UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	June 13, 2007
Shaw AREVA MOX Services, LLC	Docket No. 70-3098
(Mixed Oxide Fuel Fabrication Facility Possession and Use License)	ASLBP No. 07-856-02-MLA-BD01

SHAW AREVA MOX SERVICES, LLC ANSWER OPPOSING BREDL ET AL., PETITION FOR INTERVENTION AND REQUEST FOR HEARING

I. INTRODUCTION

In accordance with 10 CFR § 2.309(h), Shaw AREVA MOX Services, LLC (MOX Services), the Applicant for the license in the above-captioned proceeding, hereby files its Answer to the "Petition for Intervention and Request for Hearing" (Petition), jointly filed on May 14, 2007 by the Blue Ridge Environmental Defense League (BREDL), Nuclear Watch South (NWS), and the Nuclear Information and Resource Service (NIRS), (collectively Petitioners hereafter). The Petition responds to the U.S. Nuclear Regulatory Commission (NRC or Commission) "Notice of License Application for Possession and Use of Byproduct, Source, and Special Nuclear Materials for the Mixed Oxide Fuel Fabrication Facility, Aiken, SC, and Opportunity to Request a Hearing" (Hearing Notice) published in the Federal Register on March 15, 2007 (Hearing Notice, 72 Fed. Reg. 12,204).

As discussed below, the Petitioners have not satisfied the NRC's requirements for a hearing. In particular, they have failed to meet the requirements for legal standing, and have failed to identify a single admissible contention. Accordingly, Petitioners' request for a hearing should be denied.

II. BACKGROUND

MOX Services has submitted to the NRC an application for a license to possess and use byproduct, source, and special nuclear material at the planned Mixed Oxide Fuel Fabrication Facility (MFFF) at the U.S. Department of Energy's (DOE) Savannah River Site (SRS) in Aiken, South Carolina. In the Commission's March 15, 2007 Hearing Notice, it stated that any person whose interest may be affected by this proceeding and who desires to participate as a party must file a written request for hearing by May 14, 2007, in accordance with the provisions of 10 CFR § 2.309 (72 Fed. Reg. at 12,205). This proceeding will be conducted in accordance with the informal hearing procedures set forth in 10 CFR part 2, Subpart L. The Petition was served on the NRC Office of General Counsel by electronic mail late in the evening of May 14, 2007. The Certificate of Service on MOX Services is dated May 14, 2007, but the Petition was not received by MOX Services' representative until May 24, 2007. The Petition was served via first class mail.

The MFFF has been the subject of a previous NRC hearing. In particular, on February 28, 2001, Duke Cogema Stone & Webster LLC (DCS), the predecessor to MOX Services, submitted a Construction Authorization Request (CAR) to the NRC. A notice of opportunity to request a hearing was thereafter published in the Federal Register (66 Fed. Reg. 19,994 (April 18, 2001)), and on December 6, 2001, an Atomic Safety and Licensing Board admitted two organizations as parties to the proceedings – Georgians Against Nuclear Energy (GANE) and

BREDL. Memorandum and Order (Ruling on Standing and Admissibility of Contentions), *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403 (Dec. 6, 2001).

Petitioner NWS in the current proceeding states that it is the successor organization to GANE[1], and the current Petitioner BREDL is, of course, the same organization as the intervenor in the MFFF CAR proceeding. Despite the submittal by GANE and BREDL of over 60 proposed contentions collectively in the MFFF CAR proceeding, on July 20, 2005, the Atomic Safety and Licensing Board ultimately dismissed their intervention and terminated the proceeding prior to hearing. *See* Order (Terminating Proceeding), Duke *Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-15, (July 20, 2005). The Commission declined to review the Licensing Board's decision, and in accordance with NRC practice, the decision became final agency action on August 29, 2005. *See* Memorandum, Order Terminating Proceeding, from Annette L. Vietti-Cook to Board and Parties, September 12, 2005. On March 30, 2005, the NRC Director of Nuclear Material Safety and Safeguards issued the requested Construction Authorization. *See* Duke Cogema Stone & Webster, Docket No. 70-3098, Mixed Oxide Fuel Fabrication Facility Construction Authorization (March 30, 2005). As discussed above, MOX Services is now seeking a license to possess and use byproduct, source, and special nuclear material at the MFFF.

Section III below demonstrates that none of the Petitioners has standing to participate as a party to this proceeding. Section IV of this Answer describes the standards governing the

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[1] *See* http://www.nonukesyall.org ("NUCLEAR WATCH SOUTH- formerly Georgians Against Nuclear Energy").

admissibility of proposed contentions and demonstrates that none of Petitioners' proposed contentions are admissible. Therefore, the Petition should be denied.

III. PETITIONERS HAVE FAILED TO DEMONSTRATE LEGAL STANDING

A. Applicable Legal Standards

Both the Commission's Hearing Notice for this proceeding and its general Rules of Practice require a petitioner to set forth: (1) the nature of its right under the Atomic Energy Act (AEA) to be made a party to the proceeding; (2) the nature and extent of its property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on its interest. *Hearing Notice*, 72 Fed. Reg. at 12,205; 10 CFR § 2.309(d)(l).

