps for the Proposed Unit 3, CCNP Units 1 and 2 Water Intake Pumps and the Water Ballast Intake Pumps of the LNG Tanker Ships that Are Operational During LNG Unloading Operations at the Dominion Cove Point LNG Pier.*

In this proposed contention Petitioners allege that the ER omits a discussion of the cumulative impact on Chesapeake Bay biota from the combined operations of existing Calvert Cliffs Units 1 and 2, proposed Unit 3, and the ballast water intake pumps of LNG tanker ships. Pet. at 32-34. This contention is inadmissible because it incorrectly asserts that a matter was not considered in the application and because Petitioners fail to provide the necessary factual or expert support to demonstrate a genuine dispute with the information in the application.

The Unit 3 application addresses the cumulative impacts of nearby facilities, including the LNG terminal and Calvert Cliffs Units 1 and 2. ER Section 2.8.6 describes the potential impacts associated with other non-federal projects, including the Cove Point Liquefied Natural Gas Terminal and associated activities (such as LNG tanker operations).[36] The ER notes that the identified non-Federal projects, including both the current operations and a planned expansion at Cove Point, are not expected to contribute adversely to cumulative impacts

[36] *See also* ER Section 2.3.2.1.2 (identifying the Dominion Cove Point LNG facility as the second largest user of Chesapeake Bay water); ER Table 2.3-22. Additionally, the responses to Requests for Additional Information 12 and TE-7 also discuss impacts to aquatic resources in light of both Units 1 and 2 and the LNG terminal. *See* "Submittal of Response to Requests for Additional Information for the Calvert Cliffs Nuclear Power Plant Unit 3 and Request for Withholding of Documents," UN#08-018, dated June 12, 2008 (ADAMS No. ML081850081).

affecting environmental resources (*e.g.*, water consumption, water quality, radiological emissions, and transportation infrastructure) in the region. The ER goes on to state that it is reasonable to conclude that any cumulative environmental impacts involving these other non-Federal projects and the proposed CCNPP Unit 3 facility will be small.[37] Petitioners have provided no information to suggest that the tanker ballast pumps would be a significant contributor to entrainment/impingement impacts, particularly given the relatively low volumes at issue (50,000 gpm for tankers and Unit 3 versus 2.4 million gpm for Units 1 and 2).

With respect to existing Units 1 and 2, Section 10.5.2 notes that Unit 3 utilizes closed-cycle cooling, which uses significantly less cooling water than that required for once-through cooling, such as the two operating units. The ER recognizes that there will be aquatic impacts attributable to operation of the CCNPP Unit 3 intake structures and cooling water systems, including impingement of organisms on the traveling screens and entrainment of fish and invertebrate eggs and larvae within the cooling system. *Id.*; *see also* ER Section 5.3.1.2 (aquatic ecosystems); ER Section 9.4.2.1 (cooling water system alternatives). But, the ER also states that use of closed-cycle cooling systems at CCNPP Unit 3 will significantly reduce these impacts compared to power plants that operate open-cycle (*e.g.*, CCNPP Units 1 and 2). Specifically, ER Section 10.5.2 describes the cumulative impacts as follows:

> Physical impacts of cooling system water withdrawal could include alteration of site hydrology in the immediate vicinity of the intakes structures. Previous hydrodynamic modeling for CCNPP Units 1 and 2 indicated that their operation would represent less than 1% of tidal flow. Since the amount of cooling water to be used for CCNPP Unit 3 is a small

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[37] As discussed above, the environmental review mandated by NEPA is subject to a "rule of reason." *See Northern States*, ALAB-455, 7 NRC at 49.

