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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman
Dr. Charles N. Kelber
Dr. Peter S. Lam

In the Matter of DUKE COGEMA STONE & WEBSTER (Savannah River Mixed Oxide Fuel Fabrication Facility)	Docket No. 070-03098-ML ASLBP No. 01-790-01-ML December 6, 2001

MEMORANDUM AND ORDER
(Ruling on Standing and Admissibility of Contentions)

Before the Licensing Board is the question whether any of the Petitioners filing intervention petitions in response to the Commission's notice of opportunity for hearing on the application of Duke Cogema Stone & Webster (DCS) to construct a mixed oxide fuel fabrication facility (MFFF) near Aiken, South Carolina, have standing to intervene. Also before the Board is the question whether any of the 67 contentions proffered by the Petitioners are admissible in this Commission-modified, 10 C.F.R. Part 2, Subpart L, informal proceeding. In order to be admitted as a party to the proceeding, each Petitioner must establish standing to intervene as well as proffer at least one admissible contention.

For the reasons set out below, Petitioners Environmentalists, Inc. (EI), Georgians Against Nuclear Energy (GANE), and Joint Petitioners Blue Ridge Environmental Defense League and Donald J. Moniak (collectively BREDL), have established their standing to intervene. Petitioner Edna Foster has failed to establish her standing to intervene. Therefore,

her intervention petition must be denied. Additionally, Petitioner GANE has proffered a number of admissible contentions and Petitioner BREDL has proffered at least one admissible contention; hence, their intervention petitions are granted, and they are admitted as parties to the proceeding. Petitioner EI has failed to proffer any admissible contentions. Therefore, EI's intervention petition is denied.

I. Background

On February 28, 2001, DCS, a government contractor, filed a construction authorization request (CAR) seeking permission to build an MFFF on the United States Department of Energy's Savannah River Site (SRS) in South Carolina. See 66 Fed. Reg. 19,994, 19,995 (Apr. 18, 2001). According to the Environmental Report that is part of the DCS application, the 310-square mile federally-owned SRS is a roughly circular tract of land within Aiken, Barnwell, and Allendale Counties bounded for 17 miles on its southwestern border by the Savannah River. See DCS Mixed Oxide Fuel Fabrication Facility Environmental Report (Dec. 19, 2000) (Rev. 0) at 4-1 [hereinafter ER]. Within the SRS, the MFFF will be located adjacent to the north-northwest corner of the 395-acre F-Area on a 41-acre site that lies within Aiken County, 5.8 miles from the nearest SRS site boundary. See id. at 4-1 to 4-2. The largest nearby population centers are Augusta, Georgia and Aiken, South Carolina. See id. at 4-1. Although the site description in the ER does not disclose either the actual distances between the proposed MFFF and Aiken or any other cities or towns, it states that the "center" of the F-Area lies approximately 25 miles southeast of Augusta and that the towns of New Ellenton, Jackson, Barnwell, Snelling, and Williston, South Carolina are "within" 15 miles of the center of the F-Area. See id.

The MFFF is designed to operate for 20 years and convert 36.4 tons of surplus weapons-grade plutonium oxide into mixed oxide (MOX) fuel through a series of chemical and other processes that ultimately blends plutonium dioxide powder with uranium dioxide powder,

forms the mixture into fuel pellets, inserts the pellets into fuel rods, and then bundles the rods into fuel assemblies. See id. at 1-2. The MFFF has an annual design throughput of 3.8 tons of plutonium. See id. After manufacture, it is currently anticipated that the MOX fuel will be shipped to, and subsequently irradiated in, four "mission" reactors at Duke Energy Corporation's Catawba Nuclear Station (Units 1 and 2) near York, South Carolina and McGuire Nuclear Station (Units 1 and 2) near Huntersville, North Carolina. See id. Although the Department of Energy (DOE) will own the facility, DCS will be the license holder. See id. at 1-1. DOE has contracted with DCS to design, construct, operate, and deactivate, although not decommission, the MFFF. After deactivation, the facility will be turned over to DOE for ultimate disposition. See id.

Along with the MFFF, two other proposed facilities requiring no NRC licensing will be located at the SRS: a Pit Disassembly and Conversion Facility (PDCF) and a Plutonium Immobilization Plant (PIP). As its name indicates, the PDCF will disassemble the pits from nuclear weapons and, inter alia, convert the recovered weapons-grade plutonium into plutonium dioxide for feedstock for the MFFF and the PIP. See id. at 1-3 to 1-4. For its part, the PIP will immobilize surplus plutonium into ceramic pucks for insertion into canisters at an existing DOE SRS facility, the Defense Waste Processing Facility, as part of high-level waste packages for subsequent disposal. See id. at 1-4. Together, the proposed MFFF along with the other SRS facilities are intended to provide DOE with the means to carry out its surplus plutonium disposition strategy.

After receiving the DCS application, the Commission published a hearing notice on April 18, 2001. See 66 Fed. Reg. at 19,994. In addition to affording an opportunity for a hearing on the DCS application, the Commission indicated that because the CAR was "a necessary first step in a process potentially leading to the issuance of a 10 C.F.R. Part 70 materials license, the informal hearing procedures contained in 10 C.F.R. Part 2, Subpart L are

generally applicable." Id. at 19,995. The Commission stated, however, that "[t]o enhance the effectiveness of the adjudicatory process . . . additional procedures . . . will be used" in the informal proceeding. Id. Specifically, it directed that a single presiding officer, either with or without technical assistants as called for under Subpart L, or a three-judge licensing board as required in formal proceedings under 10 C.F.R. Part 2, Subpart G, could preside over the case, and that petitioners must file contentions pursuant to Subpart G, 10 C.F.R. § 2.714(b)(2), instead of highlighting germane areas of concern as in Subpart L informal proceedings. See id. at 19,996. Although discovery is not permitted in informal Subpart L proceedings, the Commission directed that "limited discovery (by deposition, interrogatory, or both) from non-NRC sources . . . will be permitted." Id. Finally, in place of the presentation procedures of Subpart L, 10 C.F.R. § 2.1235, the Commission restricted all testimony to that of experts filed in affidavit form. In this regard, the Commission directed that any party filing expert witness affidavits must make the expert available for questioning by the presiding officer, retaining the Subpart L procedure that the parties may propose questions to the presiding officer to ask the expert. See id.

In response to the Commission's hearing notice, Petitioners Edna Foster, EI, GANE, and BREDL filed timely hearing requests and intervention petitions.[1] Subsequently, DCS filed answers opposing each petition.[2] On June 14, 2001, the Commission issued an order referring

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[1]See letter from Edna Foster, 120 Balsam Lane, Highlands, North Carolina to NRC (undated); Environmentalists, Inc. Request for Hearing and Petition to Intervene (facsimile dated May 18, 2001) [hereinafter EI Petition]; Georgians Against Nuclear Energy Request for Hearing (May 17, 2001) [hereinafter GANE Petition]; Blue Ridge Environmental Defense League Request for Hearing Regarding Mixed Oxide (MOX) Fuel Fabrication Facility (May 17, 2001) [hereinafter BREDL Petition].

[2]See Duke Cogema Stone & Webster's Answer to Edna Foster's Request for Hearing (June 5, 2001); Duke Cogema Stone & Webster's Answer to Environmentalists, Inc. Request for Hearing and Petition to Intervene (June 4, 2001) [hereinafter DCS Answer to EI Petition]; Duke Cogema Stone & Webster's Answer to Georgians Against Nuclear Energy's Request for

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the four intervention petitions to the Atomic Safety and Licensing Board Panel for appropriate action. See CLI-01-13, 53 NRC 478 (2001). In its order, the Commission reiterated the scope of the proceeding and the hearing procedures previously outlined in the hearing notice, stating with regard to the substitute procedures it ordered that "[h]ad we not taken this step, the exclusive use of Subpart L procedures would most likely have led to an entirely paper proceeding in this case." Id. at 480. The Commission's referral order also detailed an aggressive proposed schedule for conducting and completing the proceeding. See id. at 484-86.

On June 15, 2001, this three-member Licensing Board was established to conduct the proceeding. See 66 Fed. Reg. 33,276 (June 21, 2001). The NRC Staff then filed its answer addressing the four intervention petitions as well as a notice pursuant to 10 C.F.R. § 2.1213, indicating that the Staff would participate as a party.[3] In accordance with the Commission's referral order and the schedule set by the Licensing Board, Petitioners EI, GANE, and BREDL each filed amendments to their intervention petitions on July 30, 2001,[4] and DCS and the Staff filed responses.[5] The same Petitioners each then filed their proffered contentions.[6] DCS and

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[2](...continued)
Hearing (June 1, 2001) [hereinafter DCS Answer to GANE Petition]; Duke Cogema Stone & Webster's Answer to Blue Ridge Environmental Defense League's Request for Hearing (May 29, 2001) [hereinafter DCS Answer to BREDL].

[3]See NRC Staff's Answer to Hearing Request of Donald Moniak, Blue Ridge Environmental Defense League, Georgians Against Nuclear Energy, Environmentalists, Inc., and Edna Foster (June 25, 2001) [hereinafter Staff Answer].

[4]See Environmentalists, Inc. Amendment (July 30, 2001) [hereinafter EI Amended Petition]; Georgians Against Nuclear Energy's Amended Petition to Intervene (July 30, 2001) [hereinafter GANE Amended Petition]; Blue Ridge Environmental Defense League and Donald Moniak Additional Filings on Standing (July 30, 2001) [hereinafter BREDL Amended Petition].

[5]See Duke Cogema Stone & Webster's Answer to Environmentalists, Inc. Amendment to Request for Hearing and Petition to Intervene (Aug. 10, 2001) [hereinafter DCS Answer to EI Amended Petition]; Duke Cogema Stone & Webster's Answer to Georgians Against Nuclear
(continued...)

the Staff filed responses.[7] On September 21, 2001, the Board convened a prehearing conference in North Augusta, South Carolina and heard argument on the standing of the Petitioners to intervene and the admissibility of each Petitioners' proffered contentions.

II. Standing

Under the Commission's Rules of Practice for informal Subpart L materials licensing proceedings, a petitioner requesting a hearing and seeking to intervene must "meet the judicial standards for standing," 10 C.F.R. § 2.1205(h), as the first of two prerequisites for admission as a party to a proceeding. As the Commission has frequently reiterated, to demonstrate standing a petitioner must assert an actual or threatened, concrete and particularized injury in fact falling within the zone of interests protected by the statutes governing NRC proceedings that is fairly traceable to the challenged licensing action and is likely to be redressed by a favorable decision. International Uranium (USA) Corporation (White Mesa Uranium Mill), CLI-01-18,

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[5](...continued)
Energy's Amended Petition to Intervene (Aug. 10, 2001) [hereinafter DCS Answer to GANE Amended Petition]; Duke Cogema Stone & Webster's Answer to Blue Ridge Environmental Defense League and Donald Moniak Additional Filings on Standing (Aug. 10, 2001) [hereinafter DCS Answer to BREDL Amended Petition]; NRC Staff's Response to Supplemental Filings on the Issue of Standing (Aug. 10, 2001) [hereinafter Staff Answer to Amended Petitions].

[6]See Environmentalists, Inc. [Contentions] Amendment to Petition to Intervene (Aug. 13, 2001) [hereinafter EI Contentions]; Georgians Against Nuclear Energy Contentions Opposing a License for Duke Cogema Stone & Webster to Construct a Plutonium Fuel Factory at Savannah River Site (Aug. 13, 2001) [hereinafter GANE Contentions]; Blue Ridge Environmental Defense League and Donald Moniak Submission of Contentions Regarding the Proposed MFFF (Aug. 13, 2001) [hereinafter BREDL Contentions].

[7]See Duke Cogema Stone & Webster's Answer to Environmentalists, Inc. Amendment to Petition to Intervene (Sept. 12, 2001) [hereinafter DCS EI Contention Response]; Duke Cogema Stone & Webster's Answer to Proposed Contentions Filed by Georgians Against Nuclear Energy (Sept. 13, 2001) [hereinafter DCS GANE Contention Response]; Duke Cogema Stone & Webster's Answer to Blue Ridge Environmental Defense League and Donald Moniak Submission of Contentions Regarding the Proposed MFFF (Sept. 12, 2001) [hereinafter BREDL Contention Response]; NRC Staff's Response to Contentions Submitted by Donald Moniak, Blue Ridge Environmental Defense League, Georgians Against Nuclear Energy, and Environmentalists, Inc. (Sept. 12, 2001) [hereinafter Staff Contention Response].

54 NRC 27, 30 (2001); Sequoyah Fuels Corporation (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13 (2001); Quivira Mining Company (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998). The same showing of injury, causation, and redressability is necessary regardless of whether a petitioner is an individual or an organization seeking to intervene in its own right. Yankee Atomic Electric Company (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). When a membership organization seeks to intervene as the representative of its members, however, the petitioning organization must show that one of its individual members, who has authorized the organization to represent his interests, has standing to intervene. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998); Georgia Tech, CLI-95-12, 42 NRC at 115. Additionally, the petitioning organization must demonstrate that the interests it seeks to protect are germane to its purposes and that neither the claim it asserts nor the relief it requests require the participation of an individual member in the proceeding. Private Fuel, CLI-98-13, 48 NRC at 30-31. Finally, in determining whether a petitioner has standing to intervene, a licensing board must construe the petition in a light most favorable to the petitioner regardless of whether the petitioner is an individual or an organization. Georgia Tech, CLI-95-12, 42 NRC at 115.

In accordance with the terms of the Commission's referral order, CLI-01-13, 53 NRC at 484, the Licensing Board provided the Petitioners an opportunity to amend their intervention petitions, and all except Ms. Foster filed such amendments. Thus, the Petitioners' initial intervention petitions must be read in conjunction with the subsequent amendments in assessing whether the Petitioners have standing. Ms. Foster's initial handwritten petition requests, without more, a hearing on the MFFF and the future use of MOX fuel at Oconee, South Carolina, which she states is located near her. Because Ms. Foster's petition does not

particularize any injury caused by the MFFF, it is facially insufficient to establish her standing to intervene and the petition must be denied.

In their intervention petitions, EI, GANE, and BREDL each make extended and extensive presentations on standing. EI states that it is a non-profit corporation of over 40 members organized under the laws of South Carolina dedicated to protecting the health, safety, and welfare of the citizens of South Carolina, preserving the State's natural environment, and preventing environmental pollution by harmful contaminants, including radioactivity. See EI Petition at 1. GANE states that it is a Georgian environmental membership organization founded in 1978 whose purpose is to phase out nuclear power, promote conservation and sustainable energy sources, abolish the global use of nuclear weapons, and promote the formation of ethical social policies for the handling and containment of nuclear waste. See GANE Amended Petition at 1-2. Finally, BREDL indicates that it is an environmental organization founded in 1984 with chapters and members in North and South Carolina. See BREDL Amended Petition, Aff. of Janet Marsh Zeller (July 30, 2001) at 1. Because we find that each of these organizations has established its representational standing by demonstrating that one of its members, who has authorized the organization to represent him or her, has standing, we need not freight this Memorandum with an analysis of the Petitioners' various claims of organizational standing. Further, because our determination of representational standing is based upon a common claim of standing by at least one member of each of these organizations based upon the transport of MOX fuel, we need not burden this decision with an analysis of the numerous other claims of standing in the intervention petitions. With respect to the Petitioners' other standing claims, however, it should be noted that DCS does not oppose some of GANE's claims of representational standing, although it challenges the standing of EI, BREDL, and Donald Moniak. See DCS Answer to GANE Amended Petition at 1; DCS Answer to EI Amended Petition at 2-14; DCS Answer to BREDL Amended Petition

at 3-13. For its part, the Staff concedes that EI, GANE, and Donald J. Moniak, an individual member of BREDL and its representative here, have standing on some of these other grounds. The Staff, however, argues that BREDL has not established its representational standing on the basis of Mr. Moniak's standing. See Staff Answer to Amended Petitions at 2.[8]

In their intervention petition, EI, GANE, and BREDL all claim representational standing on the basis of the harm to one or more of their members from the unwanted radiation dose those members will likely receive by being in close proximity to a shipment of MOX fuel on the same roads over which the MOX fuel will likely be transported from the MFFF to the Catawba and McGuire reactors. In this regard, EI's intervention filings indicate that the release of radioactive materials during transport will adversely affect its members and their interest in, and right to travel on, public highways. See EI Petition at 3. Its petition states that because of the uncertainties surrounding the transportation of plutonium and other nuclear materials, it is not possible to predict with accuracy which of its members are most likely to be harmed or the extent of the damage, but that its members will be adversely affected in "[t]heir interest in and right to know which highways and roads are safest for travel in terms of protecting themselves and their families from the dangers of being close to trucks carrying Mixed-oxide fuel." Id. at 4. Finally, EI's petition specifically identifies a number of its members who live 10 to 20 miles from

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[8]Even though the Staff concedes that some of the assertions in the BREDL pleadings establish Mr. Moniak's standing as an individual, the Staff argues that BREDL has not established its representational standing on the basis of Mr. Moniak's standing apparently because it concludes that Mr. Moniak has not authorized BREDL to represent his interests in the proceeding. See Staff Answer at 14, 24. Mr. Moniak filed a signed and witnessed statement, however, expressly asserting that he was a member of BREDL and that he authorized BREDL to represent his interests in the proceeding. BREDL Amended Petition, Aff. of Donald J. Moniak (July 30, 2001) at 1. Although mislabeled as an "affidavit," Mr. Moniak's statement is merely a declaration because it is not a sworn statement executed before a notary. There is no regulatory requirement, however, that this information must be set forth in an affidavit. See Shieldalloy Metallurgical Corp. (Cambridge, Ohio Facility), CLI-99-12, 49 NRC 347, 354 & n.4 (1999). In the circumstances presented, Mr. Moniak's declaration is sufficient to establish his authorization of BREDL to represent his interests in this proceeding.

the SRS or the mission reactors, including EI members Gregg and Nancy Jocoy who, the petition states, live approximately 10 miles from the Catawba Nuclear Station, travel over the roads that will be used to transport mixed oxide fuel to the reactors and "are informed and believe" that their interests will be harmed by the construction of the MFFF. Id. Along with its petition, EI included the affidavits of Gregg Jocoy and Nancy Jocoy declaring, inter alia, that they authorize EI to represent their interest in the proceeding and that the release of radiation during transport of mixed oxide fuel would greatly increase the risk to their health. See EI Amended Petition, Aff. of William Gregg Jocoy (May 15, 2001); Aff. of Nancy Lynn Jocoy (May 15, 2001).

In the same vein as EI's intervention pleadings, GANE's petition claims standing by virtue of the harm to its member Susan Bloomfield from the radiological impact of transporting plutonium in close proximity to her over the highways she travels. See GANE Amended Petition at 3-4. In its petition, GANE proffers that "[a]s demonstrated in Appendix L of the DOE's Surplus Plutonium Disposal Final Environmental Impact Statement (Nov. 1999), impacts of transporting plutonium under normal conditions include vehicle exhaust and radiological doses of up to 10 mrem/hour at two meters from the vehicle." Id. at 3-5 n.1. GANE's petition claims that "Ms. Bloomfield wishes to avoid any incremental exposure to radiation, including doses that she may get during uneventful transportation of plutonium" and that "[e]ven a 'minor' public exposure may constitute grounds for establishing standing." Id. In a sworn declaration accompanying GANE's pleadings, Ms. Bloomfield asserts that she is a member of GANE, has authorized GANE to represent her interests in the proceeding, and that she is concerned about future shipments of plutonium on the roads near her home because the "exposure to radiation and vehicle exhaust from these shipments could injure my health." Id., Aff. of Susan Bloomfield (July 26, 2001) at 1.