Petitioners must demonstrate either that they have presumptive standing based on geographic proximity to the proposed facility, or that they satisfy the traditional elements of standing. *See Exelon Generation Co., LLC & PSEG Nuclear, LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, (slip op. at 3) (Oct. 26, 2005). These concepts are discussed more fully below, along with the requirements for organizational standing.

1. Standing Based on Geographic Proximity

Under NRC case law, a petitioner may in some instances be presumed to have fulfilled the judicial standards for standing based on his or her geographic proximity to a facility or source of radioactivity. *Id.* at 3. The NRC has held that the proximity presumption is sufficient to confer standing on an individual or group in proceedings under 10 CFR Part 50 for reactor construction permits, operating licenses, or significant license amendments. *Florida Power and Light Company* (St. Lucie, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989).

Although residence within 50 miles of a reactor commonly gives rise to presumptive standing in proceedings regarding reactor construction permits or operating licenses, the Commission has required "far closer proximity in other licensing proceedings." *See Consumers Energy Company* (Big Rock Point ISFSI), CLI-07-19 (slip op. at 3) (Apr. 26, 2007). The appropriate radius in proceedings having less obvious potential for offsite consequences is decided on a "case-by-case" basis taking into account whether the:

> proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences. Whether and at what distance a petitioner can be presumed to be affected must be judged on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source.

Georgia Inst. of Tech. (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995).

2. Traditional Standing

To demonstrate standing in a Subpart L materials licensing case, a petitioner must meet the judicial standards for standing. *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 250 (2001). To demonstrate standing, a petitioner must show: (1) an actual or threatened, concrete and particularized injury; that is (2) fairly traceable to the challenged action; which (3) falls among the general interests protected by the Atomic Energy Act; and is (4) likely to be redressed by a favorable decision. *Id.*

First, the Petitioners' injury in fact showing "requires more than an injury to a cognizable interest. It requires that the party seeking review be himself among the injured." *Sierra Club v. Morton*, 405 U.S. 727, 734-35 (1972).

Second, Petitioners must establish that the injuries alleged are fairly traceable to the proposed activity - in this case, the approval of the MFFF possession and use license application.

Although the Petitioners are not required to demonstrate that the injury flows directly from the challenged action, they must nonetheless show that the "chain of causation is plausible." *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994).

Third, Petitioners must demonstrate that their alleged injury falls within the zone of interests protected by the statutes governing the proceeding. *U.S. Enrichment Corp.* (Paducah, Kentucky), CLI-01-23, 54 NRC 267, 272 (2001).

Finally, each Petitioner is required to show that "its actual or threatened injuries can be cured by some action of the [NRC]." *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning) CLI-01-2, 53 NRC 9, 13 (2001). In other words, each Petitioner must demonstrate that the injury can be redressed by a decision in this proceeding. Furthermore, "it must be likely, as opposed to merely speculative that the injury will be redressed by a favorable decision." *Sequoyah Fuels Corp.*, CLI-94-12, 40 NRC at 76 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992) (internal quotations omitted)).

3. Standing of Organizations

An organization that wishes to intervene in a proceeding may do so either in its own right (by demonstrating injury to its organizational interests), or in a representative capacity (by demonstrating harm to the interests of its members). *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998). To intervene in a proceeding in its own right, an organization must allege - just as an individual petitioner must allege - that it will suffer an immediate or threatened injury to its organizational interests that can be fairly traced to the proposed action and be redressed by a favorable decision. *Georgia Inst. of Tech.*, CLI-95-12, 42 NRC 111, 115 (1995).

To invoke representational standing, an organization must show that at least one of its members has standing in his or her own right (*i.e.*, by demonstrating geographic proximity in

cases where the presumption applies, or by demonstrating injury within the zone of protected interests, causation, and redressability) and has authorized the organization to represent his or her interests. *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 250 (2001); *Power Auth. of the State of N.Y.* (James A. FitzPatrick Nuclear Power Plant and Indian Point Nuclear Generating Unit 3), CLI-00-22, 52 NRC 266, 293 (2000).

A partnership, corporation, or unincorporated association may be represented by a duly authorized member or officer, or by an attorney-at-law. 10 CFR § 2.314(b). Any person appearing in a representative capacity shall file with the Commission a written notice of appearance. *Id.* The notice of appearance must state the representative's name, address, telephone number, and facsimile number and email address, if any; the name and address of the person or entity on whose behalf the representative appears; and the basis of his or her authority to act on behalf of the party. *Id.*

B. Petitioners Have Not Established Standing to Intervene

The Licensing Board in the previous MFFF CAR proceeding concluded that BREDL and GANE (NWS's predecessor organization) had established representative standing to intervene in that proceeding. *See* Memorandum and Order (Ruling on Standing and Admissibility of Contentions), Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403 (2001). However, the fact that standing was granted in the CAR proceeding does not automatically confer standing in the present proceeding. This is an entirely separate proceeding, and Petitioners standing claims here are different than the claims proffered in the CAR proceeding.