> fraction of the intake flow from CCNPP Units 1 and 2, there should be no incremental cumulative adverse impact to the Chesapeake Bay hydrology.
>
> Aquatic impacts attributable to operation of the CCNPP Unit 3 intake structures and cooling water systems include impingement of organisms on the traveling screens and entrainment of fish and invertebrate eggs and larvae within the cooling system. Use of closed-cycle cooling systems at CCNPP Unit 3 will significantly reduce these impacts compared to power plants that operate open-cycle (once-through). In addition, CCNPP Unit 3 will incorporate additional design criteria to limit impingement including intake approach velocities to less than 0.5 ft/sec (0.15 m/sec).
>
> Although some small amount of entrainment will occur, studies indicate that the CCNPP site area is not a spawning area for key species of commercial or recreational value, and that entrainment at CCNPP Units 1 and 2 has not resulted in detectable changes in population levels. Further, the dominant species that occur in the CCNPP site area of the Chesapeake Bay have not been identified as requiring habitat protection.
>
> Blowdown from the cooling towers is returned to the Chesapeake Bay through a submerged multi-port diffuser. The temperature of this discharge will be several degrees above ambient creating a small thermal plume. Modeling of this plume shows that its size and distribution will meet all State water quality criteria and will be sufficiently small that it is unlikely to cause impacts to marine benthos or motile organisms migrating through the area.
>
> * * *
>
> Because the use of closed-cycle cooling will limit cooling water requirements, the incremental impact from operation of CCNPP Unit 3 should not result in cumulative adverse ecological impacts.

In light of the discussion of cumulative impacts in the ER, there is no omission as alleged in the proposed contention.

In addition, Petitioners fail to provide any factual, documentary, or expert support for a contention challenging the application on the issues addressed here. Although Petitioners cite to a "Notice of Intent to Sue" (Pet. Ex. 14) for the proposition that Unit 3 could cause

cumulative impacts to aquatic biota, the exhibit does not allege that impingement and entrainment are factors causing harm to Chesapeake Bay. Instead, the notice of intent is focused on issues such as low oxygen levels caused by elevated nutrient levels and limited water clarity. Thus, this document provides no support for the alleged contention.

For the above reasons, proposed Contention 5 is inadmissible for failure to demonstrate a genuine dispute on a material issue.

6. Contention 6: The Application Is Deficient in its Discussion of High-Level Radioactive Waste that Would Be Generated by Calvert Cliffs-3.

Petitioners allege in Proposed Contention 6 that the application is deficient because it fails to discuss the environmental implications of the current lack of a facility for disposal of spent nuclear fuel.[38] Pet. at 35. The Petitioners further allege that the NRC has not made a reliable assessment regarding the degree of assurance that radioactive waste generated by the proposed reactors can be safely disposed of or when such disposal will occur. *Id.* Petitioners assert that the Commission has given no indication that it has confidence that repository space will be available for spent fuel from new reactors licensed after December 1999. Pet. at 37. Petitioners also argue that the Commission no longer has confidence that more than one repository will be licensed. *Id.*

In addition, Petitioners allege that the NRC's Waste Confidence Decision[39] applies only to currently-operating plants. Pet. at 36-37. Petitioners argue further that even if

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[38] Petitioners split Proposed Contention 6 into two related sub-contentions, proposed Contentions 6A and 6B. Each of these contentions are specifically addressed below.

[39] The Waste Confidence Decision contains a generic finding that a geologic repository will be available for disposal of spent nuclear fuel. *See* 10 C.F.R. § 51.23(a).

the existing Waste Confidence Decision applies to this proceeding, UniStar should not be allowed to rely on it because the NRC is re-examining the Decision. *Id.* at 38. Finally, Petitioners assert, despite the Commission's prior rulings, that the NRC should revisit the Waste Confidence Decision in light of September 11, 2001, the susceptibility of nuclear fuel to terrorist attack, and the decision in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006). *Id.* at 46.

As shown below, proposed Contention 6 should be dismissed. The proposed contention impermissibly attacks Commission regulations, is not within the scope of this proceeding, and is contrary to Commission precedent.

a. Contention 6A: Failure to Evaluate Whether and in What Time Frame Spent Fuel Generated by Calvert Cliffs Unit 3 Can be Safely Disposed of.

In essence, Contention 6A alleges that the Applicant cannot rely on NRC's Waste Confidence Decision because that decision applies only to currently operating plants. Pet. at 37. However, proposed Contention 6A is an impermissible attack on the Commission's regulations. *See* 10 C.F.R. § 2.335; *Vermont Yankee*, CLI-07-3, 65 NRC at 17-18 and n.15; *Millstone*, CLI-01-24, 54 NRC at 364; *see also Dominion Nuclear North Anna, LLC* (Early Site Permit for the North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-70 (2004) (holding inadmissible an essentially identical set of contentions as impermissibly challenging the NRC's regulations).