Among the multitude of standing claims in its intervention petition, BREDL asserts that its members will be affected by the direct impacts of transportation of MOX fuel over the public highways of North and South Carolina. See BREDL Petition ¶ 7. According to their petition, "BREDL members drive on, live along, and recreate near transport routes that will be used for shipping plutonium fuel" and "[t]he shipping of plutonium fuel from SRS to MOX fuel irradiation facilities will affect members by . . . impacting public health." Id. ¶ 7a. BREDL asserts that "[t]he MOX fuel option substantially increases DOE radioactive material shipments in the area between SRS and irradiation facilities, and thus poses an unnecessary risk of harmful exposure to doses of ionizing radiation during incident free transportation operations." Id. ¶ 7a.i. Joint Petitioners' intervention filings also include the affidavit of, inter alia, Frank Carl stating that he is a member of BREDL, and that he authorizes BREDL to represent his interests in the proceeding. See BREDL Amended Petition, Aff. of Dr. Frank Carl (July 30, 2001) at 1. In his affidavit, Dr. Carl asserts that he resides approximately 6 miles from the Catawba Nuclear Station and 23 miles from the McGuire Nuclear Station and, because of his work and other activities, he frequently drives over various named state and interstate highways that likely will be used to transport MOX fuel to the mission reactors. See id. at 1-2. Additionally, his affidavit states that

> I will have no way of knowing if I am being exposed to potentially harmful and certainly higher than normal levels of ionizing radiation because the transportation vehicles will not be marked. I will have no way of knowing if I can avoid the routes because they will not be publicly acknowledged by the U.S. Department of Energy or Duke Cogema Stone and Webster.

Id. at 2.

We find that Petitioners EI, GANE, and BREDL have each demonstrated representational standing by showing that at least one of their respective members has standing, i.e., has stated an injury in fact falling within the zone of interests protected by the

Atomic Energy Act, that is fairly traceable to the construction of the MFFF, and is likely to be redressed by a decision favorable to the Petitioners. Initially, EI through its members Gregg and Nancy Jocoy, GANE through its member Susan Bloomfield, and BREDL through its member Frank Carl, have all established that their respective members have authorized the Petitioners to represent their interest in the proceeding. Each of these individuals also has stated an injury in fact. They all have asserted the threatened harm to their health from unwanted doses of ionizing radiation from the MOX fuel that will be transported from the MFFF to the mission reactors over the same public highways the Petitioners' members travel because of their close geographic proximity to the MFFF or the mission reactors. As the intervention petitions indicate, incident-free shipping of plutonium provides a dose of ionizing radiation, albeit small, to anyone next to the transport vehicle and a minor exposure to radiation, even one within regulatory limits, is sufficient to state an injury in fact. See Yankee Atomic Electric Company (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996). Further, the asserted harm here -- injury to the health and safety of Petitioners' members from ionizing radiation -- is clearly encompassed by the health and safety interests protected by the Atomic Energy Act.

Nor is there any doubt that the injury alleged by the Petitioners' members is fairly traceable to the construction and subsequent manufacture and shipping of MOX fuel. Because the transport of MOX fuel to the mission reactors over the public highways on which Petitioners' members travel cannot take place without the construction of the MFFF, it cannot fairly be argued that the threatened injury to the Petitioners' members is not caused by the challenged licensing action. Indeed, the unique circumstances surrounding the transportation of MOX fuel over unannounced routes with unannounced schedules in unmarked trucks precludes the Petitioners' members from being able to avoid the asserted harm to their health from the shipment of plutonium over the public highways. Additionally, and most obviously, the asserted

injury to the health of the Petitioners' members would be redressed by a decision favorable to the Petitioners denying the DCS construction authorization for the MFFF. Finally, the interests that EI, GANE, and BREDL seek to protect by challenging the DCS construction authorization request are clearly germane to the purposes of the environmental membership organizations and neither the claims asserted in any of their proffered contentions nor the relief sought by the Petitioners requires the participation of an individual member in the proceeding. Accordingly, EI, GANE, and BREDL have each established their standing to intervene.[9]

In their answers to the Petitioners' intervention petitions, DCS and the Staff oppose the Petitioners' claims of representational standing based upon the standing of their members' exposure to ionizing radiation from the transport of MOX fuel, arguing that the subject of MOX fuel transportation is outside the scope of the proceeding and, therefore, cannot form the basis for Petitioners' standing. See DCS Answer to EI Petition at 7-8; DCS Answer to GANE Petition at 9; DCS Answer to BREDL Petition at 11; Staff Answer at 15, 36, 41. Relying on two earlier Licensing Board rulings, DCS also argues that similar transportation claims have been rejected

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[9]The intervention petition of BREDL was filed as a joint petition with Mr. Moniak, a member of BREDL and its representative in this proceeding, also seeking to intervene as an individual. See BREDL Petition ¶¶ 1, 6 n.9. Mr. Moniak's declaration filed as part of the Joint Petitioners' amended petition also makes clear that he is a member of BREDL. See BREDL Amended Petition, Aff. of Donald J. Moniak at 1. As previously indicated (see supra p. 11), the Joint Petitioners' intervention filings assert that BREDL members, which necessarily includes Mr. Moniak, travel on the public highways over which MOX fuel likely will be transported and thus risk exposure to ionizing radiation from such transport. Additionally, the assertions in the Joint Petitioners' intervention petition make it clear that Mr. Moniak travels on the likely MOX fuel transport routes. See BREDL Petition ¶ 6 & n.10; BREDL Amended Petition, Aff. of Donald Moniak. Therefore, the Joint Petitioners' intervention filings also establish Mr. Moniak's standing on the basis of the transportation of MOX fuel from the MFFF to the mission reactors. In any event and as the Staff, but not DCS (see supra p. 9), concedes, the Joint Petitioners' intervention petition establishes Mr. Moniak's standing on the basis, inter alia, of his residing and growing food for his consumption in Aiken, South Carolina, some 19 miles from the proposed MFFF, which property, in the event of a major accident at the MFFF, could become contaminated with radioactivity. See, e.g., Allied-General Nuclear Services (Barnwell Fuel Receiving and Storage Station), ALAB-328, 3 NRC 420, 423-24 (1976). Accordingly, Mr. Moniak also has established his standing to intervene.

in the past, while the Staff argues that the assertions of transportation-related injury by the Petitioners' members are too speculative to support claims of standing. See, e.g., DCS Answer to EI Petition at 8-9; Staff Answer at 36. Each of these arguments by DCS and the Staff lack merit.

As DCS and the Staff should be well aware, the scope of an agency licensing proceeding is delineated by the Commission's notice of hearing and referral order. See Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985). Here the Commission's hearing notice specifically and clearly states that "contentions are expected to focus on the CAR, the December 2000 environmental report, and/or the January 2001 quality assurance plan submitted by DCS." 66 Fed. Reg. at 19,996. It is, of course, a fundamental principle of NRC adjudication that the subject matter of all contentions is limited to the scope of the proceeding. See Gulf States Utilities Co. (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994); Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-171 (1976)). Accordingly, by directing in the notice of hearing that contentions must be focused on the DCS ER, the Commission necessarily placed the matters encompassed by the ER within the scope of the proceeding. Among the many matters addressed, the ER deals extensively with the transportation of MOX fuel from the MFFF to the mission reactors. For example, section 1.2.6 of the ER states that "[b]ecause one mission reactor site was eliminated since the publication of the SPD EIS [DOE's Surplus Plutonium Disposition Environmental Impact Statement], the environmental impacts of MOX fuel transport to the mission reactors are reevaluated in this ER." ER at 1-5. In section 5.4, entitled "Transportation," a section with 11 subsections, the ER states that "[a]n assessment of the human health risks of the overland transport of radioactive materials is crucial to a complete appraisal of the environmental impacts of the MFFF." ER at 5-25. The ER then presents an analysis of the impacts of incident-free transportation and

those due to transportation accidents, including both nonradiological and radiological impacts. Subsection 5.4.3, entitled "MOX Fuel," and subsections 5.4.3.1 and 5.4.3.3 address the impacts of incident-free transportation, including the impacts on maximally exposed individuals such as a person stuck in traffic for 30 minutes next to a shipment of MOX fuel receiving a dose of 2 mrem with the dose rising proportionately to the length of exposure. See ER at 5-27 to 5-28. Finally, in a 28-page Appendix E, the ER sets out DCS's transportation risk assessment which reveals that there will be 238 MOX fuel shipments to Catawba and 212 to McGuire, and states that "[b]ecause of the classified nature of SGT shipments, the actual routes used and shipment schedule will not be publicly available." Id., App. E at E-6; see id. at E-21. Thus, contrary to the arguments of DCS, which authored the ER, and the Staff, which is charged with reviewing it, the subject of the transportation of MOX fuel is extensively addressed in the ER, clearly making this a subject within the scope of the proceeding.

DCS's skeletal argument relying upon two prior Licensing Board standing rulings also is unpersuasive. The factual circumstances of both cited cases are readily distinguishable from the Petitioners' assertions establishing their standing here. In Northern States Power Company (Pathfinder Atomic Plant), LBP-90-3, 31 NRC 40, 42-43 (1990), an organization alleged that the health of one of its officers, living a mile off Interstate 90 in Rapid City, North Dakota, 350 miles from the decommissioned Pathfinder plant, would be harmed by an increased risk of cancer from radioactivity from an accident on the assigned interstate route involving truck shipments of low-level waste enroute to the Hanford, Washington disposal site. The Presiding Officer in Pathfinder determined that "the link between the injury claimed and the proposed licensing activity remains absent," and the fact that "radioactive waste will be transported if decommissioning is authorized does not ipso facto establish that there is a reasonable opportunity for an accident to occur at Rapid City, or for the radioactive materials to escape because of [an] accident or the nature of the substance being transported." Id. at 43. Unlike

Pathfinder, where the critical causal link between the asserted injury and the licensing activity was found absent, the Petitioners here, as previously explained, have adequately established that nexus. Unlike the Petitioners here, in Pathfinder there was no assertion that the officer regularly used the same roads as the shipments likely would travel, that a person traveling on the road next to the truck shipment would receive an unwanted dose, albeit small, of ionizing radiation, and that the harm could not be avoided because information about the shipments would not be public. Rather, in Pathfinder, the officer merely claimed, without more, that an accident on the interstate near his home by a truck carrying low-level waste would harm him. The officer made no showing of how a transportation accident would happen to occur near his home along hundreds of miles of interstate shipping routes or how, in an accident, radioactivity would be released to the environment, or how, if released, the low-level radioactive material involved could cause him harm at his residence. Putting aside the fact that the Presiding Officer's unreviewed ruling in Pathfinder is not binding precedent, the factual circumstances asserted by the Petitioners here clearly establish their standing and these circumstances are not comparable, or even similar, to those asserted in Pathfinder.

DCS's reliance on the Licensing Board's ruling in Exxon Nuclear Company, Inc. (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518 (1977) is similarly misplaced. In Exxon, a resident of Nashville, Tennessee, sought to intervene in the construction permit proceeding for a proposed reprocessing facility in Oak Ridge claiming that spent fuel shipped by rail would likely travel over the L & N Railroad tracks very near her property causing her bodily harm if an accident occurred close to her home. See id. at 519. In denying standing, the Licensing Board held that the allegation of injury was "entirely speculative in nature, being predicated on the tenuous assumptions that the spent fuel will be shipped by the named carrier and that an accident might occur in the area proximate . . . to her residence." Id. at 520. Without reiterating all the Petitioners' standing assertions, it suffices to note that, unlike the

standing claims in Exxon, the Petitioners' claims of injury from the transport of MOX fuel are far more specific in detailing a real, threatened injury and are neither so conjectural nor problematic as to be speculative for purposes of establishing standing. Although the Petitioners have not established the probability of their members receiving an unwanted dose of ionizing radiation from traveling the same highways over which MOX fuel will be transported between the MFFF and the mission reactors, no such precision is required. In light of the secrecy surrounding the transport of MOX fuel, the Petitioners cannot reasonably be expected to do more. Indeed, the fact that the ER reveals that there will be 450 MOX fuel shipments to the mission reactors over the life of the MFFF serves to validate that the Petitioners' assertions of harm fall well within the realm of threatened injuries sufficient to establish standing.[10] Accordingly, DCS's reliance on the Licensing Board ruling in Exxon is wide of the mark. For the same reasons, the Staff's claims that the Petitioners' standing assertions are speculative and without merit.

III. Contentions

As earlier indicated, the Commission's hearing notice and referral order modified the informal Subpart L hearing procedures for the MFFF construction authorization proceeding to require that petitioners file contentions pursuant to 10 C.F.R. § 2.714(b). Thus, in addition to establishing standing, each petitioner also must proffer at least one admissible contention in order to be admitted as a party. See 10 C.F.R. § 2.714(b)(1). In order to be admissible, a contention must specify the precise issue of law or fact being raised. 10 C.F.R. § 2.714(b)(2).

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[10]Moreover, it should be noted that both DCS and the Staff concede that GANE established its representational standing based upon Ms. Bloomfield's standing as an individual residing 20 miles from the MFFF and claiming harm to her health from radioactivity from a major accident at the facility. See DCS Answer to GANE Amended Petition at 1; Staff Answer to Amended Petitions at 19-20. These standing concessions of DCS and the Staff would appear to be entirely inconsistent with their arguments here that the harm to Petitioners from the transport of MOX fuel is speculative unless it is accepted that the probability of a major accident at the MFFF spreading radioactivity 20 miles from the facility is significantly less than the probability of the Petitioners encountering a MOX fuel shipment on the highway.

In addition, section 2.714(b)(2)(i), (ii), and (iii) provides that each contention must be accompanied by:

> (i) A brief explanation of the bases of the contention.
>
> (ii) A concise statement of the alleged facts or expert opinion which support the contention . . . together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.
>
> (iii) Sufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include references to the specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief. On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report.

Finally, pursuant to section 2.714(d)(2)(ii), the contention cannot be one that, even if proven, would be of no consequence to the proceeding and entitle the petitioner to no relief.

The contention pleading criteria set forth in section 2.714(b)(2) are mandatory and must be scrupulously followed. As the Commission has stated, "[i]f any one of these requirements is not met, a contention must be rejected." Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149,155 (1991); accord Duke Energy Corp. (Oconee Nuclear Station Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1999); see Final Rule, Rules of Practice for Domestic Licensing Proceedings; Procedural Changes in the Hearing Process, Statement of Considerations, 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989) [hereinafter Procedural Changes in the Hearing Process]. The provisions of section 2.714 were specifically adopted by the Commission "to raise the threshold bar for an admissible contention" and prohibit "vague, unparticularized contentions" resulting from "notice pleading with the details . . . filled in later." Oconee, CLI-99-11, 49 NRC at 334, 338.

Further, it is the burden of the petitioner to come forward with contentions meeting the pleading rules. Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). A licensing board is not free to supply missing information or draw factual inferences on the petitioner's behalf. See Palo Verde, CLI-91-12, 34 NRC at 155-56. As emphasized in the Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998), "[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 in 10 C.F.R. § 2.714(b)(2)." The contention admissibility determination, however, does not involve a decision on the substantive merits of the proffered contentions. Rather, it is a determination that a genuine, legitimate dispute of material fact or law exists with respect to the issue in question such as to warrant a further inquiry by the Board. See, e.g., Mississippi Power and Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973).

In addition to the contention pleading requirements of section 2.714(b)(2), a number of other long-established principles of NRC adjudication also limit the subject matter of contentions. As previously noted, licensing boards have jurisdiction over those matters that the Commission commits to them in the various hearing notices and referral orders that identify the subject matters of the hearing. See Catawba, ALAB-825, 22 NRC at 790; Marble Hill, ALAB-316, 3 NRC at 170-71. A contention is therefore admissible only if it is within the scope of the proceeding outlined in the Commission's hearing notice and referral order. Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Units 1 and 2), ALAB-739, 18 NRC 335, 339 (1983). Secondly, a contention attacking or challenging a Commission rule or regulation is inadmissible and that inadmissibility bar applies to contentions proffering, for example, additional or stricter requirements than those that are imposed by the respective regulation. See 10 C.F.R. § 2.758; Oconee, CLI-99-11, 49 NRC at 334; Public Service Co. of New

Hampshire (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 416-417 (1989); Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982).

In this proceeding, both the Commission's notice of hearing and referral orders describe the scope of the proceeding. These Commission directives indicate first that the scope of the proceeding is bounded by the environmental and safety findings under 10 C.F.R. § 70.23(a)(7) and (b) that the agency must make in order to approve DCS's application to construct the MFFF. See 66 Fed. Reg at 19,995; CLI-01-13, 53 NRC at 483. As already noted (see supra p. 14), the notice of hearing states that the subject matter of admissible contentions must focus on the DCS CAR, ER, and quality assurance plan (QAP). A number of circumstances unique to the MFFF and its relationship to DOE's surplus plutonium disposition program place several additional restrictions on the subject matter of allowable contentions with regard to matters mentioned or referenced in the DCS environmental report. The MFFF is one of the facilities, along with DOE's proposed PDCF, PIP, and its already existing Defense Waste Processing Facility, that together are intended to carry out DOE's plutonium disposition strategy. Pursuant to federal statute, however, the MFFF, unlike the other two DOE proposed facilities, is required to be licensed by the NRC. See 42 U.S.C. § 5842 (Supp. V 1999). Because the MFFF is a component of DOE's multifaceted surplus plutonium disposition strategy, DOE has already conducted a number of environmental studies and issued a number of environmental impact statements as part of its overall surplus plutonium disposition program. These documents include two separate EISs -- the most recent version, Surplus Plutonium Disposition Final Environmental Impact Statement (DOE/EIS-0283) (Nov. 1999) [hereinafter SPD EIS], and its predecessor document, Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement (DOE/EIS-0229) (Dec. 1996) [hereinafter

PEIS]. In the PEIS, DOE originally analyzed 37 potential disposition alternatives, as well as a no-action alternative (i.e., all weapons-usable fissile material would remain at existing storage sites using appropriate safeguards and security measures) and a no disposition action alternative (i.e., all weapons-usable fissile material would remain in centralized storage). In addition, the PEIS analyzed each alternative for the full range of natural resource, human resource, and issue areas pertinent to the long term storage and disposition alternatives. The PEIS also considered six locations, including the SRS, for the long-term storage of plutonium and evaluated the same sites for the construction and operation of the various facilities needed for the disposition alternatives. See ER at 1-6 to 1-7.

After concluding that MOX fuel would be a significant part of the plutonium disposition plan in the PEIS, DOE prepared a subsequent EIS analyzing the alternatives for implementing the MOX fuel strategy, including a no-action alternative. The SPD EIS provides a general description of the MOX fuel facility and the MOX fuel fabrication process, along with a consideration of specific areas within the host site. Further, it considers the environmental impacts associated with transportation of plutonium to the plutonium disposition facilities, transportation of the MOX fuel to the mission reactors, and transportation of wastes for ultimate disposal. Additionally, consideration of wastes generated at the entire SRS was considered by DOE in the Savannah River Site Waste Management Final Environmental Impact Statement (DOE/EIS-0217) (July 1995) [hereinafter SRS Waste Management Final EIS]. Finally, the transportation and disposal of spent MOX fuel at a geologic repository was considered in another EIS prepared by DOE for its proposed Yucca Mountain project in its Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-0250D) (July 1999). See ER at 1-5.

These DOE environmental impact statements are obviously relevant to the MFFF because of the role of the MOX fuel facility in DOE's surplus plutonium disposition strategy. In such circumstances, the Commission's environmental regulations provide for the tiering, adoption, and incorporation of environmental impact statements of other federal agencies into the Commission's environmental impact statements. See 10 C.F.R. Part 51, Subpart A, App. A.1.(b). Although the NRC has yet to issue its EIS for the MFFF, the DCS ER is the foundation document for the agency's EIS, see, e.g., 10 C.F.R. § 51.45(b), and follows the scheme of the Commission's environmental regulations by adopting and incorporating, where appropriate, the various DOE environmental impact statements. See, e.g., ER at 1-3 to 1-9. With the exception of the DCS reanalysis of the impacts of transporting MOX fuel to the mission reactors discussed earlier (see supra p. 15), DCS's practice of adopting and incorporating the DOE environmental impact statements into its ER generally does not bring those DOE documents within the scope of this proceeding or open them to challenge in the discrete proceeding on the MFFF.