In the CAR proceeding, the Board based its standing decision on BREDL and GANE members' claims that they would receive radiation doses during transportation of MOX fuel

through their communities. *See id.* Although some of the individual Declarations of Petitioners' members in this proceeding allude to transportation of waste (not MOX fuel), there is no discussion of doses or impacts from such transportation.

There are three reasons why the Board should reject the current Petition based on lack of standing.

First, the Petitioners provide their bases for presumptive standing in a brief section starting on page three of their Petition. Along with a few very general statements claiming harm to their interests, Petitioners repeatedly found their claim for standing on the assertion that each represented member lives within fifty miles of the proposed facility. However, because the "fifty-mile" geographic proximity presumption commonly applied to proceedings involving nuclear reactors licensed under Part 50 does not apply in materials licensing cases, their presumptive basis for standing is inadequate in this Part 70 proceeding.

Second, Petitioners fail to meet the traditional elements of standing, having provided only the vaguest descriptions of injury, causation, and redressability, and having made no effort to provide the requisite "case by case" analysis demonstrating that the MFFF involves a significant source of radioactivity with obvious potential for offsite consequences.

Finally, Petitioners NIRS and NWS have not followed the procedural requirements for filing Notices of Appearance for their designated representatives; no member of NIRS has authorized NIRS to represent them in this proceeding; and NIRS members cannot designate NWS to represent NIRS in this proceeding.

Each of these three deficiencies is discussed in more detail below.[2]

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[2] Petitioners have not alleged that they are entitled to intervene based on their organizational interests. Their sole basis for standing is in a representative capacity. Therefore, MOX Services' Answer below does not further discuss the authority of the Petitioner organizations to intervene in their own right.

1. Petitioners Have Not Established Standing Based on Geographic Proximity

The Petitioners begin their standing argument by stating that "an operating license[3] for a plutonium fuel factory would directly affect the health and well-being of our members living within 50 miles of SRS." Petition at 3. As discussed *supra*, the fifty-mile geographic proximity presumption is commonly applied in proceedings involving nuclear power reactors. *See Consumers Energy Company* (Big Rock Point ISFSI), CLI-07-19 (slip op.) (Apr. 26, 2007). However, the presumption does not apply in materials licensing actions such as this proceeding and the appropriate radius should be determined on a case-by-case basis. *See Georgia Inst. of Tech.*, CLI-95-12, 42 NRC at 116.

Petitioners go on to assert that the "environmental impact statement shows that the property, financial interests, and health of the Petitioners' members living within a 50-mile radius may all be directly affected by the proposed facility at SRS," but offer no explanation of how Petitioners arrived at this conclusion, how their interests may be affected, or why the fifty mile radius is appropriate. *See* Petition at 4. Instead, Petitioners merely state that twenty members of Petitioners' organization have provided declarations demonstrating that "Petitioners' members live near the proposed site, *i.e.*, within 50 miles." Petition at 5. Indeed, if a 50 mile proximity presumption is appropriate in the cases involving reactor construction permits or operating licenses, the appropriate radius here, if any, must necessarily be less than 50 miles. Thus, Petitioners can not base standing on the basis of a 50 mile proximity presumption, because no such presumption exists in this proceeding.

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[3] The license at issue in this proceeding is a "possession and use license," not an "operating license" as stated by Petitioners. *See* LA Section 1.1.1 ("[Applicant] seeks authorization to possess and use by-product material, source material, and special nuclear material at the [MFFF].")

2. Petitioners Have Not Established Standing Based on Traditional Standing Concepts

Of the members of Petitioners' organizations who provided a Declaration specifying a distance from their residence to the proposed facility, the closest (in the individual member's words) are "less than 20 miles," and the farthest away is 35 miles.

In their respective Declarations, the individual members identify vague concerns focusing on the possibility that if the MFFF were to be licensed, their health and safety, the environment, or property, could be adversely affected through an accidental release of radioactive material. All twenty of the Declarants expressed a vague and generalized concern for their health and safety following an accidental release of radioactive material, and thirteen stated that they believed the proposed facility to be "inherently dangerous." The same thirteen Declarants stated that transportation of uranium, plutonium and radioactive waste would result in "thousands of truck shipments," but failed to allege any harm as a result of such shipments. One Declarant (Gary Zimmerman), who did not specify how far he lived from the proposed facility, expressed a concern that his water supply would be jeopardized if the facility were to be licensed, but did not state any basis for his concern.

Such vague, generalized statements about hypothetical future injuries do not satisfy the requirement for Petitioners to demonstrate a "concrete and particularized injury" *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 250 (2001). Likewise, no Petitioner has presented any evidence that establishes that the claimed future injury is fairly traceable to the approval of this Application. *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994). Although a petitioner is not required to demonstrate that the injury flows directly from the challenged action, it must nonetheless show that the "chain of causation is plausible." *Id.* Neither the Petition nor the supporting Declarations provide any

discussion of the chain of causation for the alleged future injuries. Thus, Petitioners have not demonstrated that the MFFF involves a significant source of radioactivity with an obvious potential for offsite consequences.