As explained by the Licensing Board in the recent North Anna ESP proceeding with respect to a similar contention:

> The matters the Petitioners seek to raise have been generically addressed by the Commission through the Waste Confidence Rule, the plain language of which states:

> [T]he Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of *any* reactor to dispose of the commercial high level waste and spent fuel originating in such reactor and generated up to that time.

10 C.F.R. § 51.23(a) (emphasis added). Furthermore, when the Commission amended this rule in 1990, it clearly contemplated and intended to include waste produced by a new generation of reactors.[40]

Thus, based on the plain language of the rule and its regulatory history, the Waste Confidence Decision applies in this proceeding.

To the extent that the proposed contention challenges the environmental impacts of the management of high-level radioactive waste, this proposed contention also represents an impermissible challenge to Table S-3 of 10 C.F.R. § 51.51. Commission regulations require that a COL ER use the values in Table S-3 as the basis for assessing the environmental impacts of high-level waste. *See* 10 C.F.R. § 51.51(a). Table S-3 indicates that high-level waste will be disposed of through deep burial at a federal repository. In accordance with 10 C.F.R. § 51.51, Section 5.7 of the Calvert Cliffs ER uses Table S-3 as the basis for the discussion of the

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[40] *North Anna ESP*, LBP-04-18, 60 NRC at 269; *see also* 55 Fed. Reg. 38474, 38504 (Sept. 18, 1990) ("The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of [the current fleet of] reactors' [operating licenses]. The same would be true of the spent fuel discharged from any new generation of reactor designs."). The Commission reaffirmed its 1990 findings in 1999. *See* "Status Report on the Review of the Waste Confidence Decision," 64 Fed. Reg. 68005, 68007 (Dec. 6, 1999). And, the NRC amended the Waste Confidence Rule in 2007 to clarify that the rule encompasses COL applications. "Licenses, Certifications, and Approvals for Nuclear Power Plants; Final Rule," 72 Fed. Reg. 49, 52, 49429 (Aug. 28, 2007) ("The NRC is revising §§ 51.23(b) and (c) to indicate that the provisions of these paragraphs also apply to combined licenses.").

environmental impacts of high-level waste.[41] Petitioners attempt to attack Table S-3 by questioning whether high-level waste from Calvert Cliffs will be disposed of at a federal repository. Pet. at 42. As discussed above, however, this portion of the contention is a direct challenge to existing NRC regulations and must be rejected.

Lastly, this contention is virtually identical to contentions rejected by licensing boards in other early site permit and COL proceedings.[42] The logic of those prior decisions applies here and the proposed contention should be rejected.

b. Contention 6B: Even if the Waste Confidence Decision Applies to this Proceeding, it Should Be Reconsidered.

Petitioners also contend that even if the Waste Confidence Decision applies to this proceeding, the Decision should be reconsidered. This request, like Contention 6A, is not within the scope of this proceeding and is — by its very terms — an impermissible attack on the Commission's regulations. *See* 10 C.F.R. § 2.335; *Vermont Yankee*, CLI-07-3, 65 NRC at 17-18

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41 Petitioners also reference potential radioactivity releases from Yucca Mountain and the Environmental Protection Agency's ("EPA") proposed Yucca Mountain radiation release regulations (Pet. at 36), but the purpose of this reference is not clear. Petitioner does not allege that potential radioactivity releases from Yucca Mountain will exceed the EPA standard or that the EPA standard is somehow inadequate. Therefore, that issue is not addressed further.

42 *See Virginia Electric and Power Co.,* (Combined License Application for North Anna Unit 3), LBP-08-15, 68 NRC__ (slip op. at 52-54) (Aug. 15, 2008), *Tenn. Valley Auth.*, (Combined License Application for Bellefonte Nuclear Power Plant Units 3 and 4), LBP-08-864, __NRC__ (slip op. at 60-62) (Sept. 12, 2008), *Duke Energy Carolinas, LLC.,* (Combined License Application for William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, __NRC__ (slip op. at 28-30) (Sept. 22, 2008), *S. Nuclear Operating Co.,* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237 at 267-68; *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-70 (2004); *Sys. Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004).

and n.15; *Millstone*, CLI-01-24, 54 NRC at 364; *North Anna ESP Site*, LBP-04-18, 60 NRC at 269. The Commission's rules provide as follows:

> [W]ithin the scope of the generic determination in [§ 51.23(a)], no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the . . . reactor combined license . . . for which application is made, is required in any environmental report [or] environmental impact statement. . . prepared in connection with the issuance . . . of a combined license for a nuclear power reactor under [part 52].