Thus, for a contention to be admissible, its subject matter must come within the scope of the proceeding as outlined above and meet all of the pleading requirements of 10 C.F.R. § 2.714(b). We review each of the Petitioners' proffered contentions in accordance with these standards.

A. GANE's Contentions

1. Lack of Consideration of Safeguards and Physical Protection in Facility Design

GANE's first and second contentions deal, respectively, with the insufficiency of information in the CAR on the design features of DCS's material control and accounting (MC&A), and physical protection systems. Because these two contentions raise similar issues and the contentions are opposed on the same basic grounds by DCS and the Staff, the contentions are addressed together.

In its first contention, GANE asserts that because the CAR lacks sufficient information on design features relevant to implementing MC&A measures capable of meeting or exceeding the Commission's MC&A requirements, the CAR fails to provide any basis for the NRC, as called for in the Staff's MFFF Standard Review Plan (SRP), to be able to "establish that the applicant's design basis for MC&A and related commitments will lead to an FNMCP (Fundamental Nuclear Material Control Plan) that will meet or exceed the regulatory acceptance criteria in Section 13.2.4" of the SRP. GANE Contentions at 3 (quoting SRP § 13.2.5.2 A). Much like its first contention, GANE's second contention asserts that, because the CAR lacks sufficient information on design features relevant to implementing physical protection measures capable of meeting or exceeding the Commission's physical protection requirements, the CAR fails to provide any basis for the NRC to "establish that the applicant's proposed design, location, construction technique, and material for elements of the physical protection system and related commitments will lead to a physical protection plan that will meet or exceed the regulatory acceptance criteria in Section 13.1.4" of the SRP. GANE Contentions at 10 (quoting SRP § 13.1.5.2 A). The bases for these contentions are long and detailed, totaling over ten pages. The factual statements and opinions in the bases of both contentions are supported by the sworn declaration of Edwin S. Lyman, Ph.D, the scientific director of the Nuclear Control Institute. Dr. Lyman holds a Ph.D in theoretical physics as well as a master of science and a bachelor's degree in physics, and for over nine years has conducted research on security and environmental issues associated with the management of nuclear material and the operation of nuclear power plants. See GANE Contentions, Exh. 1. Neither DCS nor the Staff challenge Dr. Lyman's expertise with regard to contentions 1 and 2 or any of the other contentions Dr. Lyman's affidavit supports.

As the basis for contention 1, GANE relies upon a 1992 International Atomic Energy Agency (IAEA) Board of Governors' recommendation and a 1997 report by safeguards experts

at the Los Alamos and Sandia National Laboratories intended for potential bidders on the DOE MOX fuel facility contract, indicating that effective safeguard measures must be considered early in the design of new facilities. See GANE Contentions at 3-4. Quoting from the latter report, GANE indicates that if safeguards capabilities are not properly designed into the facility it may not be possible to retrofit them to meet requirements without prohibitive costs. See id. at 4. From these materials, GANE concludes that a reasonably complete description of the safeguard strategies for the MFFF must be submitted at the design stage and asserts that this same approach is recommended by the Staff in its guidance for the safety evaluation of construction approval in the SRP, which states that the "reviewer should establish that the applicant's design basis for MC&A and related commitments will lead to an FNMCP that will meet or exceed the regulatory acceptance criteria in Section 13.2.4." Id. at 5 (quoting SRP § 13.2.5.2 A). In this regard, GANE notes that the Staff's SRP defines "design bases" as "the information that identifies the specific functions to be performed by an SSC of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design." GANE Contentions at 5 (quoting SRP at xviii). GANE next asserts that section 13.2 of the CAR, a brief paragraph entitled Material Control and Accounting, is grossly deficient and lacks the information necessary to reach conclusions regarding the quality of DCS's design bases for MC&A. See GANE Contentions at 5. Rather, according to GANE, the CAR merely states that DCS will provide an FNMCP meeting the Commission's regulatory requirements with its application for a possession and use license even though other sections of the CAR refer to the location of MC&A systems, but provide no "range[] of values chosen for controlling parameters" as required by the SRP. Id. In contrast to the CAR, GANE points to the rigors of the DOE design review described in the 1997 report by the safeguards experts at the national laboratories requiring that "[a]t each main stage of the design process, a safeguards and security vulnerability assessment (VA) shall be performed on the facility design to determine if

the design meets the intent of the DOE Orders for preventing and detecting theft or diversion of nuclear materials." Id. at 6. Finally, GANE points to design flaws in the scrap control system of the French MELOX plants, which purportedly are the model for the MFFF, to illustrate the necessity of providing basic MC&A design information at the construction approval stage. See id. at 7-9.

As the basis for its second contention, GANE asserts that the necessity of accounting for physical protection considerations in the design of facilities that will store and use special nuclear material is self-evident. See id. at 10. GANE contends that facility layout, structural design, and the location of physical barriers are the design elements that play a crucial role in the technical basis for physical protection. See id. In this regard, GANE points to the IAEA's recommendations that physical protection systems should be taken into account in the design of the facility as early as possible to ensure that an adequate system can be applied without compromising safety because in some instances a direct conflict arises between physical protection requirements based on denial of access and safety requirements based upon easy access of emergency personnel. See id. at 11. According to GANE, this same principle is incorporated into the Staff's SRP in its guidance on the safety evaluation for construction approval stating that the reviewer should establish that the design, location, construction technique, and material elements of the physical protection system will lead to a physical protection plan that will meet or exceed the regulatory criteria in section 13.1.4 of the SRP. See id. at 12. GANE claims, however, that contrary to this guidance, section 13.2 of the CAR, dealing with physical security, is grossly deficient and merely states, without more, that DCS will provide a physical security plan as part of its application for a license to possess and use special nuclear material. See id. GANE notes that although the CAR provides no information on how DCS took physical protection considerations into account in its plant design, it seeks to

take credit for safeguards and security structures in addressing the possibility of damage to the MFFF from accidental explosions in CAR section 5.5.2.7.6.2. See id.

DCS and the Staff both oppose the admission of contentions 1 and 2 on the grounds that they are outside the scope of the proceeding. See DCS GANE Contention Response at 17-20; Staff Contention Response at 8-13. Specifically, relying upon a portion of the first sentence of 10 C.F.R. § 70.23(b), DCS argues that the scope of this MFFF construction authorization proceeding is limited to whether "the design bases of the principal structures, systems, and components and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents." DCS GANE Contention Response at 17 (quoting 10 C.F.R. § 70.23(b)). According to DCS, MC&A and physical protection systems are, by their very nature, not intended to protect against natural phenomena and accidents. Rather, DCS states such systems are intended to prevent the loss, theft, or sabotage of special nuclear material so they fall outside the scope of section 70.23(b) and, hence, there is no requirement to describe the design bases for the MC&A and physical protection function in its CAR. See DCS GANE Contention Response at 18.

The regulation is not nearly as narrow as DCS argues and section 70.23(b) does not dictate the exclusion of the most basic design information of the MC&A and physical protection systems at the construction authorization stage. In pertinent part, 10 C.F.R. § 70.23(b) states that

> [t]he Commission will approve construction of the principal structures, systems, and components of a plutonium processing and fuel fabrication plant on the basis of information filed pursuant to §70.22(f) when the Commission has determined that the design bases of the principal structures, systems, and components, and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.

Neither 10 C.F.R. Part 70 nor any other part of the Commission's regulations, however, define the word "principal" or the term "principal structures, systems, or components."

Here, there is no dispute that the MC&A and physical protection systems for the MFFF are "systems." In the absence of any regulatory definition, the word "principal" or the term "principal system" must be construed in accordance with its ordinary and common meaning in the context of the subject to which it relates -- in this instance "the principal . . . systems . . . of a plutonium processing and fuel fabrication plant." 10 C.F.R. § 70.23(b). The dictionary defines the adjective "principal," the grammatical form in which it is used in the regulation, as "most important, consequential, or influential: relegating comparable matters, items, or individuals to secondary rank." Webster's Third New International Dictionary 1802 (1993). Applying this definition to the word "principal" in the context of a facility that processes tons of weapons-grade plutonium to make MOX fuel, it would appear axiomatic that the MC&A and physical protection systems are most important systems and systems of first rank so as to qualify as principal systems within the meaning of section 70.23(b).

DCS and the Staff argue that the MC&A and physical protection systems are not principal systems within the standard understanding of that term in the industry. See Tr. at 241, 262. In the case of a domestic plutonium processing and fuel fabrication facility licensed by the NRC pursuant to 10 C.F.R. § 70.23(b), there is no industry from which to draw a common understanding. This is the first such facility seeking a license from the NRC. Moreover, a comparison to the larger domestic nuclear industry encompassing nuclear reactors and uranium fuel facilities licensed by the NRC is inapt because no other domestic facilities process strategic quantities of weapons-grade plutonium. In any event, the terms at issue must be defined in the context of the facility being licensed. Similarly, any foreign MOX fuel industry is irrelevant to defining the term because such facilities are not licensed by the NRC under 10 C.F.R. § 70.23(b).

In fact, the relevant past domestic experience appears to have been within the province of DOE. As GANE's first contention indicates in quoting an article by safeguards experts at the national laboratories intended for bidders on the DOE MOX fuel facility contract before Congressionally-mandated NRC licensing was imposed, DOE required a stringent safeguards and security vulnerability assessment at each stage of the design process. See GANE Contentions at 6. This suggests that, in overseeing its plutonium facilities, DOE considers MC&A and physical protection systems to be of a rank tantamount to principal systems under section 70.23(b). Further, in requiring that the NRC license the MOX fuel facility of a DOE contractor, there is no indication in applicable section 3134 of the Strom Thurmond Defense Authorization Act for Fiscal Year 1999, 42 U.S.C. § 5842 (Supp. V 1999) or its legislative history, that Congress intended a less stringent regulatory approach than would be applied by DOE. Hence, contrary to the argument of DCS and the Staff, the MC&A and physical protection systems of the MFFF are principal systems within the meaning of section 70.23(b).

Nor is there merit in DCS's argument that the design bases of MC&A and physical protection systems of the MFFF need not be considered at the construction authorization stage under section 70.23(b) because these systems do not protect against natural phenomena and accidents, but instead are intended to prevent the loss and theft of special nuclear material. As the plain meaning of the regulation itself indicates, section 70.23(b) is not as limited as DCS's argument would have it. Indeed, DCS's argument would effectively read out of the regulation the requirement of a reasonable assurance determination for the quality assurance program. That program also does not protect against natural phenomena and accidents, but instead is intended to provide confidence that other structures, systems, and components (SSCs) will perform satisfactorily. In much the same manner, the MC&A and physical protection systems are interrelated and interdependent upon other facility SSCs and, in the context of a plutonium processing fuel fabrication plant processing tons of weapons-grade plutonium, the design

bases of the MC&A and physical protection systems must retain their functionality to make a reasonable assurance determination of protection against natural phenomena and the consequences of potential accidents. Accordingly, the design bases of the MC&A and physical protection systems of the MFFF are not precluded from consideration under section 70.23(b), and GANE contentions 1 and 2 are within the scope of the proceeding.

Because contentions 1 and 2 also meet all the requirements of 10 C.F.R. § 2.714(b)(2), these GANE contentions are admissible. Each contention adequately identifies the issue raised, provides a full explanation of the bases for the contention, and details the facts, expert opinion, and documents supporting GANE's position that shows a genuine dispute exists with DCS over the sufficiency of the design bases information in the CAR for the MC&A and physical protection systems. A final cautionary note concerning these contentions is in order. Although neither DCS nor the Staff have brought this matter to the attention of the Licensing Board, section 13.1.4.3 of the Staff's SRP for the MFFF states that the "NRC has determined that public disclosure of the details of the physical protection system for a MOX facility could affect common defense and security and should be classified as Confidential National Security Information." Thus, these two contentions may require invocation of the procedures of 10 C.F.R. Part 2, Subpart I, even though this proceeding is being conducted pursuant to 10 C.F.R. Part 2, Subpart L, not Subpart G.

2. Inadequate Seismic Design

GANE's third contention states:

> In Sections 1.3.5 through 1.3.7 of the CAR, DCS specifies the design criteria for the MOX Fuel Fabrication Facility to withstand any potential geological hazard. DCS claims that "conservative design criteria" have been established. Id. at 1.3.6-23. This assertion is not supported, because DCS has not performed a seismic analysis that is either adequate in scope or adequately documented.

GANE Contentions at 13.

Like its first two contentions, GANE's basis for its third contention is long and detailed. The factual statements and opinions set forth in the basis are supported by the sworn declaration of Peter Burkholder, a seismologist. Mr. Burkholder holds a master of science degree in seismology and has over ten years experience conducting and supporting seismological research in various parts of the world. See id., Exh. 2. DCS does not challenge Mr. Burkholder's expertise with regard to GANE contention 3.

As the basis for contention 3, GANE initially explains that the seismic hazard at a site depends upon the likelihood of a significant seismic event and the expected site response to such an event. See id. at 13. With respect to the former, GANE relies upon a recent April 2001 study by Pradeep Talwani and William T. Shaeffer entitled "Recurrence rates of large earthquakes in the South Carolina Coastal Plain based on paleoliquefaction data," that it asserts provides evidence that, contrary to the geologic section of DCS's CAR, the frequency of major seismic events in the South Carolina coastal plain is higher than previously thought and that major events need not be limited to the Charleston seismic zone. See id. at 14, Exh. 5. As GANE states, "contrary to what the CAR says, major events may have occurred much closer to the SRS than the Charleston Seismic Zone." GANE Contentions at 15. Next, GANE asserts that although DCS claims to analyze the relationship between geologic structure and seismic sources within the site region, DCS's representations cannot be evaluated because of the lack of references in the seismology section of the CAR. See id. Specifically, GANE asserts that most of the tables and figures in section 1.3.6.2 of the CAR do not contain references to any published work and for those figures that do indicate some source of information, no citation to a reference document is provided from the list of references. See id. Further, GANE claims that other referenced reports are not publicly available so that it is impossible to verify DCS's assertions in the CAR regarding site geology. See id. Similarly, GANE notes that DCS purports to list the significant earthquakes within 200 miles of the SRS but DCS has provided

no sources used to construct the data table in the CAR, so it is unverifiable. See id. In this regard, GANE states that a comparison with the "U.S. Geological Survey's Preliminary Determination of Epicenters" monthly listing catalog shows that DCS's listing is inaccurate and incomplete at least for the period 1974 onwards. See id. at 15-16. From this, GANE concludes that the recent evidence of prehistoric earthquakes and the failure to list all recent seismic events indicates that the CAR does not adequately account for the risk of a major event. See id. at 16.

With respect to site response, GANE explains that the shaking experienced at a particular location during an earthquake is dependent upon, inter alia, the distance of the event, the regional geology and topography, and local geology and topography. See id. GANE states that, although the CAR cites a number of site response studies within the SRS, DCS does not state that a quantitative site response study has been done for the MFFF but only indicates some tests will be done in the future. See id. at 16-17. GANE concludes, therefore, that DCS has not established the potential for soil liquefaction for the MFFF. See id. Additionally, GANE points to the Staff's February 28, 2001, RAI to DCS indicating that the Probabilistic Seismic Hazard Assessment (PSHA) for the MFFF is incomplete and asserts that GANE concurs with the need for clarification on all points mentioned in the RAI. See id. at 17. GANE also states that the Staff's Standard Review Plan for nuclear power plants, NUREG-0800, provides that applicants should develop a site-specific design spectrum. See id. According to GANE, DCS has not developed a site-specific design spectrum for the MFFF but instead is using one computed in 1997 for the entire SRS, and DCS has not provided in the CAR detailed methodologies or references of spectral shape changes applied to the starting spectrum for data from site-specific studies. See id. Finally, GANE asserts that DCS's approach to the PSHA in the CAR is insufficiently conservative. See id. Specifically, GANE points to DCS's estimate of a 2700-year return period of a certain seismic event derived from non-public

Westinghouse Savannah River Company reports even though the National Seismic Hazard Mapping Project estimates a return period of 1200 years for the same event at the SRS. See id. at 17-18.

DCS argues that GANE's seismic contention is inadmissible. See DCS GANE Contention Response at 21. According to DCS, even if GANE's allegations are accepted as true, it has provided no basis for believing that any changes in the design basis earthquake are necessary, and therefore, GANE has failed to identify a genuine dispute of a material issue of fact or law as required by the regulations. See id. For its part, the Staff supports the admission of GANE's third contention asserting that "it identifies with sufficient particularity material disputes between GANE and DCS which merit further inquiry." Staff Contention Response at 14. In supporting the admission of the contention, the Staff notes that "[a]t this time, various seismic design issues remain to be resolved before the necessary probabilistic seismic hazard assessment (PSHA) can be completed for the proposed MOX facility." Id. In this regard, the Staff states that "[w]hat (if any) impact the alternative earthquake scenario proposed by Talwani et al. (2001) will have on the PSHA remains to be determined." Id.

As the Staff correctly indicates, GANE's third contention meets the pleading requirements of section 2.714(b)(2) and thus is admissible. The contention clearly identifies the issue raised, claiming that the seismic analysis in the CAR used by DCS to support the design criteria for the MFFF is inadequate in scope and inadequately documented. The basis for the contention then sets forth the facts, expert opinion, and documents that show a genuine dispute exists between GANE and DCS on the adequacy of the analysis with respect to the location, frequency, and return frequency of major and other seismic events and the sufficiency of the documentation of these matters in the CAR. DCS's argument that, because GANE has not demonstrated that there needs to be any change in the design basis earthquake, it has failed to identify a genuine dispute of a material issue of fact or law overlooks the fact that a supported,

legitimate challenge to the validity of the seismic analysis in the CAR necessarily draws into question and casts doubt on the continuing soundness of DCS's conclusion regarding the design basis earthquake underlying its design criteria. Only after GANE's challenge to DCS's seismic analysis is resolved on the merits can it be determined if the design basis earthquake is correct. The determination of whether a contention is admissible, however, is not concerned with the ultimate outcome of the merits dispute as DCS's argument seemingly would have it. Rather, the determination at the contention admissibility stage is concerned only with whether a real, meaningful controversy is presented and adequately supported. Here, GANE contention 3 does that.

In addition to its overarching argument, DCS also parses the basis of GANE's contention into seven parts and, with respect to each part, sets forth its view of the facts and argues that no genuine issue of material fact is raised. In each individual instance, however, just as in the case of its overarching argument, in claiming its position is correct, DCS argues the substantive merits of the factual dispute. To repeat, at this stage of the proceeding, the focus is solely on whether the contention raises a legitimate issue that rests on an adequate foundation. Accordingly, GANE contention 3 is admissible.

3. Inadequate Licensing Review by NRC Staff

In its fourth contention, GANE asserts that the NRC lacks the necessary recent, relevant experience to regulate plutonium fuel processing activities so as to effectively protect the public and the environment from harm. See GANE Contentions at 18. As the basis for contention 4, GANE states that it has been more than 20 years since the Cimarron plutonium processing plant operated in Oklahoma. See id. Next, GANE states that, although it accepted the CAR, ER, and QAP for docketing, the Staff is not equipped to review the DCS application, particularly given the short time line set for the Staff to complete its review. See id. As support, GANE points to a July 11, 2001, letter from the agency's Division of Fuel Cycle Safety and

Safeguards, Office of Nuclear Materials Safety and Safeguards (NMSS), to DOE, requesting training for agency Staff in plutonium processing environments, especially processing environments with weapons-grade plutonium, and seeking to procure the training without going through NRC's administrative processes in order to save an estimated 6 month's time. See id. at 19; id. Exh. 4. According to GANE, the Staff appears to have undertaken the technical review of the key conceptual stage of the MOX facility while lacking the requisite technical expertise or timely obtaining the training. See GANE Contentions at 19. DCS and the Staff oppose the admission of GANE contention 4, in effect, on the grounds that it raises an issue that is not within the scope of the proceeding. See DCS GANE Contention Response at 27; Staff Contention Response at 15.