Finally, Declarants have not addressed the "redressability" element of the standing analysis beyond several bald statements that the "plutonium fuel factory would be safer if [Petitioners'] position in this proceeding is upheld." In this case, the members' minimalist Declarations do not meet the Commission's well-accepted standing requirements, and should be rejected.

3. Petitioners NIRS and NWS Have Not Submitted Appropriate Notices of Appearance

a. NIRS

NIRS is not represented in this proceeding by any member, officer, or attorney. Any person appearing in a representative capacity for a partnership, corporation, or unincorporated association is required to file with the Commission a written notice of appearance. 10 CFR § 2.314(b). The notice of appearance must state the representative's name, address, telephone number, and facsimile number and email address, if any; the name and address of the person or entity on whose behalf the representative appears; and the basis of his or her authority to act on behalf of the party. *Id.* In the case of NIRS, no such notice of appearance has been filed.

Moreover, neither Susan Bloomfield nor William J. Mareska (the only members of NIRS identified in the Petition) have authorized NIRS to represent their interests in this proceeding. *See* Petition at 4-5 (identifying Ms. Bloomfield and Mr. Mareska as members of NIRS) and Declarations of Bill Mareska and Susan Bloomfield (failing to authorize NIRS to represent them).

Finally, Bill Mareska and Susan Bloomfield[4] declared that they are members in good standing of NIRS, and that they have authorized NWS (and its purported representative Glenn Carroll) to represent their interests. However, a partnership, corporation, or unincorporated association may only be represented by a *duly authorized member or officer* of the organization, or by an attorney-at-law. 10 CFR § 2.314(b) (emphasis added). Because NWS is not a "duly authorized member or officer" of NIRS, and is not an attorney-at-law, it can not represent NIRS in this proceeding.

Thus, NIRS cannot currently participate in this proceeding. Indeed, it is unclear from the Petition and the accompanying Declarations why NIRS was identified as a Petitioner, and if such identification was duly authorized by NIRS.

b. NWS

Similarly, NWS and its purported representative Glenn Carroll, have not met the notice of appearance requirements of 10 CFR § 2.314(b). While Ms. Carroll has filed a notice of appearance with the Secretary, the notice fails to identify her role in the organization or the basis of her authority to act on behalf of NWS. It is therefore unclear if Ms. Carroll has been authorized by NWS to act on its behalf.

Based on the above, Petitioners have not met their burden of demonstrating standing, and should not be admitted as parties to this proceeding.

[4] Ms. Bloomfield and Mr. Mareska each provided one declaration for NWS and one declaration for NIRS.

IV. PETITIONERS HAVE NOT IDENTIFIED ANY ADMISSIBLE CONTENTIONS

A. Applicable Legal Standards

1. Petitioners Must Submit at Least One Admissible Contention with an Adequate Basis

To intervene in an NRC licensing proceeding, Petitioners must propose at least one admissible contention. 10 CFR § 2.309(a). The NRC will deny a petition to intervene and request for hearing from a petitioner who has standing but has not proffered at least one admissible contention. *Florida Power & Light Co.* (Turkey Point Nuclear Power Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 5 (2001). As the Commission has observed, "[i]t is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions and demonstrate that a genuine dispute exists within the scope of this proceeding." *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). In addition, "[a] contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions." *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

2. Proposed Contentions Must Satisfy the Requirements of 10 CFR § 2.309 to be Admissible

Section 2.309(f)(1) requires a petitioner to "set forth with particularity the contentions sought to be raised," and with respect to each contention proffered, address six criteria, discussed in detail below. A contention that fails to meet any one of these requirements must be dismissed. *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, (not reported) (slip op. at 17-18) (Oct. 26, 2005). The Commission has described the

agency's contention standard, now found in Section 2.309(f), as "strict by design."[5] This strict rule serves several purposes:

> First, it focuses the hearing process on real disputes susceptible of resolution in an adjudication. For example, a petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies. Second, the rule's requirement of detailed pleadings puts other parties in the proceeding on notice of the petitioners' specific grievances and thus gives them a good idea of the claims they will be either supporting or opposing. Finally, the rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 NRC 328, 334 (1999)(citations omitted); *see also Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001). Sections (a) through (f) below summarize the requirements of Section 2.309(f)(1) as they have been further developed by NRC case law.

a. Petitioners Must Specifically State the Issue of Law or Fact to Be Raised

Section 2.309(f)(1)(i) requires that petitioners "provide a specific statement of the issue of law or fact to be raised or controverted." The Commission has held that this criterion imposes upon a petitioner the burden to "'articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties.'" *Dominion Nuclear Conn., Inc.*, CLI-01-24, 54 NRC at 359 (quoting *Duke Energy Corp.*, CLI-99-11, 49 NRC at 388).