10 C.F.R. § 51.23(b). Any request to reconsider the regulation must be pursued as a petition for rulemaking under 10 C.F.R. § 2.802.[43]

Petitioners also assert that the September 11, 2001 attacks against the United Sates constituted "significant and pertinent unexpected events that raise substantial doubts about the continuing validity" of the third and fourth findings of the revised Waste Confidence Decision. Petition at 44-46. Petitioners also request that the Commission revisit its policy not to consider the environmental impacts of terrorist attacks. *Id.* at 46.

However, the Commission and its licensing boards have consistently held that the NRC Staff does not need to consider, as part of its environmental review, terrorist attacks on nuclear power plants. In *Grand Gulf*, the Commission refused to admit a NEPA-terrorism

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[43] Petitioners cite *Minnesota v. NRC*, 602 F.2d 412, 416-17 (D.C. Cir. 1979), to support their argument that the ER is "fatally deficient" for failing to address ultimate disposal of spent reactor fuel. Pet. at 35. In *Minnesota v. NRC*, the Court of Appeals for the D.C. Circuit remanded to the Commission the issue of ultimate disposal of spent fuel in a case involving two license amendments. *Id.* at 419. The court, however, did not reverse the agency's determination that the amendments should be issued. *Id.* at 418. Rather, the court held that the petitioners were not entitled to an adjudicatory proceeding on issues related to the disposal of spent fuel and that the NRC "could properly consider the complex issue of nuclear waste disposal in a 'generic' proceeding such as a rulemaking, and then apply its determinations in subsequent adjudicatory proceedings." *Id.* at 416.

contention in a licensing proceeding. *Grand Gulf*, CLI-07-10, 65 NRC at 146. Relying on the reasoning in its prior *Oyster Creek* decision, the Commission stated: "The 'environmental' effect caused by third-party miscreants 'is. . . simply too far removed from the natural or expected consequences of agency action to require a study under NEPA.'" The claimed impact is too attenuated to find the proposed federal action to be the "proximate cause" of that impact. *Id.* at 146-47 (quoting *Oyster Creek*, CLI-07-08, 65 NRC at 129).

In *Oyster Creek*, the Commission also expressly rejected the assertion that the Ninth Circuit's decision in *Mothers for Peace* requires the NRC and its licensees to address the environmental costs of a successful terrorist attack on a nuclear plant. *See Oyster Creek*, CLI-07-08, 65 NRC at 128-29. The Commission explained that, while it was required to comply with the Ninth Circuit's remand in the *Diablo Canyon* proceeding, it "is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question." *Id.* Where a matter has been considered by the Commission, it may not be reconsidered by a Board. *See Va. Elec. & Power Co.* (North Anna Nuclear Power Station, Units 1 & 2), ALAB-584, 11 NRC 451, 463-65 (1980); *Vogtle*, LBP-07-3, 65 NRC at 269.

Further, to the extent Petitioners' request to "reconsider" the Waste Confidence Rule is treated as a request for waiver, Petitioners have not met any of the requirements for waiver pursuant to 10 C.F.R. § 2.335(b). The Commission has specified that "[t]he sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." *Id.*; *see also Millstone*, CLI-05-24, 62 NRC at 560-61. And, "[w]aiver of a Commission rule is simply not appropriate for a

generic issue." *Conn. Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-03-7, 58 NRC 1, 8 (2003) (citing *Metro. Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-80-16, 11 NRC 674, 675 (1980)). Petitioners here have not stated any unique circumstances related to the Calvert Cliffs facility that would justify waiving the applicable regulation for this generic issue. The Petitioners have, therefore, failed to establish that they meet any of the requirements imposed by the Commission on litigants requesting that a rule be waived or an exception be granted.