Both DCS and the Staff are correct that the contention is inadmissible. As the Commission stated in amending the contentions rule, "a contention will not be admitted if the allegation is that the NRC Staff has not performed an adequate analysis" because "the sole focus of the hearing is on whether the application satisfies NRC regulatory requirements, rather than the adequacy of the NRC staff performance." Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,171. Therefore, "contentions must rest on the license application, not on NRC Staff reviews," Baltimore Gas & Electric Company (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349 (1998), and "the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns." Curators of the University of Missouri (Trump-S Project), CLI-95-8, 41 NRC 386, 396 (1995); see Louisiana Power and Light Company (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 55-56 (1985); Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807 (1983). Accordingly, the Staff's asserted inexperience and lack of training with respect to plutonium processing environments, specifically weapons-grade plutonium processing environments, and

hence its competence to review DCS's application to construct the MFFF, are irrelevant to the sufficiency of DCS's application and whether the application complies with the agency's regulations. Thus, GANE contention 4 raises an issue that is not litigable as beyond the scope of the proceeding.

4. Incorrect Designation of Controlled Area

GANE contention 5, a safety contention, and contention 8, an environmental contention, are essentially identical and rely upon the same basis. The two contentions are therefore consolidated as contention 5. In contention 5, GANE asserts that even though it does not have control over the whole SRS, DCS incorrectly designates the entire SRS as the controlled area of the MFFF in violation of the NRC's regulations requiring the controlled area to be an area outside the restricted area, but inside the site boundary, in which DCS can limit access for any reason. As a result of the improper controlled area designation, GANE states that DCS (1) improperly characterized members of the public as MFFF workers for the purposes of calculating radiological doses to the public during normal operations and accidents; (2) incorrectly minimizes in its ER the environmental impacts of the MFFF on the public; and (3) adversely affects the adequacy of the physical security measures resulting in inadequate design bases for the MFFF to support construction. See GANE Contentions at 19-20.

As the basis for contention 5, GANE points to the section of the ER that states DCS plans to use the site boundary of the SRS as the controlled area boundary for the MFFF. See id. at 20. Relying on the description of the SRS in the ER, GANE notes that the SRS is an approximately circular tract occupying 310 square miles or some 198,000 acres, while the MFFF will be located only on a 41-acre site, some much smaller portion of which will be surrounded by a conventional perimeter intrusion detection and assessment system fence forming a protected area within the SRS. See id. GANE then cites 10 C.F.R. § 20.1003, which requires the controlled area to be within the control of the licensees, and asserts that the largest

area around the MFFF that is within the control of DCS consists of the protected area that lies within the boundary of the fence around the facility. See id. Next, quoting from two Staff RAIs, GANE states that its concern with DCS's declaration of the controlled area is supported by the Staff. In the first, a June 18, 2001, RAI on the ER, the Staff indicates that the ER should state that the NRC considers SRS workers who are not closely and frequently connected to the licensed activity and who are outside the MFFF restricted area, yet within the controlled area boundary, to be members of the public. See id. In the second, a February 28, 2001, RAI on the CAR, the Staff indicates that DCS should revise its description of the controlled area boundary to include only those areas to which DCS can limit access for any reason and change its description of the SRS workers deemed to be members of the public. See id. at 20-21. Finally, GANE points to DCS's July 12, 2001, answer to the Staff's RAI in which DCS argues that the agency has changed its policy by enacting a new 10 C.F.R. § 70.61, so that workers at other SRS facilities within the controlled area of the SRS may be considered workers for purposes of assessing doses from the operation of the MFFF. See id. at 21. In response, GANE states that, contrary to DCS's claim, the NRC has not changed the definition of a controlled area and, therefore, DCS has no legal basis for defining the controlled area boundary of the MFFF as the boundary of the entire SRS. See id. DCS argues the contention is inadmissible because it is based upon an incorrect legal interpretation of controlled area. See DCS GANE Contention Response at 28-30, 30. The Staff argues the contention is inadmissible for, in effect, failing to state an adequate basis and for merely relying upon Staff RAIs. See Staff Contention Response at 15-16, 18-19.

Contrary to the arguments of DCS and the Staff, contention 5 is admissible. The contention is brief and straightforward in meeting the pleading requirements of 10 C.F.R. § 2.714(b)(2). It sets forth a specific statement of the issue controverted in asserting that DCS has incorrectly designated the entire SRS as the controlled area for the MFFF. It then sets

forth a statement of the basis supporting that issue showing that a genuine dispute exists with DCS over an issue of material fact or law. Specifically, GANE relies on 10 C.F.R. § 20.1003 that defines the term "controlled area" and asserts that DCS does not have control over the entire SRS, but rather only over the area of the MFFF site surrounded by the plant fence. GANE then explains that DCS's improper designation of the controlled site has led DCS to improperly characterize members of the public as MFFF workers in the CAR and ER for purposes of calculating radiological doses to the public during normal operation and accident conditions. A contention need not be elaborate to be admissible, so long as it meets the requirements of section 2.714(b)(2), which contention 5 does here.

Even though it does not control all of the SRS, DCS nevertheless argues that GANE's contention 5 misinterprets the term "controlled area" in the Commission's regulations and claims that "the MOX Facility controlled area will be controlled by DCS through an Agreement, or 'protocol,' with the DOE that will, among other things, provide for limitation of site access in the event of an emergency." DCS GANE Contention Response at 28. According to DCS, the NRC "specifically sanctioned" this approach in amending 10 C.F.R. Part 70, and it points to two sentences from the Statement of Considerations accompanying the rule change as support. See id. at 28-29 & n.76. The two sentences from the Statement of Considerations relied upon by DCS, however, do not support its argument. Specifically, the Statement of Considerations states that

> [t]he licensee can set the controlled area at any location around its facility as long as it maintains control of that area as specified in Part 20 and retains the authority to exclude or remove personnel and property from the area. If the controlled area included the nearby Department of Energy (DOE) facilities, then NRC would consider the personnel working at those facilities to be "workers" for the purposes of the performance requirements of Section 70.61, provided the conditions of § 70.61(f)(2) are met.

"Domestic Licensing of Special Nuclear Material; Possession of a Critical Mass of Special Nuclear Material," 65 Fed. Reg. 56,211, 56,212 (Sept. 18, 2000) (emphasis added). DCS's reading of these statements overlooks the "as specified in Part 20" language used by the Commission. Part 20, of course, necessarily includes the definition of controlled area contained in 10 C.F.R. § 20.1003 as is made abundantly clear by the amended first sentence of 10 C.F.R. § 70.61(f), which states that "[e]ach licensee must establish a controlled area, as defined in § 20.1003." And, as GANE contention 5 notes, controlled area is defined in section 20.1003 as "an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason." Most simply put, DCS's purported "control" of access to the SRS by way of an agreement with DOE limiting SRS site access in the event of an emergency arguably is not coextensive with the "for any reason" language of the regulation. DCS has not argued, nor can it reasonably do so, that DOE will cede to DCS the authority to close the entire SRS "for any reason," given that the site includes a major state highway, CSX railroad tracks, and a public trash dump. Hence, for the same reason set forth in the bases of GANE contention 5, DCS's argument is unpersuasive.

Similarly, the Staff's argument that contention 5 is inadmissible because it merely references Staff RAIs is wide of the mark. Although reliance on the fact that the Staff has issued an RAI on a particular subject does not, by itself, present any genuine material dispute, see, e.g., Oconee, CLI-99-11, 49 NRC at 337, that clearly is not what GANE has done here. Rather, the bases for GANE's contention are the facts asserted about DCS's use in the ER and CAR of the entire SRS for the controlled area of the MFFF and the Commission's regulations that GANE asserts prohibit DCS's actions. GANE has only used the Staff RAIs as confirmation of its reading of the regulations, a perfectly legitimate use of the such materials. Accordingly, consolidated contention 5 is admissible.

5. Inadequate Safety Analysis

GANE's sixth contention asserts:

> The Safety Analysis (SA) submitted as part of the DCS Construction Authorization Request (CAR) is seriously flawed and provides neither a comprehensive assessment of all potential accident consequences nor a credible assessment of all potential accident likelihoods. The SA does not provide information of sufficient detail and quality to enable the NRC to make a determination pursuant to 10 C.F.R. § 70.23(b) that "the design bases of the principal structures, systems and components [of the MFFF] . . . provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents."
>
> In particular, the SA fails to correctly identify and carry out consequence assessments for accident scenarios with "bounding" consequences. The applicant's failure to identify the actual bounding accident scenarios implies that it has underestimated the consequences of these scenarios, and hence may not have applied engineered and/or administrative controls to the extent necessary to meet the performance requirements established in 10 C.F.R. § 70.61 and the defense-in-depth requirements of 10 C.F.R. § 70.64(b). In addition, the SA incorrectly considers the controlled area boundary of the MFFF to be coincident with the SRS site boundary when evaluating accident impacts to the public, which leads to projected doses to the public considerably below the correct values. Hence, the CAR SA fails to demonstrate that the MFFF as designed is likely to be in compliance with 10 C.F.R. Part 70. NRC should therefore deny authorization of MFFF construction based on this document.

GANE Contentions at 21-22.

Much like the issue statement of the contention, the basis for the contention is long and detailed, consisting of five pages in which the factual statements and opinions are supported by the sworn declaration of Dr. Lyman. See id. at 22-26; id. Exh. 1. Initially, the contention basis sets out the regulatory standard under 10 C.F.R. §§ 70.22(f) and 70.23(b) for judging the adequacy of DCS's safety analysis and the objective of the safety analysis as set forth in section 5.4.3.1 E of the Staff's SRP, which, in turn, looks to the performance requirements of 10 C.F.R. § 70.61 and the defense-in-depth requirements of 10 C.F.R. § 70.64(b). See id. at 22-23. Applying these standards, GANE challenges the "bounding" accident analyses in DCS's safety analysis and concurs with the Staff's assessment stated in its June 8 and 21, 2001, RAIs that DCS has not provided an adequate justification of its choice of bounding

accidents nor provided sufficient information to determine the quantitative likelihood of the analyzed accidents. See id. at 23. GANE then details two illustrative examples of the shortcomings of DCS's safety assessments.

First, GANE states that, in the case of an internal fire addressed in section 5.5.3.2 of the CAR, DCS does not analyze a bounding case with respect to the source term and, in the case it does analyze -- a fire in the plutonium dioxide buffer storage unit -- its assumptions for bounding an airborne release fraction, an airborne respirable release number, and leak path factor are questionable and require more detailed justification. See id. at 23-24. In this regard, GANE asserts that the assumed value of the respirable airborne release fraction for plutonium dioxide powder exposed to fire is taken from NUREG/CR-6410. An examination of the origins of that value, however, indicates that (1) it is based upon a single set of experiments from the 1960s on a powder of unknown specifications with no correlation to the powders to be used at the MFFF and (2) NUREG/CR-6410 itself cautions that differences in powders make the study's results of questionable value to other applications. See id. at 24. As a second illustrative example, GANE asserts, in effect, that DCS has failed to provide adequate information to support the assumption that its HEPA filters will continue to operate normally during an accident involving a fire. Relying upon a 1994 DOE study of HEPA filters in design basis accidents indicating that there are large gaps and limitations in the data on filter performance that introduce significant errors in the estimates of filter efficiencies, GANE asserts that even if conditions are precisely known, the performance of filters during accidents is uncertain. Because DCS has not provided even basic information about accident conditions relevant to HEPA filter performance, GANE asserts that it is impossible to determine quantitatively the likelihood that the filters will survive and thus meet the performance requirements of 10 C.F.R. § 70.61. See id. at 24-25. In this regard, GANE points to the Staff's June 21, 2001, RAI stating that HEPA filters are unlikely to survive an explosion of the magnitude implied by the CAR and

indicates that if the filters are degraded, the accident event would not meet the performance requirements of 10 C.F.R. § 70.61. See id. at 25. GANE concludes that the severity of such an accident would be consistent with the Staff's preliminary findings contained in the August 10, 2001, response to the Petitioners' standing supplements, that an explosion in the absence of fully functioning HEPA filters would cause a dose 20 miles from the MFFF to approach the 5 to 25 rem range. See id. at 26.

With the exception of the portion of the contention regarding the controlled area boundary, the Staff supports the admission of the contention. See Staff Contention Response at 16-17 & n.20. For its part, DCS opposes the admission of GANE contention 6 on the grounds that it lacks an adequate basis. See DCS GANE Contention Response at 30-34. DCS claims that the basis for the contention is insufficient arguing that "GANE states that the NRC Staff has posed numerous RAIs related to the ER and CAR safety assessments" but "RAIs by themselves are not a sufficient basis for a contention." Id. at 31. Next, DCS argues that GANE has not provided any facts, expert opinion, or other documentation that call into question the acceptability of DCS's analysis. See id. Finally, DCS argues that the DOE paper calling for the use of conservative values for HEPA filter efficiencies in design basis accident analyses relied upon by GANE does not raise any genuine issue of material fact. In this regard, DCS states, with a reference to its response to the Staff's RAI, that it used conservative values for HEPA filter efficiencies in its accident analysis by assuming that filter efficiency was reduced from 99.95% to 99% and that GANE has provided no basis for questioning that value. See id. at 32-33.

GANE contention 6 meets the requirements of 10 C.F.R. § 2.714(b)(2) and is admissible. The contention adequately identifies the issue controverted, provides an explanation of the basis for the contention and details the facts, expert opinion, and documents that support GANE's position which, in turn, show that a genuine dispute exists with DCS on the

adequacy of the accident analysis in DCS's safety analysis. DCS's argument concerning GANE's use of Staff RAIs both mischaracterizes GANE's contention and misapplies the law. Although the fact that the Staff has issued RAIs to DCS by itself does not support the admission of a contention, see Oconee, CLI-99-11, 49 NRC at 337, GANE has not merely relied, without more, upon the fact that the Staff issued RAIs to DCS on this issue. Rather, as should be obvious from a reading of the basis for the contention, GANE has used the substance of the RAIs as additional support for its articulated position. With respect to DCS's claim that the contention lacks expert support, DCS apparently overlooks Dr. Lyman's sworn declaration supporting the facts and opinions set forth in contention 6 and GANE's reliance on the limitation in NUREG/CR-6410 with regard to the accuracy of any conclusions that can be drawn from the data relied upon by DCS.

Similarly, with regard to DCS's last argument, the factual assertions and opinions in GANE's challenge to the validity of DCS's accident analysis and HEPA filter assumptions are supported, inter alia, by its expert Dr. Lyman. That challenge, as spelled out in the basis of contention 6, taken as a whole, directly questions the validity of DCS's HEPA filter assumption and the lack of information provided in the CAR to support these assumptions and clearly sets up a dispute as to the adequacy of the accident analysis. Indeed, at oral argument, DCS effectively conceded a lack of information in the CAR relating to HEPA filter performance in accident conditions of the kind claimed by GANE as precluding a quantitative analysis of HEPA filter efficiencies. See Tr. at 321-322. Moreover, subsequently filed supplementary information filed by DCS in response to Staff RAIs may provide grist for the summary disposition mill as the proceeding progresses but it cannot be used at the initial contention pleading and contention admissibility determination stage to defeat a contention's admissibility. Finally, for the reasons discussed with regard to the admissibility of GANE contention 5, the Staff's objection to the

admissibility of the controlled area boundary portion of contention 6 is without merit. Accordingly, contention 6 is admissible.

6. Impacts of Using MOX Fuel in the Catawba and McGuire Reactors

In its seventh contention, GANE asserts that the ER is deficient because it does not provide an adequate analysis of the impacts of irradiating MOX fuel in the Catawba and McGuire reactors. See GANE Contentions at 27. As the basis for the contention, GANE notes that the Catawba and McGuire reactors have ice condenser containments and that, in addressing the environmental impacts of burning MOX fuel in these reactors, the ER references DOE's SPD EIS. See id. GANE asserts that DOE's analysis is inadequate because it fails to take into account significant new information contained in an April 2000 technical report prepared for the NRC by Sandia National Laboratories, "Assessment of the DCH [Direct Containment Heating] Issue for Plants with Ice Condenser Containments," NUREG/CR-6427 (SAND 99-2553) (Apr. 2000), showing that ice condenser plants are at least two orders of magnitude more vulnerable to early containment failure than pressurized water reactors with large dry or subatmospheric containments. See id. at 28-29; id. Exh. 7. Relying on an article by Dr. Lyman, "Public Heath Risks of Substituting Mixed-Oxide for Uranium Fuel in Light-Water Reactors," to be published in an upcoming issue of Science and Global Security, GANE claims that the Sandia findings are of particular concern because the public health consequences of a severe accident with containment failure and core dispersal are significantly increased with MOX fuel due to the greater concentrations of plutonium and other actinides compared to low-enriched uranium cores. See GANE Contentions at 28-29; id. Exh. 8. DCS and the Staff argue that GANE contention 7 is inadmissible as outside the scope of the proceeding. See DCS GANE Contention Response at 34-35; Staff Contention Response at 17-18.

As previously indicated, DCS's reference in its ER to DOE's analysis from the SPD EIS of the environmental impacts of irradiating MOX fuel in reactors with ice condenser

containments does not open DOE's analysis to challenge in this proceeding. Although it is one part of DOE's larger surplus plutonium disposal program, the scope of the instant proceeding is limited to the construction authorization for the MFFF, and the impacts of burning MOX fuel in the mission reactors is outside that scope. Accordingly, the contention is inadmissible. As the ER states, however, the "[s]afety and environmental impacts of design basis and beyond-design basis accidents will be analyzed by the mission reactor licensee as part of the 10 C.F.R. Part 50 reactor license amendment process," ER at 5-43. The Staff agrees that consideration of the impacts of such accidents will be part of the mission reactor license amendment process and the Staff's NEPA review so that the subject may be an appropriate one for contentions in the mission reactor license amendment proceedings. Tr. at 331-32.

7. Inadequate Cost Comparison

GANE's contention 9 declares that the ER fails to provide a discussion of the costs of the proposed MFFF or make a comparison to the costs of other alternatives. See GANE Contentions at 31. As the basis for contention 9, GANE quotes 10 C.F.R. § 51.45(c) to the effect that an environmental report is required to include "consideration of the economic, technical, and other benefits and costs of the proposed action and of alternatives." Id. GANE then asserts that DCS's ER violates this regulatory requirement by failing to discuss the economic costs and benefits of the proposed MOX facility or offering any comparison of the economic costs of other alternatives. See id. Finally, GANE's contention lists the various omitted costs that should be included in the ER and notes that, to the extent DCS intends merely to rely upon DOE's SPD EIS, the information in that impact statement has been superceded by more recent information from DOE. See id. DCS argues that GANE contention 9 represents an impermissible challenge to NRC regulations and does not raise a material issue of law or fact within the scope of the proceeding so it is inadmissible. See DCS

GANE Contention Response at 35-36. The Staff supports the admission of the contention. See Staff Contention Response at 19-20.

As the Staff asserts, contention 9 is admissible. DCS argues that, because the first sentence of section 51.45(c) uses the word "shall" in directing that an environmental report include an analysis of the environmental effects of the proposed action and alternatives, while the second sentence only uses the word "should" in calling for the consideration of the economic costs and benefits of the proposed action and alternatives, the inclusion of the economic costs and benefits of the proposed action and alternatives in its ER is permissive, not mandatory. DCS's interpretation of section 51.45(c) is unpersuasive. As a review of the history of section 51.45(c) reveals, prior to its amendment in 1996, the general language requiring the inclusion of the economic benefits of the proposed action and alternatives in an environmental report was contained in the first sentence of the provision containing the mandatory word "shall." See 10 C.F.R. § 51.45(c) (1996). The 1996 amendment divided the first sentence of subsection c into two separate sentences. The amendment then added an exception for environmental reports prepared for facilities seeking a license renewal at the beginning of the new second sentence that continued to contain the language about economic benefits. In amending the regulation, the Commission did not indicate that any change was intended in the mandatory nature of the economic costs and benefits requirement of section 51.45(c) other than for environmental reports for facilities seeking a license renewal. See 61 Fed. Reg. 28,467 (June 5, 1996). Indeed, if the entire economic costs and benefits provision was intended to be made permissive as DCS would have it, there would have been no need for the Commission to provide the specific and express exception for license renewal in the newly created second sentence. Accordingly, the provision of section 51.45(c) providing for the inclusion in an environmental report of the economic costs and benefits of the proposed action and alternatives is mandatory as GANE's contention asserts.