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[5] In January 2004, the Commission adopted substantial revisions to 10 CFR Part 2, the NRC's Rules of Practice, which became effective on February 13, 2004. *See Changes to Adjudicatory Process*, 69 Fed. Reg. 2,182 (Jan. 14, 2004). In the Statements of Consideration accompanying the Final Rule, however, the Commission noted that the contention standard set forth in new Section 2.309(f)(1) is the same standard that has been in effect since 1989 (*i.e.*, the same standard that was set forth in former 10 CFR § 2.714(b) and developed in NRC case law prior to the adoption of the current rule). *Id.* at 2,189-90.

b. Petitioners Must Briefly Explain the Basis for the Contention

Pursuant to Section 2.309(f)(1)(ii), a petitioner must also provide "a brief explanation of the basis for the contention." A petitioner must provide a clear statement as to the basis for the contention and the submission of supporting information and references to specific documents and sources that establish the validity of the contention. *Florida Power & Light* (Turkey Point Nuclear Power Plant, Units 3 and 4), CLI-01-17, 54 NRC at 19 (2001).

c. Contentions Must Be Within the Scope of the Proceeding

In accordance with 10 CFR § 2.309(f)(1)(iii), a petitioner must demonstrate "that the issue raised in the contention is within the scope of the proceeding." The scope of permissible contentions is bounded by the issues specified in the Notice of Opportunity for Hearing. *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Georgia Inst. of Tech.*, CLI-95-12, 42 NRC 118. As will be discussed further below, certain issues were within the scope of the prior proceeding on the DCS Construction Authorization Request that are not within the scope of this proceeding – which is limited to determining whether MOX Services meets the requirements for the issuance of a license to possess and use licensed materials at the MFFF. *See* 72 Fed. Reg. at 12,204-05.

A contention that raises matters that are not within the scope of the current proceeding cannot be admitted. *See, e.g., Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, (not reported) 2005 WL 4131574 (NRC) at 22 (2005).

d. Contentions Must Raise a Material Issue

A petitioner also must demonstrate "that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding."

10 CFR § 2.309(f)(1)(iv). As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of the licensing proceeding.'" *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC at 333-34 (1999); *see also Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process*, 54 Fed. Reg. 33,168, 33,172 (Aug. 11, 1989). In this regard, "[e]ach contention must be one that, if proven, would entitle the petitioner to relief." *USEC, Inc.* (American Centrifuge Plant), CLI-04-30, 60 NRC 426, 429 (2004). In addition, contentions alleging a deficiency or error in an application also must "indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment." *Louisiana Energy Svcs., L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 56 (2004), *aff'd in part by* CLI-04-25, 60 NRC 223 (2004).

e. Contentions Must Be Supported by Facts or Expert Opinions

A petitioner must provide "a concise statement of the alleged facts or expert opinions which support the [...] petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the [...] petitioner intends to rely to support its position on the issue." 10 CFR § 2.309(f)(v). A contention "will be ruled inadmissible if the petitioner has offered no 'tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.'" *Fansteel, Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)). "[V]ague, unparticularized issues" (*Pacific Gas and Elec. Co.* (Diablo Canyon Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 27 (2003)) and "open-ended or ill-defined contentions lacking in specificity or basis" are not admissible. *Dominion Nuclear Conn., Inc.*, CLI-01-24, 54 NRC at

359. As the Commission has observed, a petitioner "must do more than submit 'bald or conclusory allegation[s]' of a dispute with the applicant." *Id.* at 358 (quoting 54 Fed. Reg. at 33,171). In the event that a petitioner fails to provide the requisite support for its contentions, a Licensing Board is not free to supply missing information or to draw factual inferences on the petitioner's behalf. *Arizona Public Service Company* (Palo Verde Nuclear Generating Station, Unit Nos. 1, 2 and 3) CLI-91-12 , 34 NRC 149 at 155-156 (1991).

f. Contentions Must Raise a Genuine Dispute of Material Law or Fact

Section 2.309(f)(1)(vi) requires a petitioner to provide:

> sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) 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.

Thus, for a contention to be admissible, it must refer to those portions of the license application that the petitioner disputes and indicate supporting reasons for each dispute. *Florida Power & Light Co.*, CLI-01-17, 54 NRC at 19. As the Commission explains:

> [r]equiring the substance and presentation of contentions to be concrete and specific to the license application helps ensure that individual license applicants are not put into the position of defending the policies and decisions of the Commission itself. It also precludes an intervenor from making general allegations, with the hope of generating through discovery sufficient facts to show there is a genuine dispute.

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 130 (2004).

If a petitioner does not believe that the application adequately addresses a relevant issue, then the petitioner is required to explain why the application is deficient. *Florida Power & Light Co.*, CLI-01-17, 54 NRC at 19. Additionally, in such cases, the petitioner must provide "supporting grounds" for its contention that the application must, but does not, consider some information required by law. *Id.* Furthermore, a contention that does not directly controvert a position taken in the application is subject to dismissal, as is a contention that mistakenly asserts the application fails to address a relevant issue. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998); *Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994); *Texas Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

3. Contentions May Not Challenge NRC Rules and Regulations

An adjudicatory proceeding is not the proper forum for challenging the validity of previously-issued NRC rules and regulations. 10 CFR § 2.335; *Florida Power & Light Co.*, CLI-01-17, 54 NRC at 16; *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 252 (1996). The NRC will reject as inadmissible any contention that attacks applicable statutory requirements or Commission regulations. *Private Fuel Storage*, CLI-04-22, 60 NRC at 129.