At bottom, the proposed Contention 6 and its supporting bases raise matters that are not within the scope of the proceeding and impermissibly seek to challenge a Commission regulatory requirement. *See* 10 C.F.R. §§ 2.309(f)(1)(iii), 2.335; *Vermont Yankee* and *Pilgrim*, CLI-07-3, 65 NRC at 17-18 and n.15; *Millstone*, CLI-01-24, 54 NRC at 364. Absent a showing of "special circumstances" under 10 C.F.R. § 2.335(b), which Petitioners have not made, this matter must be addressed through Commission rulemaking.

7. Contention 7: UniStar's Application to Build and Operate Calvert Cliffs Nuclear Power Plant Unit 3 Violates NEPA by Failing to Address the Environmental Impacts of the Waste that it Will Generate in the Absence of Licenses Disposal Facilities or Capability to Isolate the Radioactive Waste from the Environment.

This contention alleges that the application fails to offer a viable plan for disposal of low-level radioactive waste ("LLRW") because, as of June 30, 2008, the disposal facility in Barnwell, South Carolina no longer accepts Class B and Class C LLRW that is generated outside the Atlantic Compact Commission States of Connecticut, New Jersey, and South Carolina. Specifically, Petitioners argue that the application "does not address long term storage onsite" and that the ER should evaluate the impacts of licensing the site itself under 10 C.F.R. Part 61 or

Maryland's compatible agreement state regulations for Class B, Class C, and Greater-than-Class C ("GTCC") wastes. Pet. at 50.

Substantially similar contentions have been proposed in other COL proceedings. *See Virginia Electric and Power Company d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (Combined License Application for North Anna Unit 3), LBP-08-15, 68 NRC __ (Aug. 15, 2008); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant Units 3 and 4), LBP-08-16, 68 NRC __ (Sept. 12, 2008). In those two proceedings, the presiding licensing boards concluded that the issue of whether an applicant might someday require a permit under 10 C.F.R. Part 61 for a disposal facility is "too speculative at present" and is therefore not "material to the findings the NRC must make to support the action that is involved in" the COL proceeding. *See North Anna COL*, LBP-08-15, 68 NRC at (slip op. at 26); *Bellefonte COL*, LBP-08-16, __ NRC at (slip op. at 58). Both boards also concluded that the disposal of GTCC radioactive waste is not directly affected by the partial closure of the Barnwell disposal facility because the disposal of GTCC waste is the responsibility of the federal government. *See 42* U.S.C. § 2021c(b)(1)(D); *see also North Anna COL*, LBP-08-15, 68 NRC at n.86 (slip op. at 21 n.86); *Bellefonte COL*, LBP-08-16, 68 NRC at (slip op. at 58). Accordingly, both licensing boards declined to admit those portions of the proposed contentions. For the same reasons, those aspects of proposed Contention 7 are likewise inadmissible in this proceeding.

This leaves only the portions of the proposed contention relating to Class B and C wastes. These portions of the proposed contentions are also inadmissible. As an initial matter, Petitioners alleged omission rests on an incorrect premise. Petitioners assume that the lack of a licensed disposal site for Class B and C wastes necessarily means that the waste will remain

onsite indefinitely. Pet. at 50. However, under 10 C.F.R. Part 20, a power reactor licensee could transfer the material to another licensee that is licensed to accept and treat waste prior to disposal. 10 C.F.R. § 20.2001. The waste treatment facility would then be responsible for eventual waste disposal. *See, e.g.*, UniStar Exhibit 1.[44] Thus, even with the closure of Barnwell, there is a clear disposition path for removing Class B and C wastes from the Calvert Cliffs 3 site.

Further, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine issue. *See Millstone*, LBP-04-15, 60 NRC at 95-96. Here, petitioners mistakenly assert that the ER does not address the environmental impacts of the waste in the absence of licensed disposal facilities. To the contrary and as discussed below, the application clearly addresses both the plan for handling LLRW onsite and the environmental impacts of storing such waste.