Further, DCS's argument that the part of GANE contention 9 concerning the continuing validity of the cost data in DOE's SPD EIS is somehow an attack on DOE policy decisions and outside the scope of the proceeding is equally unavailing. DCS, not DOE, is required to meet the requirements of section 51.45(c) in its ER on the MFFF. The information on the MFFF necessary to meet the requirements of that section obviously is information that is well within the scope of the proceeding. Moreover, GANE's assertions that there is more recent DOE cost information than that contained in DOE's SPD EIS is not an attack on DOE's policy decisions. Rather, it is nothing more than an indirect reference to 10 C.F.R. § 51.45(e) that the information in an environmental report submitted pursuant to section 51.45(c) "should not be confined to information supporting the proposed action but should also include adverse information." Accordingly, GANE's ninth contention meets all the requirements of 10 C.F.R. § 2.714(b)(2) for an environmental contention and, therefore, is admissible.

8. Inadequate Discussion of Transportation Impacts

GANE's tenth contention asserts that DCS's reliance in its ER on the inadequate analysis in DOE's SPD EIS of the environmental impacts of transporting plutonium to the SRS through Georgia from the western states does not comply with the requirement of NEPA that all foreseeable impacts be analyzed. GANE Contentions at 31-32. As the basis for its contention, GANE repeats numerous comments on various aspects of the transportation of plutonium that the State of Georgia filed on DOE's draft SPD EIS. See id. at 32-41. DCS and the Staff oppose the admission of the contention on the grounds that the transportation issues raised are beyond the scope of the proceeding. See DCS GANE Contention Response at 36-37; Staff Contention Response at 20.

Like GANE's contention 7 concerning the impacts of burning MOX fuel in the Catawba and McGuire reactors, this contention dealing with the transportation of plutonium to the SRS is outside the scope of the proceeding. For the reasons discussed earlier (see supra p. 15), the

subject of the shipment of MOX fuel from the MFFF to the mission reactors is within the scope of this proceeding. GANE contention 10, however, concerns the shipment of plutonium to the SRS, which is not a subject DCS reanalyzed in its ER. See ER at 1-5. The transportation of plutonium to the SRS is addressed in DOE's SPD EIS and, inter alia, deals with plutonium shipments to DOE's proposed PDCF which, in turn, supplies plutonium oxide feedstock to the MFFF. See ER at 1-3 to 1-5. The scope of the instant proceeding is limited to the construction authorization of the MFFF and the subject of contention 10 falls outside that scope. Accordingly, the contention is inadmissible.

9. ER Fails to Address Waste Stream from Aqueous Polishing

In its eleventh contention, GANE claims that the ER understates the impacts of the waste stream from the aqueous polishing process used to remove gallium, fails to acknowledge problems with the same process in Europe, and adds to the radioactive waste already at the SRS without designing any plan for managing the waste as required by NEPA. See GANE Contentions at 41. Stripped to its essentials, GANE states in its basis for contention 11 that DOE's 1999 SPD EIS analyzed only a dry process called ARIES to purify the plutonium pit feed material of gallium and other contaminants. See id. at 42. The ER now indicates, however, that the MFFF will use an aqueous polishing process to remove gallium, americium, and uranium from the weapons-grade plutonium. See id. According to GANE, the aqueous process will create some 81,000 gallons of liquid high-alpha waste per year that contains nearly 80,000 curies of radioactivity, primarily from americium-241, for a total over a million curies during the life of the facility. See id. at 42-44. GANE indicates that DCS has proposed no plan to deal with the large volume of this particular non-high-level waste as required by NEPA, but instead indicates that it will utilize DOE's high-level waste tanks in the F-Area tank farm at the SRS. See id. at 42. GANE next asserts that the aqueous polishing process is based upon similar processes at Cogema's MELOX and LaHague facilities in France and, even

though DCS "cite[s] experience gained there and processes used there as bases for the plutonium fuel factory at SRS," all the "data relevant to design, performance, waste volume and management, and environmental and worker safety for COGEMA's French operations are secret and unavailable to the public." Id. at 41-42. GANE then refers to the study and monitoring by Greenpeace and WISE - Paris of contamination in the North Atlantic from the LaHague plant and claims that in order to comply with NEPA and 10 C.F.R. Part 70, the environmental data from the French facilities must be made available. See id. at 42. DCS and the Staff both claim that, because GANE has failed to provide an adequate basis for contention 11, it is inadmissable. See DCS GANE Contention Response at 37-40; Staff Contention Response at 21.

There is no doubt that contention 11 could be better organized and stated more clearly and precisely so that the contention provides an easier roadmap to follow. Nonetheless, the central part of the contention indicating that the ER fails adequately to address and analyze the impacts from the high-alpha waste stream produced from the MFFF and the supporting basis for the issue meet the minimum requirements for admissibility set forth in 10 C.F.R. § 2.714(b)(2). Thus, contrary to the arguments of DCS and the Staff, that portion of contention 11 is admissible.

In opposing contention 11, DCS argues that GANE inaccurately characterizes the record in that its ER provides that the wastes from the aqueous polishing process will be transferred to the SRS F-Area tank farm under DOE's jurisdiction and that neither DCS nor the NRC has responsibility or jurisdiction over the wastes once they leave the MFFF. See DCS GANE Contention Response at 38. DCS also argues that the environmental impacts associated with the SRS High Level Waste System, including the F-Area tank farm, are described in DOE's 1995 SRS Waste Management Final EIS in which DOE analyzed the management and treatment of the approximately 35 million gallons of existing high-level waste

at the SRS as well as an additional 7.1 million gallons projected to be generated under various scenarios. Because the MFFF will generate less than 100,000 gallons of high-alpha liquid waste per year for 20 years, DCS claims the environmental impacts of the MFFF waste are bounded by existing analyses. See id. at 39.

DCS's argument ignores the primary thrust of GANE's contention that neither DOE's SPD EIS nor the ER analyze and address the annual 80,000-gallon, non-high-level, high-alpha liquid waste stream containing nearly 80,000 curies of americium-241 as required by NEPA. The fact that the waste ultimately will be turned over to DOE, and therefore, is not within the jurisdiction of either DCS or NRC once the waste leaves the MFFF does not relieve DCS of its obligation, in the absence of any DOE analysis of the high-alpha waste, to analyze and address in the ER the environmental impacts of the wastes it generates. Although DCS argues that the environmental impacts of the SRS High Level Waste System, including the F-Area tank farm are described in DOE's SRS Waste Management Final EIS,[11] that EIS deals with high-level waste, not the kind of non-high-level, high-alpha liquid waste generated by the MFFF and, as Appendix B, Table B.13-2 of that EIS shows, the F-Area tanks do not contain americium-241. Indeed, DCS has not challenged GANE's assertion that DOE's SPD EIS does not address the disposition and impacts of the high-alpha waste stream.[12] Similarly, DCS's "proverbial drop in

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[11]In citing DOE's 1995 SRS Waste Management Final EIS, DCS does not provide even a volume number, much less a section or page number, to the purportedly relevant portions of the document that it claims describe "[t]he environmental impacts associated with the SRS High Level Waste (HLW) system, including the F-Area Tank Farm . . . ." DCS GANE Contention Response at 39. Just as the mere reference to a document does not provide an adequate basis for a contention, see Calvert Cliffs, CLI-98-25, 48 NRC at 348, the general reference to a document or documents without specific citations to the relevant material in the document is not an adequate response to a contention.

[12]Although DCS neither cites nor otherwise references DOE's SPD EIS in opposing GANE contention 11, it appears DOE briefly describes in that EIS a "plutonium-polishing process." See SPD EIS at 2-35. Assuming that process is comparable to the MFFF aqueous polishing process, the SPD EIS does not appear to be consistent with the description in DCS's (continued...)

the bucket argument" concerning the quantity of waste generated by the MFFF in relation to the 35 million gallons of high-level waste already at the SRS again does not address the principal focus of GANE's contention that the environmental impacts of a high-alpha waste stream containing americium-241 has not been appropriately addressed. Perhaps this is why the ER, in contrast to DCS's contention response, states only that "any impacts to the environment should be bounded by those evaluated in the previous DOE EISs." ER at 5-20 (emphasis added). Accordingly, that portion of GANE contention 11 asserting that DCS's ER understates the impacts of the waste stream from the aqueous polishing process is admissible.

10. Failure to Analyze Malevolent Acts of Terrorism

GANE contention 12 states that NEPA requires the analysis of foreseeable environmental impacts and asserts that the ER fails to analyze the foreseeable impacts of malevolent acts of terrorism and insider sabotage causing a beyond design basis accident. See GANE Contentions at 45. As the basis for the contention, GANE relies upon an internal memorandum of the State of Georgia criticizing DOE's response to the State's comments on DOE's draft SPD EIS indicating, inter alia, that the State is unconvinced by DOE's assertions that malevolent acts are only conjecture and do not present a credible scenario for serious accidents. See id. at 47-48. Further, GANE contends that for the malevolent act scenario to go unaddressed could lead to dire consequences for the people and environment of South Carolina and Georgia because

> [t]errorism scenarios abound in the nightly news. Assault weapons and rocket launchers may be purchased by members of the civilian population not only on the black market but at weapons trade shows. News stories abound of employees at nuclear facilities around the world stealing special nuclear

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[12](...continued)
ER of the disposition and treatment of the high-alpha waste stream (i.e. americium-241). See ER at 5-20.

> materials, to prove that they CAN or at least that's what they say when caught.

Id. at 48. DCS opposes the admission of the contention arguing that it raises matters that need not be considered under NEPA. See DCS GANE Contention Response at 40-41. For its part, the Staff argues that the contention lacks an adequate legal basis and thus is inadmissible. See Staff Contention Response at 22.

GANE contention 12 meets the standards of 10 C.F.R. § 2.714(b)(2) for an admissible environmental contention. The contention states the precise issue raised, i.e., pursuant to NEPA, DCS's ER must analyze the environmental impacts of terrorist acts causing a beyond design basis accident because such terrorist acts are reasonably foreseeable. It complies with section 2.714(b)(2)(i) & (ii) by providing a brief explanation of the basis and an outline of the basic facts supporting the contention. In this regard, GANE references an internal memorandum of the State of Georgia stating the State's view that terrorists acts against nuclear interests are credible and not conjecture, and then sets out a simple, fact-based argument to the effect that terrorist scenarios and the means by which such schemes are executed are now foreseeable as they are regular fare in the news. Such fact-based arguments are one method of complying with the requirements of section 2.714(b)(2). See, e.g., Oconee, CLI-99-11, 49 NRC at 342 ("[d]ocuments, expert opinion, or at least a fact-based argument are necessary"). Finally, and as required by section 2.714(b)(2)(iii), GANE's contention provides sufficient information to show a genuine dispute with DCS over whether the ER, as the foundation document for the Staff's environmental impact statement, complies with NEPA because it fails to analyze the environmental impacts of foreseeable terrorist acts causing a beyond design basis accident.

Citing Long Island Lighting Company (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973), DCS asserts, without any analysis, that "NEPA does not require an

assessment of the environmental impacts of terrorism." DCS GANE Contention Response at 41 & n.107. Shoreham, a reactor construction permit proceeding, involved an appellate challenge to the exclusion of the issue of foreign sabotage from the proceeding and the argument that the Licensing Board's decision was deficient because the risks of foreign and industrial sabotage should have been factored into the Board's cost-benefit analysis under NEPA. See Shoreham, ALAB-156, 6 AEC at 851. In upholding the exclusion of this issue, the Appeal Board held that the rationale for 10 C.F.R. § 50.13, which obviates the need for design features in reactors to protect against attacks by foreign enemy governments or individuals, applied to the Commission's NEPA responsibilities as well. See id. By its terms, however, section 50.13 applies only to production and utilization facilities and is inapplicable to the MFFF. Nor is there a comparable regulatory provision covering material license facilities, specifically fuel fabrication facilities. Accordingly, Shoreham is inapposite.

Although the rationale for 10 C.F.R. § 50.13 that the Shoreham Appeal Board found applicable to the agency's NEPA responsibilities so as to preclude consideration of the environmental impacts caused by foreign sabotage at a nuclear reactor would appear to be equally applicable to all other facilities regulated by the NRC, the simple fact remains that the Commission has never promulgated a parallel regulation covering 10 C.F.R. Part 70 facilities such as the MFFF. Consequently, for the Licensing Board to apply the rationale for 10 C.F.R. § 50.13 to the agency's responsibilities under NEPA here, requires a leap that is tantamount to writing a comparable regulation for Part 70 facilities and then applying the rationale for that new regulation to the agency's NEPA responsibilities for the MFFF. Such an action would involve the Board in making policy decisions that are the exclusive domain of the Commission and require the Board to exceed its assigned role in the Commission's adjudicatory system.

DCS and the Staff agree, and as GANE's contention indicates, the applicable legal standard under NEPA is that only reasonably foreseeable environmental impacts arising from

the proposed action need be analyzed. See Tr. at 352; Staff Contention Response at 22; see, e.g., Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 739 (3d Cir. 1989). Stated otherwise, environmental impacts from remote and speculative initiating events need not be analyzed. See, e.g., Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333, 334-35 (1990). Although agreeing on the applicable legal standard, both DCS and the Staff also argue that terrorist acts are not foreseeable. See, e.g., Tr. at 354-355, 357-358, 362.

GANE's contention was filed on August 13, 2001. Regardless of how foreseeable terrorist acts that could cause a beyond basis accident were prior to the terrorist attacks of September 11, 2001, involving the deliberate crash of hijacked jumbo jets into the twin towers of the World Trade Center in New York City and the Pentagon in the Nation's Capitol killing thousands of people, it can no longer be argued that terrorist attacks of heretofore unimagined scope and sophistication against previously unimaginable targets are not reasonably foreseeable. Indeed, the very fact these terrorist attacks occurred demonstrates that massive and destructive terrorist acts can and do occur and closes the door, at least for the immediate future, on qualitative arguments that such terrorist attacks are always remote and speculative and not reasonably foreseeable.

Obviously, the Board cannot close its eyes to the recent terrorists acts or the Commission's immediate response that nuclear facilities, including fuel facilities, maintain the highest level of security readiness. Nor is it controlling that the events of September 11 occurred subsequent to the filing of GANE's contention and are not specifically included in it. The contention speaks generically of foreseeable terrorist acts causing a beyond design basis accident and more is not required. In this regard, however, it should be noted that GANE sought leave to amend the factual basis for the contention and also requested the Board to take judicial notice of the recent terrorist attacks. See Tr. at 351. Having found that the contention

is admissible, the Board notes that DCS and the Staff are still free to challenge quantitatively the likelihood of such a terrorist initiated event in an attempt to demonstrate it is remote and speculative.

DCS also argues that because the consequences of a terrorist-caused accident are similar to other types of accidents addressed in its ER and other impact statements, there is no reason separately to address terrorist acts. See DCS GANE Contention Response at 41. Although in some circumstances DCS's argument may have currency,[13] the accidents analyzed in the ER for the MFFF, as well as those in the CAR, are not similar to a beyond design basis accident caused by terrorist acts of the type recently witnessed. All of DCS's accident scenarios assume filtration efficiency for each HEPA filter of at least 99%. See ER, App. F at F5-F6; CAR § 11.4.9.2. Stated otherwise, in all of DCS's accident scenarios, both HEPA filters continue to function and DCS has not analyzed the impact of any accident in which one or both HEPA filters are incapacitated. In such circumstances, DCS's argument is unpersuasive. Finally, both DCS (Tr. at 355) and the Staff (Staff Contention Response at 22) argue that contention 12 is inadmissible because GANE has not shown it is foreseeable that a MOX facility will be the target of a terrorist attack. The test under NEPA, however, is only reasonable foreseeability, not perfect prescience.

Even though GANE contention 12 raises the issue of a terrorist-caused beyond basis accident as an environmental contention under NEPA, and not as a safety contention, it nonetheless raises an extremely important policy question. In such circumstances, the Board normally would certify the question of the admissibility of this contention to the Commission pursuant to 10 C.F.R. § 2.1209(d). In this instance, however, DCS has vigorously opposed the

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[13] See, e.g., Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 698-99 (1985), aff'd in part, CLI-86-5, 23 NRC 125 (1986), aff'd in part and rev'd on other grounds sub nom. Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719 (3d Cir. 1989).

admission of all of GANE's contentions and the grant of its intervention petition and DCS has the opportunity to place the issue squarely before the Commission in an appeal from the grant of GANE's intervention petition. See Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 23 (1998). Thus, the certification by the Board of this matter is unnecessary.

11. Lack of Probabilistic Risk Assessment

GANE's last contention, number 13, asserts that the ER satisfies neither NEPA nor the NRC's regulations because it contains an inadequate assessment of the probability and consequences of accidents. See GANE Contentions at 48. As the basis for contention 13, GANE first states that the accident analysis in the ER is inadequate because it is not supported by a detailed license application describing how the MFFF will be operated and, without such information, the risk assessment is merely speculative. See id. at 48-49. Next, GANE asserts that the ER violated 10 C.F.R. § 51.45(c) because it does not quantify the probability of accidents or explain why it is not practicable to quantify them. See id. at 49. DCS opposes the admission of the contention arguing that it is legally incorrect and also mischaracterizes the ER. See DCS GANE Contention Response at 41-43. The Staff argues the contention is inadmissable for being "too vague and general," apparently meaning it fails to meet the requirements of 10 C.F.R. § 2.714(b)(2). See Staff Contention Response at 23.

Both of GANE's asserted bases for contention 13 are insufficient to support the contention. GANE cites no NEPA or Commission regulatory provision requiring that the ER be supported by a detailed license application describing how the facility will be operated. Further, contrary to GANE's assertion, 10 C.F.R. § 51.45(c) does not support its contention. In pertinent part, section 51.45(c) states that the "analyses for environmental reports shall, to the fullest extent practicable, quantify the various factors considered" and "[t]o the extent that there are important qualitative considerations or factors that cannot be quantified, those considerations or

factors shall be discussed in qualitative terms." This unambiguous regulation implementing the Commission's responsibility under NEPA, see 10 C.F.R. § 51.10 (a), does not by its terms mandate the preparation of a probabilistic risk assessment. Further, no other Commission environmental or safety regulation requires DCS to prepare a probabilistic risk assessment for the MFFF. Moreover, contrary to GANE's assertion, the ER states why DCS provides qualitative rather than quantitative statements of accident risks. See ER, App. F at F-6. Accordingly, contention 13 is inadmissible because it lacks an adequate basis showing that a genuine dispute exists on a material issue of law or fact as required by section 2.714(b)(2)(iii).

B. BREDL Contentions

BREDL's 77-page contention filing begins with a 12-page introduction stating, inter alia, that its contentions are written "with an eye towards endorsing the NRC's own 'plain language policy'" so as to be readily understandable. BREDL Contentions at 11. BREDL then states that its "[c]ontentions are grouped into categories to avoid duplication involved with citing rules as well as redundancy in the facts and narratives [sic] discussions. In this manner, contentions are more discrete and easily identified, with related contentions are [sic] grouped in a systematic matter." Id. Although the announced scheme for drafting and arranging its contentions is admirable, BREDL's execution falls far short of its goal. The separation of purported issue statements from the asserted factual and legal bases for the contentions, combined with frequent numbering and other identification errors, and the presentation of seemingly disjointed statements instead of any real connecting narrative or explanation has made it extremely difficult in many instances for the Licensing Board to understand and match the supposed bases with the issues. Thus, any misinterpretation or misapprehension of BREDL's contentions by the Board in determining whether they meet the requisite regulatory standards for admissibility rests squarely with BREDL. See, e.g., Florida Power & Light Company (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 15 (2001).