B. Petitioners' Contentions Are Inadmissible[6]

1. Contention One: Failure to Limit Emissions of Hazardous Air Pollutants

This Contention generally alleges that the requirements of the National Environmental Policy Act (NEPA) have not been met because: (1) the MFFF will not meet the U.S. Environmental Protection Agency's (EPA) Clean Air Act standards; and (2) MOX Services has not properly accounted for "higher levels of morbidity and mortality in females and infants caused by low levels of radiation." Petition at 6-7. Petitioners have organized this general Contention into five separate contentions. As discussed below, however, the Board should reject all of these Contentions because they are NEPA-based, and Petitioners have made no effort to make the requisite showing to admit such Contentions in this proceeding.

Before the proceeding on the DCS CAR commenced in 2001, the Commission issued two notices in the Federal Register. In the first notice, the Commission made clear that there would be two opportunities for hearing in connection with the MFFF. The first (*i.e.*, the CAR hearing) would encompass "issues related to the construction approval...and environmental issues." The second hearing would encompass all the other issues related to the issuance of a 10 CFR Part 70 license." *Notice of Opportunities for Hearings Related to Licensing the Mixed Oxide Fuel Fabrication Facility*, 66 Fed. Reg. 6,701 (Jan. 22, 2001) (emphasis added). The Commission elaborated on the scope of the CAR hearing in its subsequent "*Notice of Acceptance for Docketing of the Application, and Notice of Opportunity for a Hearing, on an Application for Authority to Construct a Mixed Oxide Fuel Fabrication Facility*," 66 Fed. Reg. 19,994 (Apr. 18, 2001) (CAR Hearing Notice). In its CAR Hearing Notice, the Commission stated that any

[6] The Commission's March 15, 2007 Hearing Notice directed Petitioners to specifically designate each of their contentions as either Technical, Environmental, Emergency Planning, Physical Security, or Miscellaneous. 72 Fed. Reg. at 12,205. Petitioners have ignored that direction.

NEPA-based contentions "are expected to focus on ... the December 2000 environmental report" and that "Petitioners will not be permitted to wait for the NRC staff to issue its environmental impact statement before formulating contentions." CAR Hearing Notice, 66 Fed. Reg. at 19,996.

As part of its CAR, DCS submitted a full Environmental Report (ER) addressing the impacts of both construction and operation of the MFFF. *See* Mixed Oxide Fuel Fabrication Facility Environmental Report, Rev. 5 (Jun. 10, 2004), Sections 5.1-Impact of Site Preparation and Facility Construction and 5.2- Effects of Facility Operation. The NRC Staff, as well, issued a Final Environmental Impact Statement (FEIS) also encompassing and addressing the same impacts. *Environmental Impact Statement on the Construction and Operation of a Proposed Mixed Oxide Fuel Fabrication Facility at the Savannah River Site, South Carolina*, NUREG-1767 (January 2005) (MFFF FEIS). The MFFF FEIS underwent a full NEPA public review. The Intervenors in the CAR proceeding – two of which are Petitioners in this proceeding– had ample opportunity to exercise their right to request a hearing at that time on all potential environmental impacts of the MFFF. Indeed, over the course of the CAR proceeding, GANE (now NWS) and BREDL proffered at least 20 contentions relating to the environmental impacts of operating the MFFF. For example, contentions were proffered on such topics as the environmental impacts of the high-alpha waste stream, and NEPA requirements regarding analysis of the impacts of terrorism. *See Request for Hearing Regarding Mixed Oxide (MOX) Fuel Fabrication Facility*, Blue Ridge Environmental Defense League (May 17, 2001); *see also* 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). Furthermore, some of those contentions were dismissed in that prior proceeding on the basis of timeliness and failure to identify any new and significant information. *See, e.g.*, Licensing Board

Memorandum and Order (Denying Admission of Late-Filed Contentions), Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), (November 19, 2002) (unpublished). Thus, the environmental impacts of MFFF operations were a major focus of the previous CAR proceeding.

In a Memorandum and Order addressing the two-step licensing process for the MFFF (*i.e.* construction authorization and license to possess and use radioactive material), the Commission discussed the adjudication of environmental contentions in the MFFF proceedings. The Commission indicated that the Intervenors in the CAR proceeding were free to raise such contentions during the hearing process on the construction authorization. *See Duke Cogema Stone & Webster*, (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-07, 55 NRC 205, 220 (2002). The Commission further indicated that "if genuinely new environmental information emerges during subsequent phases of the proceeding, [the Commission's] rules provide for the possibility of supplements to the EIS and for late-filed hearing contentions." *Id.* at 221 *citing Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 481 (2001) (adopting late-filed contention rule, 10 CFR § 2.714(a)(1), for this proceeding); 10 CFR § 51.92 (providing supplements to an EIS).[7] Clearly, the Commission did not intend that the current proceeding address any environmental issues absent a showing on the part of the Petitioners that there is new and significant information and that the standards for late-filed contentions have been met. *See id.*[8]

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[7] The late-filing standards were changed from 10 CFR § 2.714(a)(1) to 10 CFR § 2.309(c). *See* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, at 2,220-21 (Jan. 14 2004).