In Section 3.5, the application states that the radioactive waste treatment systems are designed and operated to maintain, during normal operation, the radioactivity content of liquid and gaseous effluents from the site such that the dose guidelines expressed in Appendix I to 10 C.F.R. Part 50 (10 C.F.R. 50.34a), 40 C.F.R. Part 190, and 10 C.F.R. 20.1301(d) are met. The application then describes the radioactive waste treatment systems in considerable detail. For example, Section 3.5.2.1 discusses the Liquid Waste Storage System that collects liquid wastes from the plant, segregates the wastes based on their expected radioactivity and chemical composition, and stores them in the liquid waste storage tanks accordingly. Section 3.5.4

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[44] Studsvik, *Press Release*, "First contract signed with FPL for new U.S. waste model" (December 2, 2008). Studsvik will treat the Class B and C waste at its Erwin, Tennessee facility and thereafter take responsibility for storage and final disposal, for which a storage agreement has been reached with Waste Control Specialists in Texas. Constellation Generation Group has signed a similar contract with Studsvik.

discusses the Solid Waste Management System that collects, treats and stores the solid radioactive wastes produced throughout the plant. The Solid Waste Storage System serves to store the solid waste mentioned above, both before and after processing. The untreated solid waste is stored near its producing area until it is ready to be processed. Once treated, the solid waste, along with the treated concentrates, is stored in one of two areas. One area is a tubular shaft storage area for the high activity drums and the other is a temporary storage area for low to medium activity drums. Further, Section 3.5.4.1 describes the storage of spent resins in the resin waste tanks of the coolant purification system for an extended length of time to allow short lived activity to decay. The section also describes the processing of resin waste and notes that once processing is complete, the drum is picked up by the drum store crane and moved to the drum store for storage. Thus, the COL application clearly describes the handling and storage of low level waste onsite.

Section 3.5 also presents the estimated radioactivity of plant waste (*see, e.g.*, Tables 3.5-4, 3.5-10, 3.5-11 3.5-12), which is then used for the radiological environmental impact analyses during normal operation. That information is presented in, among others, Sections 5.4, 5.5, 5.7.6, and 5.7.7 of the application. These discussions demonstrate that the radioactive waste treatment systems keep doses to the public as low as reasonably achievable ("ALARA") and within the dose limits for individual members of the public as specified in 10 C.F.R. § 20.1301.

Importantly for contention admissibility purposes, the NRC's regulations (and thus the application) have previously addressed the health impacts associated with on-site storage

of such waste within Part 20 limits.[45] In promulgating the occupational and dose limits in Part 20, the NRC concluded that doses associated with the limits would have small health and environmental impacts. "Standards for Protection Against Radiation; Republication," 51 Fed. Reg. 1092, 1120 (Jan. 9, 1986); *see also*, *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, __ NRC (slip op. at 10-11) (Oct. 23, 2008). Thus, so long as the expected doses at Calvert Cliffs are within Part 20 limits (which they will be), the environmental and health impacts have been assessed.[46]

In addition, ER Section 5.7.7 evaluates the environmental impact from the anticipated occupational dose and states that the impact "is considered minor compared to the dose of 0.05 Sv/yr (5 rem/yr) to any individual worker permitted under 10 CFR Part 20." Other portions of the application also describe the environmental impacts of on-site waste storage. *See, e.g.*, Table 10.1-2 (page 10.0-13) (land use impact of onsite waste storage), Section 10.2.1.2 (same). Thus, there is no omission; there is no significant environmental impact of on site waste storage (regardless of duration); and the contention must be rejected.

To the extent that proposed contention is intended to be a safety contention as well, it is again inadmissible. Section 11.4.3 of the COL FSAR notes that the CCNPP Unit 3 Process Control Program ("PCP") describes, at the functional level, elements of the program.

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[45] As a prior licensing board noted, Table S-3 addresses the environmental impacts of the uranium fuel cycle. *North Anna COL*, LBP-08-15, 68 NRC at (slip op. at 25). The same board noted that Table S-3 does not address health effects from the effluents described in the Table. Nevertheless, contrary to the proposed contention, the health effects of on site storage have been addressed in the rulemaking establishing the occupational and public dose limits in 10 C.F.R. Part 20.

[46] Alternatively, to the extent that petitioners are challenging the existing Part 20 limits, the contention is an impermissible challenge to existing NRC regulations. 10 C.F.R. § 2.335.