1. Contention Group 1: Gross Violations of Radioactive Waste Management Rules

The first group of BREDL contentions consists of five parts, labeled 1A through 1E. In its first contention, BREDL asserts that DCS's proposal to transfer waste to DOE's contiguous SRS F-Area tanks for processing, storage, and disposal is a violation of NRC regulations. See BREDL Contentions at 13. As a basis for the contention, BREDL asserts that the MOX facility will generate a new form of waste (high-alpha activity waste), which will be transferred to DOE. BREDL contends that this transfer to the F-Area tank farm will create an unlicensed waste facility in violation of 10 C.F.R. § 20.2001. See id. at 15. DCS argues that the contention is inadmissible because there is no regulatory violation and thus no genuine dispute over any material issue of fact or law. DCS also asserts that the contention is beyond the scope of the proceeding because it fails to assert any deficiencies in the ER, QAP, or the identification of the design bases of the principal SSCs. See DCS BREDL Contention Response at 17-18. The Staff asserts the contention is inadmissible because there is no factual or legal basis for the contention. See Staff Contention Response at 28-29.

BREDL's first contention raises no genuine issue of fact or law as required by 10 C.F.R. § 2.714(b)(2)(iii). In pertinent part, section 20.2001(a) provides that "[a] licensee shall dispose of licensed material only . . . [b]y transfer to an authorized recipient as provided in . . . part[] 70 of this chapter." In turn, 10 C.F.R. § 70.42(b)(1) allows a licensee to transfer special nuclear material to DOE if such action is not prohibited by its Part 70 license. Consequently, BREDL's contention is footed upon a patently incorrect reading of an unambiguous regulation. Section 70.42(b) is clear on its face that such a transfer of waste to DOE is permitted under the Commission's rules. The contention does not assert that the regulation is unclear so as to provide for alternative readings that would create a genuine dispute. Additionally, BREDL's citation to the definition of "contiguous sites" in 10 C.F.R. § 70.4 as a legal basis for the contention does nothing to make it admissible because the contention fails to explain how this

definition is even relevant. See BREDL Contentions at 14. Accordingly, the contention is inadmissible.

In contention 1B, BREDL asserts that DCS submitted "contradictory and therefore inaccurate reports," in violation of 10 C.F.R. § 70.9, which requires the information submitted by an applicant be "complete and accurate in all material respects." Id. at 13-14. As the basis for this contention, BREDL claims that the information submitted by DCS contains contradictory language because, on the one hand, the ER states that the "greatest impact of operations at the [MOX] fuel fabrication facility will be the amount of waste generated," but on the other, the CAR states that a "very small amount" of generated waste will be transferred to the SRS. Id. at 15. DCS and the Staff argue that there is no factual or legal basis for the contention, asserting that BREDL has taken the two statements out of context. See DCS BREDL Contention Response at 18-19; Staff Contention Response at 29-30. DCS also asserts that the contention is beyond the scope of the proceeding because it does not assert any deficiency in the CAR, ER, or QAP. See DCS BREDL Contention Response at 19.

Contention 1B is inadmissible. First, the contention fails to set forth "a specific statement of the issue of law or fact to be raised" as required by section 2.714(b)(2). BREDL's contention is vague and open-ended, failing to identify a specific substantive safety or environmental issue that would entitle BREDL to legal relief. In addition, BREDL's contention does not provide an adequate basis as required by section 2.714(b)(2)(i). The contention purports to quote a sentence from the ER, but it fails to provide any citation for the referenced passage. Further, it fails to provide any explanation as to how or why these statements contradict one another, which is not self-evident. Indeed, as DCS and the Staff state, BREDL has taken the statements out of context.

BREDL's contention 1C asserts that the ER fails to identify numerous adverse impacts of radioactive waste generation in violation of 10 C.F.R. § 51.45(b), all of which relate to past

actions and alleged failures of various DOE waste initiatives. See BREDL Contentions at 13-14. For example, BREDL alleges that DCS has failed to identify numerous adverse impacts of the radiological waste disposal plan, failed to describe "notable features of the management system," failed to address or acknowledge mismanagement of waste at the SRS, and failed to identify a "plethora of failures and financial boondoggles associated with attempts to resolve the problem." Id. at 15-18. In addition, BREDL claims that DCS has not described its present and future compliance with the "SRS Federal Facility Agreement," and has failed to acknowledge key process uncertainties in managing high-level liquid radioactive waste at SRS. See id. at 17-18.[14] BREDL also alleges that the waste problem at SRS is exacerbated because DCS has adopted a false baseline of "zero," ignoring the effects of the already present 36 million gallons of waste at the F-Area tank farms that will not be removed until 2028. See id. at 16-17. BREDL asserts that these issues are "gross violation[s] of all aspects of NEPA," and a failure to comply with 10 C.F.R. § 70.9, which requires that "[i]nformation provided to the Commission by an applicant for a license . . . be complete and accurate in all material respects." Id. at 15. DCS and the Staff both assert that this contention is beyond the scope of the proceeding. See DCS BREDL Contention Response at 19-20; Staff Contention Response at 30.

Because this contention focuses exclusively on DOE's general management of waste at the SRS, it is beyond the scope of the instant proceeding that deals solely with the construction authorization for the MFFF. As previously noted (see supra p. 22), the issues concerning the management of waste of the SRS are addressed in DOE's SRS Waste Management Final EIS. Thus, the contention is inadmissible.

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[14] BREDL has labeled two items as d.vi. on page 17.

BREDL's fourth contention submits that "DOE committed gross violations of the National Environmental Protection [sic] Act . . . by knowingly publishing false, misleading and inaccurate information in legal NEPA documents." BREDL Contentions at 13. As a legal basis for the contention, BREDL lists, without more, 10 C.F.R. § 51.45(b) and (e), and all parts of NEPA. See id. at 14. The contention then asserts various supposed inadequacies with DOE's SPD EIS and other DOE documents. DCS and the Staff argue that this contention is beyond the scope of the proceeding. See DCS BREDL Contention Response at 20-21; Staff Contention Response at 30-31. DCS and the Staff are correct. Like the third contention in this group, this contention is beyond the scope of the proceeding addressing deficiencies in DOE's NEPA process and other related DOE activities.

In the final contention of this group, BREDL asserts that the ER and CAR are inadequate because they are "dominated by deficiencies." BREDL Contentions at 13. As its legal basis, the contention merely lists all parts of NEPA and 10 C.F.R. § 70.9. See id. at 14. Regarding alleged deficiencies in the CAR, the contention claims DCS fails to: (1) define the disposal route for evaporator bottoms; (2) provide for sampling of the "stripped uranium stream;" (3) specify the quantity of principal radionuclides in liquid and gaseous effluents released to unrestricted areas; and (4) specify "details" of the design requirements for the high-alpha liquid waste transfer line. See id. at 20. With regard to references in the ER, the contention claims that DOE's proposed F-Area Infrastructure Upgrades will include constructing a liquid waste pipeline from the MFFF to the F-Area outside the facility that has never been analyzed under NEPA. See id. DCS argues that the "[r]equestors' statements that these details are not provided is an improper challenge to 10 C.F.R. § 70.22 (f)" and that the contention is factually incorrect. DCS BREDL Contention Response at 21. The Staff asserts that this contention is inadmissible because the legal and factual basis for the contention is inadequate. See Staff Contention Response at 25.

With the exception of the environmental portion of the contention concerning the unanalyzed impacts of the high-alpha liquid waste transfer line, this contention is inadmissible. None of the asserted deficiencies claimed by BREDL in that part of the contention concerning the CAR raise a genuine dispute of material law or fact with DCS. Contrary to BREDL's first assertion, DCS's CAR demonstrates a disposal route for the evaporator bottoms. This waste will ultimately be discharged by the MFFF in the high-alpha level waste stream for management by DOE. See CAR Figure 10-1 at 10-21. With respect to its second assertion, the CAR indicates that the stripped uranium stream will in fact be sampled as it undergoes isotopic dilution prior to transfer to the high-alpha waste tanks. See id.; CAR § 10.1.4.1.1. The third assertion is also factually inaccurate because, as the CAR indicates, there are no radionuclide discharges from the MOX facility from normal operations into the environment, and the gaseous discharges that occur are addressed in the CAR. See CAR §§ 10.1.1, 10.2.1.2. Similarly, BREDL's last assertion concerning deficiencies in the CAR is incorrect because DOE, not DCS, will construct the waste pipeline to the F-Area outside the MFFF so the CAR need not include such information. Accordingly, these parts of the contention are inadmissible. Unlike the portions of BREDL contention 1E alleging deficiencies in the CAR, the portion of the contention asserting that the ER is deficient for failing to address the environmental impacts of the proposed high-alpha liquid waste stream pipeline meets the minimum requirements to be an admissible contention. In this portion of its contention, BREDL notes that page 1-3 of the ER indicates that a liquid waste pipeline will be constructed from the MFFF to the DOE F-Area tank farm. See BREDL Contentions at 20. BREDL also asserts that in January 2001 it formally requested DOE to analyze the impacts of the waste stream in a supplemental EIS, and DOE refused. See id. at 19-20. BREDL then claims that the impacts from the pipeline have never been analyzed as required by NEPA. See id. at 20. Thus, like the admissible portion of GANE contention 11 asserting that neither DOE nor DCS have appropriately analyzed the

impacts of the high-alpha waste stream from the aqueous polishing process as required by NEPA, this portion of BREDL contention 1E is also admissible for the same reasons. Because of the similarity of the two issues, this portion of BREDL contention 1E is consolidated with the admissible portion of GANE contention 11.

2. Contention Group 2: NRC Violations of NEPA

The second group of contentions consists of four parts labeled 2A through 2D. The first contention asserts that "NRC failed to implement NEPA early in the process by issuing a timely notice of intent to prepare an [EIS]" and failed to consult with the Defense Nuclear Facilities Safety Board (DNFSB),[15] resulting in bias in the scope of the proceeding in favor of DCS. BREDL Contentions at 21.[16] BREDL relies on NEPA, 10 C.F.R. §§ 51.15(a), 51.25, and 51.26(a), and Council on Environmental Quality (CEQ) Regulations as the legal basis for the contention, asserting that NRC should have issued a notice of intent to prepare an EIS shortly after DOE prepared its SPD EIS record of decision (ROD), and that it should have included input from the DNFSB in the ER. See id. at 21-22. DCS asserts that this contention fails to raise any issues within the scope of this proceeding and fails to provide a basis for its assertion that the Staff has violated NEPA. See DCS BREDL Contention Response at 24-25. DCS, along with the Staff also argues that the contention is inadmissible because BREDL has failed to articulate the necessary basis to establish any genuine dispute of law or fact. See id. at 24; Staff Contention Response at 32 & n.41.

BREDL has submitted an inadequate basis for the contention because it has not identified a genuine dispute of material law or fact as required by section 2.714(b)(2)(iii). First,

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[15]The DNFSB was created by Congress to monitor DOE's nuclear facilities. See 42 U.S.C. §§ 2286, 2286g (1994).

[16]In the original filing, this page was labeled as "1 of 30." Because it falls in numeric sequence as page 21, we refer to it as such.

neither section 51.26(a) nor the applicable CEQ regulations specify any particular deadline for the publication of a notice of intent.[17] In any event, the requisite notice was issued in March 2001, and BREDL does not detail how the NRC failed "to provide a clear record of decision to provide an EIS." BREDL Contentions at 25; see 66 Fed. Reg. 13,794 (Mar. 7, 2001). Similarly, there is no requirement that the DNFSB be consulted in the NRC's NEPA scoping process. The language of 10 C.F.R. § 51.28(a)(3) states:

> The appropriate NRC staff director shall invite the following persons to participate in the scoping process:
>
> (3) Any other Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce environmental standards.

According to 42 U.S.C. § 2286a(a)1, the mandate of the DNFSB is to "ensure that public health and safety are adequately protected" by reviewing standards, designs, operational data, and construction of facilities. Therefore, the DNFSB has no obvious "special expertise" regarding environmental matters, and as such was not required by the regulations to be invited to the Staff's scoping meetings on the EIS. Hence, BREDL fails to establish a basis as required by section 2.714(b)(2)(i) for that part of its contention claiming the DNFSB was illegally excluded, and it has proffered no justification why such consultations would be beneficial or shown that the DNFSB has "special expertise."

Contentions 2B through 2D are similarly flawed. Contention 2B states that the "NRC and Applicant collaborated to identify the scope of the Environmental Report outside of NEPA

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[17] 10 C.F.R. § 51.26(a) states that

> [w]henever the appropriate NRC staff director determines that an environmental impact statement will be prepared by NRC in connection with a proposed action, a notice of intent will be prepared as provided in § 51.27 and will be published in the Federal Register as provided in § 51.116, and an appropriate scoping process (see §§ 51.27, 51.28, and 51.29) will be conducted.

provisions, resulting in segmentation of the NEPA process, which again benefits the Applicant in ways contrary to NEPA." BREDL Contentions at 21. As a factual basis for this contention, BREDL points to various correspondence between DCS and the Staff regarding the scope of the ER and EIS. See id. at 24. DCS and the Staff argue that this contention is inadmissible because BREDL has failed to assert a genuine issue of material fact or law. See DCS BREDL Contention Response at 26; Staff Contention Response at 32 & n.42.

In contention 2B, BREDL fails to identify any provision in the regulations that prohibits this type of communication between DCS and the Staff. Contrary to BREDL's assertion, 10 C.F.R. § 51.40(a) "encourage[s]" the Staff to confer with a prospective applicant before the ER is submitted. Accordingly, contention 2B raises no genuine issue of material law or fact as required by section 2.714(b)(2)(iii) and is inadmissible.

BREDL contention 2C alleges that the "NRC began a de facto NEPA staff review before any time schedule for such review was published." BREDL Contentions at 21. As legal support, BREDL proffers CEQ regulations regarding the timing for the commencement of an EIS, along with "10 C.F.R. Part 51, Subpart A." See id. at 22. DCS and the Staff assert that the contention lacks basis and specificity, and raises no genuine issue of material law or fact. See DCS BREDL Contention Response at 26-27; Staff Contention Response at 32.

This contention fails to meet the section 2.714(b)(2)(iii) requirement that a petitioner assert a genuine issue of material law or fact with adequate basis and specificity to support the claim. Contrary to BREDL's assertion, 10 C.F.R. § 51.15(a) does not preclude the Staff from beginning a NEPA investigation before the publication of a schedule, stating only that the Staff "shall . . . establish a time schedule for all or any constituent part of the NRC staff NEPA process," to be followed to the "maximum extent practicable." Nor has BREDL identified any CEQ regulation that precludes the Staff's actions. This contention is thus inadmissible.

Contention 2D asserts that the "NRC changed its criteria for Environmental Justice issues under NEPA without informing the public. . . ." BREDL Contentions at 21. In support of the contention, BREDL submits that a December 11, 2000, letter to DCS from the Staff demonstrates a change in the NRC-defined scope of the EIS in favor of DCS in violation of 10 C.F.R. § 51.26(a), which requires that the scope of an EIS be determined following the NEPA mandated scoping process. See id. at 27 & n.9. DCS and the Staff argue that there is no genuine dispute of material fact or law alleged by the contention as required by section 2.714(b)(2)(iii). See DCS BREDL Contention Response at 27; Staff Contention Response at 32.

DCS and the Staff are correct that the contention is inadmissible. As noted by DCS, the letter cited by BREDL indicates that the environmental justice criteria was changed because of a factual error.[18] Thus, this contention fails to raise a genuine issue of material fact or law as required by section 2.714(b)(2)(iii). Moreover, BREDL has neither asserted nor described how such a purported change in criteria would affect the DCS NEPA analysis.

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[18] See Letter from Melanie A. Galloway, Chief, Enrichment Section of the Division of Fuel Cycle Safety and Safeguards, Special Projects Branch, NMSS, to Robert H. Ihde of DCS (Dec. 11, 2000), Attach. at 1-2. The letter states, in pertinent part,

> DCS has also requested guidance on whether to follow the Environmental Justice guidance in [the SRP] . . . or the guidance provided as an attachment to the NRC letter dated 5/3/00. The SRP states that the Description of the of the Affected Environment should include "[s]ocioeconomic information, including that for low-income and minority populations within a 50 mile radius." This dimension is incorrect. DCS should follow the [NMSS] Policy and Procedures letter 1-50, Rev. 2, which states that "if the facility is located outside the city limits or in a rural area, a 4 mile radius (50 square miles) should be used."

3. Contention Group 3: Conflicts of Interest

This group of contentions has three parts, collectively labeled 3A through 3C. The first contention in this group asserts that the "NRC has a Conflict of Interest in this proceeding because it has received, receives, and pursues receiving DOE funding to support licensing activities for the Russian MOX program . . . ." BREDL Contentions at 31. As the legal basis for this contention, BREDL cites the "Energy Reorganization Act [of 1974]." Id. DCS and the Staff submit that the contention is inadmissible because it fails to assert an adequate basis and is beyond the scope of the proceeding. See DCS BREDL Contention Response at 28; Staff Contention Response at 33-34. DCS and the Staff are correct. The issue of the NRC's involvement in the Russian MOX program is clearly beyond the scope of the proceeding as set forth in the Commission's Hearing Notice. See 66 Fed. Reg. at 19,996.

Contention 3B asserts that "NRC hired as its NEPA contractor an organization -- Argonne National Laboratory (ANL) -- with obvious conflicts of interest . . . to conduct the EIS." BREDL Contentions at 31. As a legal basis, BREDL refers to a CEQ regulation, 40 C.F.R. § 1506.5(c), which states that the lead agency should choose a contractor with a cooperating agency to avoid any conflicts of interest. Additionally, without an explanation of how it specifically relates to the contention, BREDL also asserts as a legal basis the "Atomic Energy Act of 1954. Section 2. Findings. (g)" which, according to BREDL, asserts that "[f]unds of the United States may be provided for the development and use of atomic energy under conditions which will provide for the common defense and security and promote the general welfare." Id. As the factual basis for the contention, BREDL argues that ANL is a DOE-funded and supervised laboratory that operates within the jurisdiction of the Chicago Operations Office, "the same office implementing the contract between DOE and [DCS]." Id. at 33. Additionally, ANL "received millions of dollars" in funding from DOE and "has a federally approved institutionalized commitment to advancing the cause of nuclear power." Id. DCS and the Staff argue that this

contention is inadmissible for failing to raise a genuine issue of material fact or law or an issue that is within the scope of this proceeding. See DCS BREDL Contention Response at 28; Staff Contention Response at 33-34.

This contention lacks the necessary basis and specificity required by section 2.714(b)(2). BREDL has not cited any parts of the ER that it believes are inaccurate due to the alleged bias of ANL. In addition, BREDL has not submitted any expert affidavits or other documentary evidence in support of its position regarding "the Applicant's activities in pursuing a plutonium fuel economy that contradicts U.S. policy." Id. at 31. BREDL states that it "intends to find one or more experts to testify" in support of the contention "[i]f this contention is accepted by the Panel." Id. A petitioner is required, however, to submit supporting expert affidavits at the time of the submission of contentions. See 10 C.F.R. § 2.714(b)(2)(ii). Additionally, bald assertions such as "[t]he fact that ANL views itself as a supporting role for DOE in and of itself should disqualify it from the process," fail to raise any issues or provide an adequate basis in support of the contention. Id. at 34. Accordingly, contention 3B is inadmissible.

Contention 3C asserts that "[t]he Applicant has a clear conflict of interest in terms of being involved with U.S. foreign/nonproliferation policy and also having a vested interest in parallel efforts in Russia. . . ." Id. at 31. In support, BREDL references, without more, an unspecified "attachment." Id. DCS and the Staff argue that the contention fails to raise a genuine dispute of law or fact and thus is inadmissible. See DCS BREDL Contention Response at 29; Staff Contention Response at 34.

This contention sets forth an issue beyond the scope of this proceeding. Additionally, the contention has an inadequate legal or factual basis as required in section 2.714(b)(2)(iii). Any issues pertaining to the federal government's non-proliferation policy clearly go to matters beyond the scope of the DCS CAR, ER, or QAP. Moreover, mere reference to a document,

without more, does not provide an adequate basis for a contention. Calvert Cliffs, CLI-98-25, 48 NRC at 348.