[8] MOX Services is mindful of the Commission's reference to the potential for genuinely new environmental information to emerge and to the traditional standards for late-filed contentions (which we discuss further below). However, MOX Services is also of the view that: NEPA issues were within the scope of the prior CAR proceeding; the Application now before the Commission does not contain (nor is it required to contain) an Environmental Report; and no findings on environmental issues are required to be made for the NRC to

The Commission has repeatedly stated that it does not look with favor on amended or new contentions filed after the initial Petition. *See, e.g., Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Plant, Units 2 and 3) CLI-04-36, 60 NRC 631, 636 (2004). The Commission has also stressed that its timeliness requirements "demand a level of discipline and preparedness on the part of petitioners" and that as the NRC faces an increasing adjudicatory docket, "the need for parties to adhere to [the NRC's] pleading standards and for Boards to enforce those standards are paramount." *La. Energy Servs., L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004). As the Commission noted "[t]here simply would be 'no end to NRC licensing proceedings if petitioners could disregard our timeliness requirements' and add new bases or new issues that 'simply did not occur to [them] at the outset." *Id.* (quoting *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2, Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003)).

Petitioners' environmental contentions are now clearly late. Thus, under the Commission's directive in CLI-02-07 and in 10 CFR § 2.309(c), Petitioners must demonstrate that they have met the late-filed standards set forth in 10 CFR § 2.309(c).[9]

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issue the requested possession and use license. Under these circumstances, it is not at all clear how any consideration of environmental issues is material to the findings to be made in, or within the scope of, this proceeding.

[9] The factors to be considered by a Board reviewing late-filed contentions are:

(i) Good cause, if any, for the failure to file on time;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;

(iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;

(v) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

It is long-standing NRC practice that a petitioner must show that it has satisfied the requirements for late-filed contentions. *See Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 347 (1998). The Commission itself has stated that it is appropriate to summarily dismiss late-filed contentions that fail to address the relevant factors for a late-filed petition. *See id*; *see also Boston Edison Co.* (Pilgrim Nuclear Power Station), ALAB-816, 22 NRC 461 (1985). Those factors include a demonstration of "good cause" for the late filing and Petitioners in this proceeding have made no effort to address those factors.

Based on the Commission's statements in *Duke Cogema Stone & Webster*, (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-07, discussed above, Petitioners were clearly on notice of the Commission's expectations related to the filing of environmental contentions. Moreover, the requirement to meet the late-filed standards is particularly important in this proceeding, in which the application pending before the NRC does not include an ER and no further Staff EIS is contemplated. In short, since the current Petition does not even address the requirements of 10 CFR § 2.309(c), Contention 1 should be wholly rejected.

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 CFR § 2.309(c)(1).

a. Contention 1.1: The Plutonium Fuel Factory[10] Proposed by MOX Services Does Not Comply with National Emission Standards for Radionuclides to the Atmosphere

Petitioners assert that "[c]ertain airborne radionuclide emissions from the proposed plutonium fuel factory are predicted to exceed site-wide SRS emissions; the isotopes of neptunium-237, plutonium-241 and plutonium-240." Petition at 8. There are several reasons why this Contention fails to meet the standards for admissibility.

First, as discussed above, it is a NEPA-based environmental contention and Petitioners have ignored the requisite late-filing standards. Petitioners fail to address "good cause" or any of the other standards in 10 CFR § 2.309(c).

Second, Petitioners have failed to raise any genuine dispute of material fact or law or to allege any facts or expert opinion that support the Contention. Petitioners' bare thesis is that MFFF emissions "are predicted to exceed site-wide SRS emissions." Petition at 8. This is a non-sequitor. On its face, and even if true, this statement fails to identify any error in the MFFF FEIS or noncompliance with NRC requirements, and instead only focuses on the alleged relationship between MFFF emissions and overall SRS emissions.

Indeed, the table on page 8 of the Petition compares data from the February, 2003 Draft Environmental Impact Statement for the MFFF on annual emissions from the overall SRS in 2000 to the estimated annual radiological releases from MFFF normal operations set forth in Table 10.2-1 of MOX Services' License Application. There is no effort to indicate whether estimated MFFF releases alone, or together with SRS emissions, exceed applicable air permit

[10] For clarity, MOX Services has used the same wording as Petitioners in each of the contention headings in this Answer. However, MOX Services does not agree that the term "plutonium fuel factory" accurately describes the MFFF.

limits[11] or violate any applicable NRC requirements. Nor is there any effort to show that the LA identifies potential emissions from the MFFF higher than those estimated in the MFFF DEIS and FEIS.

Furthermore, the NRC has established specific requirements in 10 CFR Part 20 for the purpose of satisfying the NESHAP provisions of the Clean Air Act, which the EPA has found satisfy the applicable Clean Air Act implementing requirements. In particular, 10 CFR § 20.1101(d) establishes a "constraint" on air emissions of 10 mrem per year Total Effective Dose Equivalent (TEDE) for the Maximally Exposed Individual (MEI) at the SRS site boundary. Petitioners have not alleged any noncompliance with that requirement; indeed, they never even mention 10 CFR Part 20. Despite the fact that the applicable NRC requirement sets a 10 mrem dose constraint standard, Petitioners make no effort to show that the constraint would be exceeded. Petitioners have thus failed to raise any genuine dispute of material fact or law.