This program description identifies the administrative and operational controls for waste processing, including parameters and surveillance requirements which demonstrate that the final waste products meet the requirements of applicable federal, state, and disposal site waste form requirements for burial at a 10 C.F.R. Part 61 licensed low level waste disposal site and will be in accordance with the guidance provided in RG 1.21, NUREG-0800, BTP 11-3, ANSI/ANS-55.1-1992 and Generic Letters 80-09, 81-38, and 81-39. The Calvert Cliffs Nuclear Power Plant, Unit 3 Process Control Program will follow NEI 07-10, "Generic FSAR Template Guidance for Process Control Program." This program ensures that doses to workers and members of the public are within regulatory limits both during on-site storage and incident to eventual decommissioning and disposal. Accordingly, there is no "omission" and the contention should be rejected.

Finally, the proposed contention is inadmissible because it fails to substantially call into question the conclusions in the ER and FSAR that waste can be stored indefinitely prior to eventual decommissioning and disposal within the applicable dose limits. A petitioner must provide sufficient information to demonstrate a genuine dispute with the applicant on a material issue. Here, Petitioners merely highlight short excerpts of the portions of the application that address waste treatment and storage. Petitioners do not allege that any portion of the application contains an incorrect assessment of doses or that that the processes and programs described in the application fail to protect public health and safety. Nor do Petitioners present any references to documents or other sources that would indicate any genuine material dispute. Thus, proposed Contention 7 should be rejected.

IV. CONCLUSION

For all of the above reasons, Petitioners lack standing and have not submitted an admissible contention. Accordingly the petition to intervene and request for hearing should be denied.

Respectfully submitted,

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Dated at Washington, District of Columbia
this 15th day of December 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC AND UNISTAR NUCLEAR OPERATING SERVICES, LLC	)	Docket No. 52-016
	)	
(Calvert Cliffs Nuclear Power Plant, Unit 3)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "APPLICANTS' ANSWER TO PETITION TO INTERVENE" in the captioned proceeding have been served via the Electronic Information Exchange ("EIE") this 15th day of December 2008, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the captioned proceeding.

/s/ signed electronically by

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UNISTAR EXHIBIT 1

December 2, 2008

First contract signed with FPL for new U.S. waste model

Studsvik has signed a long term contract with FPL Group for the treatment of medium-level (Class B/C) waste at the facility in Erwin. This is the first contract for waste treatment that has been signed under Studsvik's new model for medium-level waste in the USA.

"The strong interest that we see from customers for this new model has convinced me that we will operate the waste treatment facility in Erwin profitably from 2009 and onwards," says Studsvik's CEO Magnus Groth. "The model offers a solution to a major problem for the American nuclear power industry. Our initiative means that customers now have a competitive and environmentally sound alternative for their medium-level waste."

Contract negotiations according to this model are under way with several customers. Studsvik will re-start the Erwin facility for waste treatment in December when it starts receiving waste from FPL Group under the new contract.

The contract with FPL Group lasts through 2013. FPL Group operates 8 commercial nuclear power reactors, and with annual revenues of more than $15 billion and a presence in 27 states is one of the largest providers of electricity-related services in the United States.

Studsvik launched its new business model for the treatment of medium-level waste in the USA after obtaining necessary licenses in October. In the model, Studsvik will treat the waste at the Erwin facility in the same way as before and thereafter take responsibility for storage and final disposal, for which a storage agreement has been reached with Waste Control Specialists (WCS) in Texas.

"Our relationship with WCS is essential," states Lewis Johnson, President of Studsvik Inc. "The ability of our two companies to come together to provide this solution for the nuclear industry ensures a continuous waste management path to our customers."

Studsvik has been treating and reducing the volume of medium-level wet waste from the American nuclear power industry, mainly ion exchange resins, since the early 2000s. After treatment, the residual products were previously sent for final disposal to the Barnwell disposal facility in South Carolina. Since July this facility only accepts waste from three of the United States' 50 states, leaving most of the American nuclear power industry without access to final disposal of medium-level waste.

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Facts about Studsvik
Studsvik offers a range of advanced technical services to the international nuclear power industry in such areas as waste treatment, decommissioning, engineering & services, and operating efficiency. The company has 60 years experience of nuclear technology and radiological services. Studsvik is a leading supplier on a rapidly expanding market. The business is conducted through five segments: Sweden, United Kingdom, Germany, USA and Global Services. Studsvik has 1 200 employees in 8 countries and the company's shares are listed on NASDAQ OMX Stockholm.