4. Contention Group 4: Qualifications

Group 4 consists of two contentions regarding the qualifications of the NRC Staff, labeled 4A and 4B. The first contention reads "[t]he NRC lacks the necessary expertise in the field of industrial-scale plutonium processing to adequately determine whether public health and safety will be protected and to issue a license assuring this." BREDL Contentions at 35. The second contention asserts that "[s]hortages in critical skills threatens [sic] to weaken NRC's future ability to protect public health and our environment." Id. As a legal basis for both contentions, BREDL references "10 C.F.R. 70, Atomic Energy Act, and all other previously cited regulations requiring NRC to protect health and safety." Id. DCS and the Staff both claim that these contentions raise issues beyond the scope of the proceeding. See DCS BREDL Contention Response at 29-30; Staff Contention Response at 34-35.

Like GANE contention 4 challenging the competence of the NRC Staff, these two contentions are inadmissible for the same reasons (see supra pp. 34-35). The issue of the Staff's competence is not litigable in agency licensing proceedings and is clearly beyond the scope of the proceeding.

5. Contention Group 5: Unresolved Issue of Authority of Applicant to Apply for and Hold License

This group of contentions consists of five parts, labeled 5A through 5E. The first, second, and third contentions in this group each raise financial assurance issues regarding DOE's funding of the MFFF. Contention 5A declares that "[b]ecause DOE functions as the financial assurance entity, will own the MFFF, it should either be the applicant or a co-applicant for the Construction License." BREDL Contentions at 38. The second contention states that "DOE is not an [sic] historically reliable source of financing." Id. As a result, according to

BREDL's third contention, the "DOE contract with Applicant is a limiting factor in the ability of the Applicant to meet NRC license requirements . . . and therefore is a safety issue to be examined in this proceeding." Id. As a legal basis for all three contentions, BREDL asserts that "Yucca Mountain does provide precedence [sic] for direct licensing of DOE," and in addition, it asserts provisions of 10 C.F.R. Part 70 regarding financial assurance. Id. With regard to contention 5A, DCS asserts that the contention is beyond the scope of the proceeding because it fails to identify any deficiencies in the CAR, ER, or QAP. According to DCS, the contention also poses no genuine issue of law or fact because BREDL has not provided any facts or expert opinion in support of the contention. See DCS BREDL Contention Response at 30. The Staff argues that the contention is inadmissible because BREDL has not proffered an adequate legal or factual basis. See Staff Contention Response at 35-36.

Contention 5A is inadmissible for failing to meet the basis requirement of section 2.714(b)(2)(i). BREDL cites no statute or regulation requiring DOE to be an applicant or co-applicant in this proceeding. Indeed, contrary to BREDL's claim, Congress has authorized DOE's contractor to be licensed by the NRC. See 42 U.S.C. § 5842(5). Similarly, BREDL's contention B has not provided any "historical" information or evidence that supports its allegation that DOE has been financially unreliable in the past, other than bald assertions such as the MFFF "could be mothballed like many other DOE facilities in the past" if the DCS contract extension renewal falls through and another contractor takes over operation of the MFFF, and previous DOE contracts have involved "long cost overruns and time delays." BREDL Contentions at 40. More importantly, because DCS is a government contractor and DOE funds the MFFF project contract from funds appropriated from Congress, the contention, to the extent it seeks to challenge DOE's funding of DCS's contract, seeks to raise issues clearly beyond the scope of the proceeding.

A similar result must obtain for contention 5C. BREDL has failed to provide an adequate explanation or any examples as to why the DOE contract with DCS is a "limiting factor" that could contribute to health and safety issues at the MFFF. For example, BREDL argues that the base contract awarded to DCS only encompasses design and licensing activities and that DOE's retention of "stop work" authority over the MFFF combined with the unilateral contract extension provisions could "affect the safety and viability of the MFFF" if a different contractor, unfamiliar with the design, construction, operation, or decommissioning of the MFFF was commissioned to finish the project. BREDL Contentions at 39. These aspects of the contract, according to BREDL, "add[] a level of risk to the design and licensing process that constitutes a Configuration Management and Quality Assurance safety issue to be examined" in light of DOE's "record of long cost overruns and time delays -- [in which] obvious 'cutting corners' safety issues are raised." Id. at 39-40. Contention 5C is inadmissible for lack of the requisite basis and specificity required by section 2.714(b)(2). BREDL neglects to describe or append the contract provisions at issue or explain why they would be limiting factors that could cause health and safety issues at the MFFF. Additionally, BREDL fails to provide examples of "cost cutting" measures that should be examined in this proceeding, nor does it provide expert testimony or other support for the potential health and safety risks that could result from cutting corners. BREDL's assertions that it "intends to find one or more experts" in the areas of high-consequence safety operations, the economics of deactivation, and federal budgeting, id. at 38, do not meet the contention pleading requirements that require adequate support for each contention at the time it is filed. See 10 C.F.R. § 2.714(b)(2)(ii). Accordingly, this contention is inadmissible.

Contentions 5D and 5E state, respectively, that the "Applicant is financially obligated to pay the costs of deactivation above and beyond DOE's allowance of $10 million, but has yet to provide financial assurance," and that the "Applicant is presently liable to being held in Breach

of Contract, which adds further uncertainty to the project." BREDL Contentions at 38. BREDL again asserts as its legal basis for the last two contentions the "Yucca Mountain precedence [sic]," and 10 C.F.R. Part 70. Id.

Contention 5D is inadmissible because it fails to satisfy the basis and specificity requirement of section 2.714(b)(2). BREDL furnishes no factual or other support for its assertion that $10 million is insufficient for deactivation of the MFFF or its claim that DCS has only considered a "nearly flawless operation[] and a simple deactivation process, an assumption that defies the record of plutonium processing facilities." Id. at 40. Nor does BREDL explain how information from the records of other plutonium plants would demonstrate that there may be such problems in the future at SRS. The only purported support set forth by BREDL is that of "recent reports in nuclear trade journals" and an asserted "legally required cost-report on plutonium disposition" that BREDL alleges was concealed from Congress by DOE. Id. at 40-41. As noted before, mere citation to a document without an adequate explanation of how such information substantiates the issue statement is inadequate to support a contention. See Calvert Cliffs, CLI-98-25, 48 NRC at 348. As such, the contention is inadmissible for lack of basis and specificity.

With respect to contention 5E, BREDL again has failed to set forth an adequate legal or factual basis for its contention as required by section 2.714(b)(2). BREDL asserts that "the Applicant could easily be held in breach of contract because of the lack of a contract modification since the alleged withdrawal of Virginia Electric Power Company from its role in providing irradiation services at its North Anna Unit 1 and North Anna Unit 2 nuclear reactors." BREDL Contentions at 41. BREDL then purports to quote the contract stating that:

> The Contractor may only propose to replace a mission reactor if: (1) the reactor has been shutdown [sic] for economic reasons; or (2) the NRC or the utility company has required the reactor to be shut down for safety reasons, and in either case, the shutdown will preclude accomplishment of the plutonium disposition mission

> schedule. Failure of the Contractor to provide an approved replacement mission reactor sufficient to accomplish the plutonium disposition mission schedule shall be considered a breach of this contract.

BREDL Contentions at 41. BREDL suggests that DCS "declined to identify this to the NRC in the CAR and associated documents" and that a breach of contract would "add[] further uncertainty to the [MFFF] project." Id. at 38, 41.

Nowhere in its recitation does BREDL point out concrete details that support its notion that the purported breach of contract adds uncertainty. Nor does BREDL provide expert affidavits or other evidence to demonstrate how a breach of contract would affect the MFFF. Indeed, it appears from the language quoted by BREDL that any actionable breach of contract flows only from the failure to provide replacement reactors, and BREDL has not alleged that DCS has failed to provide replacement reactors. Moreover, it is unclear what the term "uncertainty" means in this context because BREDL provides no facts describing a health or safety risk that could occur because of such breach. Accordingly, this contention is inadmissible for failing to meet the requirements of section 2.714(b)(2).

6. Contention Group 6: Compliance Reporting

This "group" consists of only one contention labeled 6A. BREDL argues that "[t]he applicant failed to identify and describe its environmental and safety compliance record to NRC," and "[i]nstead, DCS described the regulatory compliance history of the Savannah River Site Operating Contractor Westinghouse Savannah River Site." Id. at 42. As a legal basis, BREDL quotes fully the text of 10 C.F.R. § 51.45(d), and requests "[f]ull disclosure of the environmental, safety, and health compliance records of all major and minor partners in DCS." Id. DCS asserts that BREDL's reading of section 51.45(d) evidences a "misunderstanding" of the regulation. See DCS BREDL Contention Response at 33-34. The Staff asserts that there

is no factual basis for the contention and that the contention is beyond the scope of the proceeding. See Staff Contention Response at 36-37.

The contention fails to satisfy the requirements of section 2.714(b)(2)(iii) because there is no genuine issue of material fact or law in dispute. BREDL has simply misapprehended section 51.45(d), which states in pertinent part that:

> The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with these requirements.

It is clear that section 51.45(d) contains no requirement for DCS to provide information regarding its own or other entities' status of compliance with activities or projects unrelated to the MOX facility, and BREDL has not proffered a plausible alternative legal interpretation. Thus, the contention is inadmissible.

7. Contention Group 7: Plutonium Fueled Reactor Hazards

This contention is structured differently from the rest of the contentions submitted by BREDL. It consists of several paragraphs of background facts relating to "nuclear reactor safety issues," which are followed by attachments totaling over twenty pages of material describing NRC performance reviews, news articles, and press releases regarding the Duke Catawba and McGuire reactors. See BREDL Contentions at 42-69.[19] DCS and the Staff argue that this contention is beyond the scope of this proceeding. See DCS BREDL Contention Response at 35-36; Staff Contention Response at 37-38.

Like GANE contention 7 (see supra pp. 44-46), this contention is beyond the scope of the proceeding. As previously discussed, the environmental impacts of the irradiation of MOX

[19]There are two pages numbered 42 in the Petitioners' contention filing.

fuel in mission reactors will be addressed in later license amendment proceedings regarding the McGuire and Catawba reactors. Accordingly, the contention is inadmissible.

8. Contention Group 8: Department of Energy NEPA Violations (Outside of Waste Management at MFFF)

This group consists of six separate contentions labeled 8A through 8F, all of which address certain aspects of DOE's NEPA evaluations regarding the plutonium disposition program. See BREDL Contentions at 70. The first contention alleges that DOE has failed to implement provisions in the PEIS. Specifically, BREDL states that DOE has failed to upgrade plutonium pit storage at the Pantex Nuclear Weapons Plant, and has failed to provide for long term storage of non-pit plutonium at the SRS. See id. Contention 8B asserts that "DOE irreparably biased the SPD EIS towards MOX through the premature solicitation of a MOX contractor." Id. Contention 8C alleges that "DOE has abandoned its [ROD] for the SPD EIS and has failed to issue a supplemental EIS to evaluate the impacts of major changes in addition to the liquid radwaste stream at the MFFF." Id. Contention 8D submits that "the Plutonium fuel/MOX option greatly increases the risk of plutonium theft, diversion, and reuse and DOE greatly underestimated the risk of nuclear explosives being developed from reactor plutonium." Id. Contention 8E asserts that "DOE failed to identify the dual-use nature of both the PDCF and the MFFF, and both facilities have the potential to be converted into use for plutonium pit fabrication." Id. Finally, the last contention alleges that "DOE's analysis failed to identify or greatly understated the real hazards of plutonium processing." Id. As a legal basis for all six contentions, BREDL asserts "[t]he entirety of NEPA, but particularly those sections involving adequate analysis, supplemental environmental impact statements, use of accurate information, public participation requirements, limited actions before a decision, prejudicial behavior, and triggering mechanisms for NEPA analysis." Id. at 70-71. No expert affidavits are offered, and the main factual support for these contentions are citations to various pages of a

February 6, 2001, article entitled "Plutonium: The Last Five Years," written by Mr. Moniak. See id. at 71. In addition, for contention 8A, BREDL relies on certain portions of its earlier May 18, 2001, intervention petition. See id. DCS and the Staff argue that the contentions are beyond the scope of this proceeding. See DCS BREDL Contention Response at 37-40; Staff Contention Response at 39.

As DCS and the Staff argue, these contentions are clearly beyond the scope of the proceeding. All of these contentions suggest a defect in the DOE NEPA process. As previously explained with respect to GANE contention 10 alleging inadequacies regarding the DOE SPD EIS (see supra pp. 48-49), such issues are not litigable in this proceeding because DCS, not DOE, is the Applicant, and it is the DCS CAR, ER, and QAP that are under scrutiny in this proceeding, not the DOE SPD EIS.

9. Contention Group 9: Inadequate Radiological Protection of Public

This contention group consists of two contentions, 9A and 9B. Contention 9A claims that the "Applicant used inappropriate control area boundaries and therefore mischaracterized members of the public as occupationally exposed workers." BREDL Contentions at 72. Contention 9B states that the "applicant failed to submit an Emergency Management Plan for the MFFF because of the inappropriate definition of a control area." Id. As a legal basis, BREDL cites 10 C.F.R. §§ 20.1003 and 70.61(f). Section 20.1003, as noted by BREDL, defines "public dose" as

> the dose received by a member of the public from exposure to radiation or radioactive material released by a licensee, or to any other source of radiation under the control of the licensee. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material . . . or from voluntary participation in medical research programs.

Similarly, "occupational dose" is defined as

> the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. Occupational dose does not include dose received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive materials . . . from voluntary participation in medical research programs, or as a member of the public.

Based on these definitions, BREDL asserts that DCS incorrectly defined its control area as being the entire SRS, an area that even DOE has difficulty protecting from trespassers. This is because the control area includes a road open to public travel, a hurricane evacuation route, a CSX railroad line, and the Three Rivers Regional Landfill and Recycling Center. See BREDL Contentions at 72-73.

DCS argues that the contentions are an improper challenge to NRC regulations, and that there is no basis for the claims made with respect to the DOE-controlled area. According to DCS, DOE currently controls access to the SRS and DCS will be establishing a "protocol" with DOE that will integrate the MFFF with the existing SRS control plan to limit access to the SRS in an emergency. See DCS BREDL Contention Response at 40-42. The Staff agrees with DCS that both contentions are inadmissible for lack of basis. See Staff Contention Response at 39-41.

Contention 9A is essentially the same as GANE contention 5 that has already been admitted to the proceeding. For the same reasons (see supra pp. 38-39), this contention is admitted and is consolidated with GANE contention 5.

Contention 9B, on the other hand, is inadmissible because it is premature, and hence beyond the scope of this construction authorization proceeding. The asserted basis for the contention is DCS's claim that an emergency plan is not necessary. See BREDL Contentions at 73. Thus, BREDL is, in effect, asserting that DCS has failed to submit an emergency plan because DCS has mischaracterized the controlled area as the entire SRS and, according to

BREDL, a properly characterized controlled area would require DCS to file an emergency plan. Even if BREDL is correct, however, 10 C.F.R. § 70.22(i)(1)(ii) does not require the submission of an emergency plan until DCS files an application for a possession and use license. Accordingly, BREDL will have the opportunity to intervene and submit a contention on the issue of whether or not DCS is required to submit an emergency plan for the MFFF in a future proceeding on DCS's application for a possession and use license.

10. Contention Group 10: Lack of Complete and Accurate Information

BREDL's final group consists of three contentions, labeled 10A through 10C, each alleging deficiencies in the DCS license application. Contentions 10A and 10B declare that the "Applicant failed to submit detailed information sufficient for fact checking and analysis of the proposal," and that the CAR is filled with "dead-end references." BREDL Contentions at 74. As a result, contention 10C indicates that the "Applicant has displayed a clear intent to minimally cooperate with NRC." Id. BREDL cites as its legal basis 10 C.F.R. § 70.9(a), which requires that all information from the Applicant "be complete and accurate in all material respects." Id. BREDL's purported factual bases for contentions 10A, 10B, and 10C consist of some 17 statements labeled "a through d" and "b through l" without any designation as to which contentions the various letter-designated statements apply. In general, these assertions make broad statements such as "the Applicant is contractually obligated to DOE to minimize the amount of new information for the process and optimize use of old information," and "the Applicant submitted a CAR characterized primarily by lack of detail," as shown by the fact that the NRC Staff submitted an 86-page RAI involving 239 questions. Id. DCS argues that the contentions are inadmissible because they do not raise any genuine issues of material law or fact. See DCS BREDL Contention Response at 42-53. For its part, the Staff claims, in effect, that the contentions all lack adequate bases. See Staff Contention Response at 41-43.

All three of the contentions in this group are inadmissible because they are nothing more than vague assertions based on broad generalizations. As such, all the contentions contravene 10 C.F.R. § 2.714(b)(2). Moreover, BREDL fails to provide adequate support for its issue statements by failing properly to identify and explain the significance of the inadequacies in documents submitted by DCS to the Staff in support of the CAR. For example, BREDL asserts that the "Applicant failed to identify the historic deep boreholes in the area," but fails to provide any supporting documentation or explanation as to why this information is important. BREDL Contentions at 76. Even when BREDL purports to specify supporting material, it is incompletely cited. For example, BREDL refers to "[i]nformation provided by SRS NNSA Administrator Sterling Franks during a July 9, 2001 Tour of SRS" as its sole source for the assertion that "DOE is actively reviewing potential MOX feedstock options to compensate for the delay in the PDCF." Id. at 75 & fn.3; see 10 C.F.R. § 2.714(b)(2)(ii). Accordingly, contentions 10A, 10B, and 10C are inadmissible.

C. EI's Contentions

EI filed a total of 22 contentions, labeled A through V. Contentions A through F were submitted as part of its May 18, 2001, request for hearing, and contentions G through V were filed as an August 13, 2001, amendment to the original petition. See EI Petition at 7-8; EI Contentions at 2-6. With minor exception, all of EI's contentions consist of a single short paragraph beginning with an abbreviated statement of a purported issue, followed by one or more brief sentences. The purported legal basis appears in contention V, stating that "[a]ll the contentions relate to the NEPA while a majority of them also relate to the Atomic Energy Act (AEA), since most of them are concerned with radiation's effect on people."[20] EI Contentions

[20] In full, contention V states:

> The attached map supports EI's contentions M, O, P, U, W, and the

(continued...)

at 6. Additionally, in contention V, EI indicates that an attached map of a 1974 accidental tritium gas release at one of the DOE SRS facilities supports contentions M, O, P, U, and W, although none of EI's pleadings contain a contention W. See EI Contentions at 6; id. Attach. EI provides no affidavits of experts in support of any of its contentions.

Due to the similarity of subject matter of many of the contentions, there is no need to unnecessarily lengthen this decision further by addressing each contention individually. Therefore, the contentions are addressed in five groups. In general, DCS and the Staff agree that EI's contentions are all inadmissible for lack of basis and specificity. See DCS EI Contention Response; Staff Contention Response at 43-53.

1. Contentions A, B, C, G, O, and P -- Other Facilities

The common denominator for contentions A, B, C, G, O, and P is EI's assertion that information from previous NRC proceedings and/or other facilities should be utilized by DCS in the CAR and/or ER. Initially, contention A asserts that "[t]here is a lack of information regarding operations similar to those planned by the Applicants." EI Petition at 7. It proffers the example that "the Nuclear Fuel Services plant in West Valley, New York is not discussed and yet this

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[20](...continued)
Affidavit of Basil Garzia.

> All the Contentions relate to the NEPA while a majority of them also relate to the [AEA] since most of them are concerned with radiation's effect on people.
>
> The unavailability of a Safety Analysis Report and an Environmental Impact Statement related to the MOX Facility and the MOX project done by the Nuclear Regulatory Commission (NRC) is of concern to E.I. In its May 18th Petition [sic] to Intervene, E.I. called attention to there being a NEED FOR THE NRC to "prepare its own 'detailed statement' of environmental costs, benefits and alternatives", (See paragraph [sic] 6 and 7 of Petition)

EI Contentions at 6.

facility reclaimed uranium and plutonium from spent nuclear fuel for use in Mixed-oxide fuel," while "the Applicants chose instead references which depended heavily on predictions and estimates rather than real operating experience." Id.

Contention A is inadmissible for failing to meet the basis and specificity requirements of section 2.714(b)(2). There is no regulatory requirement that an applicant discuss all potentially relevant historical material that has been submitted to the NRC by other applicants. Further, EI does not specify what information from the West Valley reprocessing facility proceeding has potential relevance to this MOX proceeding. Nor does EI specify the information that is allegedly absent from the CAR or ER that should be included. Rather, EI merely states that "many of the areas of concern being faced by the Applicants is [sic] available from a number of sources, including the transcript of the NRC licensing proceedings held between 1973 and 1976." Id. As previously noted, a simple reference to a large number of documents does not provide a sufficient basis for a contention. See Calvert Cliffs, CLI-98-25, 48 NRC at 348. At a minimum, an intervenor is obligated to clearly reference and then summarize the information being relied upon. See 10 C.F.R. § 2.714(b)(2)(ii).

Contentions B, C, and G, are similar in content to contention A. They state that DCS's CAR and ER are deficient for failing to consider other "relevant material," but, like contention A, fail to note specifically what is missing and how this deficiency affects any particular safety or environmental concern. Contention B declares that the "Applicants failed to make use of the evidence contained in the transcripts of the Barnwell Nuclear Fuel Plant, a uranium and plutonium recovery facility planned by Allied General Nuclear Services," of which "an extensive record of evidence exists regarding a majority of the same issues now being considered." EI Petition at 7. Contention C maintains that the "Applicants don't use evidence from the transcripts of licensing proceedings related to the two Duke nuclear plants, which have been proposed for MOX fuel use." Id. Lastly, contention G asserts that DCS has inadequately

evaluated the health effects on the "local population" from "routine operation" of the MFFF because it has not considered the relevant evidence contained in the transcripts regarding Allied General's proposed uranium and plutonium recovery facility that contained "sources of information which have been tested by cross-examination." EI Contentions at 2. As was the case with contention A, contentions B, C, and G, are inadmissible for failing to meet the basis and specificity requirements of section 2.714(b)(2).

Similarly, in contentions O and P, EI asserts that the DCS CAR and ER fail to satisfy NEPA requirements because DCS should consider findings and experiences of facilities similar to the MFFF. In this regard, contention O claims that the "Applicants fail to explain fully what equipment is required in terms of overcoming the accidents, leaks, worker exposures or exposure to the public," and should have considered similar events at West Valley, SRS, the Westinghouse plant in South Carolina, and Cogema in France. Id. at 4. Similarly, contention P states that the Applicant has not explained how the existing evidence from Cogema has been factored into the evaluation of health effects as a result of normal operations or accidents. See id.

Both contentions are inadmissible for failing to meet the requirements of section 2.714(b)(2). With respect to contention O, EI fails to reference the portions of the DCS ER and CAR that are allegedly inadequate. Further, the relevance of the relationship between the DCS MOX facility and the other facilities, and the supposed safety significance of the missing information is not established by the contention. Nor is there any explanation in the contention of the relevance of the attached map that traces tritium gas releases during an accident at the SRS. Thus, contention O is inadmissible.

For similar reasons, contention P fails to meet the section 2.714(b)(2)(iii) admissibility requirements. EI does not specify the portions of the documents that it believes are inadequate in claiming that Cogema experiences should have "been factored into [DCS's] evaluation of

health effects." Id. EI is required by the rules to "include references to the specific portions of the application . . . [and] the identification of each failure and the supporting reasons for the petitioner's belief," 10 C.F.R. § 2.714(b)(2)(iii), which EI has not done. Accordingly, contention P is inadmissible.

2. Contentions D, E, and M -- Financial Assurance

Contentions D, E, and M concern issues regarding the financial effects of the MFFF on the residents of South Carolina. Contention D asserts that DCS has not considered the 1966 findings of the National Academy of Sciences Committee on Geologic Aspects of Radioactive Waste Disposal or the reviews from the 1970's by geologists with the United States Geological Survey. According to EI, "[w]ithout consideration of these findings, it is not possible to estimate the economic losses which could result from approval being given to the [DCS] CAR." EI Petition at 8. Contention D is inadmissible for failing to state an adequate basis as required by section 2.714(b)(2)(i). In the contention, EI fails to indicate what part of the above mentioned documents are relevant or provide any explanation of why these materials are relevant.

Contention E asserts that the Applicant has "failed to look at the possible outcomes of their facility from the viewpoint of business owners in the State . . . and have not adequately addressed other financial issues and questions." Id. This contention also fails to meet the basis requirement of section 2.714(b)(2)(i). EI provides no reference to any regulations that are applicable, nor points to any portion of the CAR or ER that are allegedly deficient. Nor has EI proffered sufficient facts or expert opinion to support the contention. Its two simple statements asserting that "[s]ome [effects] may be close to the proposed facilities, others along routes over which radioactive shipments travel," and that DCS "ha[s] not adequately addressed other financial issues and questions," id., are woefully inadequate to meet the contention pleading requirements.

Contention M claims that the

> Applicants' evaluation of the possible and actual detrimental effects to South Carolina residents from the proposed MOX Facility, in terms of environmental harm, damaged health, safety problems, financial and business losses, is invalid because full consideration has not been given to South Carolina's unique situation of having all the fresh MOX fuel shipments taking place within its border. . . . This defect in both the CAR and ER is of particular significance in relation to the terrorist issue.

EI Contentions at 3. In support of this contention, EI asserts that the National Academy of Sciences warned in its 1995 report on the "Management and Disposition of Excess Weapons Plutonium" that if significant portions of fresh fuel are mobilized as particulate matter, the public health risks would be substantial. See id. Additionally, an attached map is claimed to support the contention. See id. at 6.

Contention M is also inadmissible. EI has referenced no specific provisions in the ER or CAR that it asserts are inadequate or incorrect as required by section 2.714(b)(2)(ii). Although the contention indicates that there will be "environmental harm, damaged health, safety problems, and financial and business losses," EI neglects to describe these harms or explain how they arise from the construction of the MFFF, as required to establish an adequate basis pursuant to section 2.714(b)(2)(i). See id. at 3. This is also the case with respect to EI's mention of "the terrorist issue." Moreover, EI's citation to a study performed by the National Academy of Sciences and an attached map fails to save the contention because it fails to indicate why the study or the map are relevant to the contention.

3. Contentions F, K, R, V, and Q -- DOE EISs

Contentions F, K, R, V, and Q are grouped together due to their similarity in raising issues concerning DOE's various EISs. Contention F refers to the "4-page section on Transportation" contained in the ER, and alleges that the only reference identified by DCS is the DOE SPD EIS. EI Petition at 8. EI contends that "[t]his practice of using the reports of the

agency promoting a nuclear project has been going on for years" and "[i]n this case, the Applicants are limiting the information used to what the DOE has to use as the basis of its decisions." Id. EI asserts that the DOE EIS is "defective" because it relies "heavily" on its own reports and those done by Westinghouse and other DOE contractors. See id.

Contention F is inadmissible. As explained previously (see supra p. 22), agency regulations expressly allow the use of previously prepared EISs by other agencies. Thus, any challenge to a MOX-related DOE EIS is beyond the scope of this proceeding. For the same reasons, contentions K and R are inadmissible. Contention K states, in pertinent part, that "[t]he piece-meal approach taken in the overall project of disposing of excess weapons plutonium by removing the pits from nuclear bombs . . . has resulted in one of the numerous examples of the Applicants failing to comply with the National Environmental Policy Act (NEPA)." EI Contentions at 2. Contention R claims that "[t]here is no section in either the ER or CAR which identifies the specific benefits and costs of fabricating MOX fuel nor of the overall plan of disposing of excess weapons plutonium . . . ." Id. at 5. DOE, however, has already addressed the issue of alternatives to the MFFF in its SPD EIS. Thus, these contentions are all beyond the scope of the proceeding.

Contention Q also seeks to raise an issue beyond the scope of the proceeding. In this contention, EI states that "[t]he Applicants, in Section 4.4 Hydrology of the ER, have failed to demonstrate that radionuclides leaked from the MOX Facility or some related operation could not migrate downward to the aquifers," because DCS is "depending on the liquid effluent system of the Department of Energy's (DOE)," which "system has not been through the NRC's licensing process." Id. at 5. As indicated with respect to BREDL contention 1A (see supra pp. 59-60), DCS is authorized to transfer waste to DOE pursuant to 10 C.F.R. §§ 20.2001(a)(1) and 70.42(b)(1). Thus, there is no violation by DCS in transferring waste from the MOX facility. Furthermore, the ER addresses the potential for radionuclide impacts to groundwater and

concludes no radionuclide wastes from the MFFF will be released to the environment from normal operations. See ER at 5-11. Finally, as already noted in regard to contentions F, K, and R, the issues addressed in previous DOE EISs are beyond the scope of this proceeding. Hence, the general issue of waste at the SRS as raised by contention Q is beyond the scope of the proceeding because it is addressed in the DOE EISs.

For similar reasons, contention V fails to meet the admissibility requirements of section 2.714(b)(2)(iii). As previously noted (see supra note 20), contention V expresses concern over the unavailability of the Staff EIS and SAR at this point in the proceeding. As the Commission stated in its Notice of Hearing, however, the "[p]etitioners will not be permitted to wait for the NRC staff to issue its safety evaluation report or environmental impact statement before formulating contentions." 66 Fed. Reg. at 19,996. Accordingly, contention V does not raise a litigable issue within the scope of the proceeding, and it is inadmissible.

4. Contentions H, N, S, T, and U -- Potential Health Effects

These five contentions outline purported inadequacies in the CAR and ER regarding alleged potential health effects from the MFFF. In contention H, EI asserts that the "Applicants' evaluation of the health effects to local populations . . . is invalid because the assumptions made in regard to the use of HEPA filters in Appendix F, Section F.5 and F.6 do not meet the guidelines of the NRC." EI Contentions at 2. This contention is inadmissible because it lacks an adequate basis as required by section 2.714(b)(2)(i). Not only does the contention neglect to identify what NRC regulations or guidelines DCS has allegedly violated, it also fails to explain why the challenged DCS assumptions do not "meet the guidelines of the NRC." Id. at 2.

Contention N claims that the "Applicants' evaluation of the health effect to the local population from routine operation of the MOX Facility is invalid because its ER fails to give adequate attention to the pathways by which groundwater could become contaminated due to such unsuitable geological conditions of the SRS area as having a shallow water table or as a

result of SRS activities in the past." Id. at 3. EI suggests that the Applicant should have relied upon the findings in the 1967 United States Department of the Interior study "Geology and Groundwater of the SRP and Vicinity, SC" and the 1966 NAC report on "Geologic Aspects of Radioactive Waste Disposal," which were both prepared for the Atomic Energy Commission. See id. at 3-4. The last part of the contention maintains that neither DOE nor DCS have complied with NEPA because they have not fully considered alternatives for locating the MOX facility elsewhere or alternative methods of disposing of weapons-grade plutonium. See id. at 4.

Each of the three issues raised by contention N are unsupported by an adequate basis. With regard to the first part of the contention asserting that DCS's ER fails to give adequate attention to the health effects from the MOX facility, EI does not identify either the sections of the ER that it challenges or the NEPA provisions that allegedly have been violated by DCS. Moreover, no detrimental health effects created by contaminated groundwater are described in relation to the purported inadequacies in the ER. With respect to the allegation that the ER fails to give adequate attention to groundwater pathways, EI provides no specifics, just generalities. Thus, the first part of the contention lacks the required basis and specificity required by section 2.714(b)(2). With respect to the second part of the contention concerning DCS's failure to consider the 1967 Department of the Interior study or the 1966 NAC report, EI makes no showing as to why these materials are relevant to this contention or what material from the documents should be included in the DCS ER. Indeed, EI does not even identify the meaning of the acronym "NAC" in one of the references. Further, there is no NEPA or agency regulatory requirement to include every relevant document or piece of information in an environmental report. And contrary to EI's assertion, DCS has discussed groundwater in its ER. See ER at 5-10 to 5-11. Without an explanation why the ER is inaccurate, this part of the contention fails to establish a genuine issue of material fact or law in dispute. See 10 C.F.R.

§ 2.714(b)(2)(iii). Lastly, alternatives to MOX fuel use and alternate locations for the MOX facility are addressed in the DOE SPD EIS, and thus are beyond the scope of the proceeding. Hence, no parts of the contention satisfy the pleading requirements for contentions. Accordingly, contention N is inadmissible.

Contention S states that DCS has failed in the ER to take into account that children and babies suffer more health damage from radiation exposure than adults, pointing to section 5.2.10.1 of the ER to demonstrate the absence of such consideration. EI alleges that "[t]his along with numerous other defects in the Applicants reports make their evaluations of the health impacts from the MOX facility invalid." EI Contentions at 5. Similarly, contention T claims that the ER is inadequate because it "fail[s] to take into consideration that there are members of the public who spend time/or travel within the SRS boundaries," citing ER § 5.2.10.2. Id.

Both of these contentions are inadmissible as failing to meet section 2.714(b)(2)(ii) & (iii) requirements. With respect to contention S, EI fails to demonstrate through any expert opinion or supporting documentation that children and babies suffer more damage than do adults. Further, based on the location of the MFFF within the SRS (see supra p. 2), EI has not indicated why children and babies should be considered in such a dose calculation. Moreover, EI has not provided any support to demonstrate that DCS has performed the dose calculations incorrectly. Finally, it is also unclear what "other defects in the Applicant's reports" have caused alleged errors in the DCS ER. Id. at 5. Similarly, in connection with contention T, EI fails to provide any expert opinion or any other supporting documentation to show that people who spend time or travel through the SRS are more adversely affected than other individuals or proffer any evidence demonstrating why the DCS analysis is inaccurate. Therefore, contentions S and T are inadmissible.

EI's contention U states that the "lack of coverage on the subject of fires and their potential for spreading radioactive particulate matter is a flaw which makes the Applicants' evaluations of safety and health impacts invalid. This ties in with the deficiencies regarding emergency planning . . . ." Id. at 5-6. The portion of the contention dealing with the issue of fires lacks an adequate basis as required by section 2.714(b)(2)(i). EI has failed to provide any information outlining why an accident involving fire is not bounded by the accidents already analyzed by DCS in the ER. The portion of the contention concerning "emergency planning," seeks to raise an issue beyond the scope of the proceeding. In this regard, the contention is similar to BREDL contention 9B in that it indicates that DCS is required to submit an emergency plan for a construction authorization license. As noted earlier, however (see supra p. 79), if an emergency plan is necessary, it need not be filed until DCS files an application for a possession and use license. Accordingly, this contention is inadmissible. See 10 C.F.R. § 70.22(i)(1)(ii).

5. Contentions I, J, and L -- Cumulative Effects at SRS

These three contentions assert inadequacies in DCS's consideration of the cumulative effects of radioactivity at SRS. In contention I, EI asserts that the CAR and ER "fail to adequately consider the long-term effects of the MOX facility" because the "impacts of decontamination and decommissioning are omitted." EI Contentions at 2. EI cites to section 5.6.1 of the CAR as support for the contention. This section entitled "Description of Principal SSCs and Required Support Systems," has no apparent connection, however, with the subject of decommissioning, and EI has not provided an explanation to establish such a relationship. Indeed, the DCS ER does not even discuss the topic of decommissioning because, as noted in the ER, DOE rather than DCS is responsible for the decommissioning of the MFFF. See ER at 5-20 to 5-21. Additionally, EI has not produced any evidence or expert opinion to show that the "deactivation" of the MFFF contributes to the long term effects of the facility. Merely stating that DCS failed to "adequately consider" long- term effects is not enough

to satisfy the basis and specificity requirements of section 2.714(b)(2). Accordingly, the contention is inadmissible.

Much like contention I, contention J claims that the DCS evaluation of impacts on the health of local residents is invalid due to inadequate consideration of the cumulative effects of radiation given that "nuclear operations [have been taking] place at the SRS since the 1950's." EI Contentions at 2. This contention lacks an adequate basis and, therefore, is inadmissible. EI not only fails to cite any portions of the ER or CAR that it believes are inadequate, but ER sections 5.6.1 through 5.6.4 describe four different types of cumulative impacts that have already been analyzed: (1) impacts from SRS activities; (2) impacts of other actions near the MFFF and SRS; (3) transportation impacts; and (4) impacts at mission reactors. In contravention of the section 2.714(b)(2)(ii) criterion, EI has not provided any expert opinion or other documentation to support its assertion that such cumulative effects are significant and need to be considered in the DCS ER.

Finally, EI's contention L alleges that the "NRC staff has pointed out a number of examples of the Applicant's failure to comply with NEPA," such as the failure to consider alternatives, and the failure to include adequate information evaluating "cumulative effects" at SRS. Id. at 3. Similar to the other contentions in this group, contention L also lacks an adequate basis as required by section 2.714(b)(2)(iii). The contention fails to point to any specific portions of NEPA or the Commission's environmental regulations with which DCS has failed to comply. Moreover, as section 5.7 of the ER indicates, see ER at 5-43 to 5-44, an array of alternatives are considered in the SPD EIS. Furthermore, EI's assertion, without more, that Staff RAIs demonstrate non-compliance with NEPA is an insufficient basis to support a contention. See Rancho Seco, CLI-93-3, 37 NRC at 147, 150. Hence, contention L is inadmissible.

IV. Conclusion

For the reasons set forth in Part II of this Memorandum and Order, we find that Petitioners GANE, EI, and Joint Petitioners BREDL and Donald J. Moniak have established standing to intervene in this materials licensing proceeding. Further, we find that Ms. Foster has failed to establish her standing and, therefore, her hearing petition is denied. For the reasons detailed in Part III.A., GANE's proffered contentions 1, 2, 3, 5 (as consolidated), 6, 9, 11 (in part), and 12 as well as BREDL contentions 1E (in part) and 9A are admitted. Therefore, the intervention petitions of Petitioner GANE and Joint Petitioners BREDL and Donald J. Moniak are granted, and they are admitted as parties to the proceeding. Because EI has not proffered any admissible contentions, its intervention petition is denied.

Pursuant to 10 C.F.R. § 2.1205(o), Ms. Foster and EI may appeal this decision to the Commission within ten (10) days of service of this Memorandum and Order on the questions whether their requests for a hearing or petitions to intervene should have been granted in whole or in part. Because DCS has challenged the granting of all the intervention petitions, it may appeal this ruling within ten (10) days of service of this Memorandum and Order on the question whether the intervention petitions of GANE and that of BREDL and Donald J. Moniak should have been denied in their entirety. Similarly, the Staff may appeal this ruling with ten (10) days of service of this Memorandum and Order on the question of whether the intervention petition of BREDL and Donald J. Moniak should have been denied in its entirety. Because the Staff has conceded the granting of GANE's intervention petition, however, it may only file a statement in support of any DCS appeal of the grant of GANE's intervention petition.

Such statement must be filed within fifteen (15) days of service of the DCS appeal brief. BREDL and GANE may also file counter-statements opposing any appeals taken by DCS or the Staff within fifteen (15) days of service of any appeal brief filed by DCS or the Staff.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD[21]

/RA/

_____
Thomas S. Moore
ADMINISTRATIVE JUDGE

/RA/

_____
Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 6, 2001

[21]Copies of this Memorandum and Order were sent this date by either Internet e-mail transmission or overnight mail to (1) GANE; (2) BREDL; (3) EI; (4) Ms. Foster; (5) DCS; and (6) the NRC Staff.

Although Judge Lam participated in final deliberations regarding this issuance and agrees with the reasoning and result, he was unavailable to sign it.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
DUKE COGEMA STONE & WEBSTER	)	Docket No. 70-3098-ML
	)	
(Savannah River Mixed Oxide Fuel Fabrication Facility)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULING ON STANDING AND ADMISSIBILITY OF CONTENTIONS) (LBP-01-35) have been served upon the following persons by U.S. mail, first class, or through NRC internal distribution.

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Docket No. 70-3098-ML
LB MEMORANDUM AND ORDER
(RULING ON STANDING AND ADMISSIBILITY
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Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 6th day of December 2001