Petitioners state that "the calculations in the plutonium fuel facility LA as compared to the EIS would appear to predict very different estimates of certain radioactive emissions." Petition at 8. They thus appear to be suggesting a disparity between the values for the estimated MFFF air emissions between the MFFF LA and EIS. As discussed above, however, Petitioners are comparing "apples and oranges," since the EIS data they cite is not for MFFF estimated emissions, but instead represent historical annual SRS emissions. Again, Petitioners have failed to raise a genuine issue of material fact or law.

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[11] In fact, dose to the public due to MFFF emissions are very low. Section 6.1.3 of the MFFF ER clearly states, "[T]he dose to the public from normal MFFF operations...will be well below NRC and EPA criteria and also below background radiation levels."

Finally, Section 5.2.10.1 and Table 5-11 of the MFFF ER clearly show that, based on a conservative calculational methodology, an SRS site boundary dose of 0.0033 mrem/year, which is far below the NRC's 10 mrem constraint level, is anticipated. Table 4.3 of the MFFF FEIS presents a similar analysis which results in a TEDE of 0.00051 mrem/year. Petitioners have failed to challenge that methodology or its results. For the reasons discussed above, Contention 1.1 should be dismissed.

b. Contention 1.2: HEPA Filter Unreliability Allows Excess Radionuclide Risks

Petitioners next assert that high-efficiency particulate air (HEPA) filters "are an unreliable means of controlling radionuclide emissions," citing a November 2002 letter from a Dr. Peter Rickards. Petition at 9. Again, this NEPA-based Contention should be dismissed for several reasons.

First, as discussed above, it is an environmental contention and Petitioners have ignored the requisite late-filing standards. No good cause has been shown for Petitioners' late filing. The fact that the MFFF would be employing HEPA filters was explicitly discussed in the CAR and the FEIS. *See* CAR § 9.1.4.1 and FEIS § 4.3.2.2. Indeed, in the CAR proceeding before the ASLB, GANE (now NWS) proffered a contention raising issues regarding HEPA filter performance that was admitted by the ASLB. *See Duke Cogema Stone & Webster*, LBP-01-35 (Dec. 6, 2001) at 437. CAR Contention 6 alleged, among other things, that the MFFF HEPA filters would not operate reliably under accident conditions. *See* 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) at 25. In the CAR proceeding, GANE ultimately withdrew its HEPA contention. *See* Georgians Against Nuclear Energy's

Motion for Leave to Withdraw Contention 6, ASLBP No. 01-790-01-ML (July 31, 2003). In the present proceeding, GANE once again attacks HEPA filter reliability-essentially the same basic contention that it abandoned in the CAR proceeding.

Furthermore, the letter[12] authored by Dr. Rickards is dated November 22, 2002 – over two and a half years before the CAR proceeding was terminated. Indeed, the language of this Contention is taken almost verbatim from a May 13, 2003 BREDL Petition to the EPA regarding the Title V permit for the SRS issued by the South Carolina Department of Health and Environmental Control.[13]

Moreover, the letter from Dr. Rickards makes clear both that Petitioners have failed to provide any facts or expert opinions to support their contention, and have failed to raise a genuine dispute of material fact or law. As discussed in Dr. Rickards' letter, he is a podiatrist, living in Twin Falls, Idaho, with no apparent relevant technical expertise, and his concerns relate to the "proposed pit facility" not the MFFF, as discussed above.[14]

Accordingly, Contention 1.2 should not be admitted.

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12 Dr Rickards' letter can be found at BREDL's website at http://www.bredl.org/pdf/SRS_TV6dec02.pdf.

13 The Petition can be found on BREDL's website at http://www.bredl.org/pdf/SRS-DOE-WSRC_petitionEPA13may03.pdf.

14 Dr. Rickards' letter refers to DOE's planned Pit Disassembly and Conversion Facility (PDCF), which is separate from the MFFF and is not being licensed by the NRC.

c. Contention 1.3: Maximum Achievable Control Technology Is Required.

Petitioners next allege that "no [maximum achievable control technology] MACT has been issued for radionuclides" and that "until a health protective measure is in place under Section 112 [of the Clean Air Act (CAA)], the NRC must determine the control technology before issuing an operating license." Petition at 10.

Again, this Contention is beyond the scope of the current proceeding and does not meet the standards for late-filed contentions discussed above.

Moreover, Petitioners have failed to identify any genuine dispute of material fact or law, nor have they provided facts or expert opinions that support their contention. They have, in fact, acknowledged that it is the "EPA [that] develops standards for [emissions of] hazardous air pollutants (HAP)" (Petition at 10), and have not identified a single NRC requirement with which MOX Services is in noncompliance.

Moreover, Section 4.3.2 of the FEIS contains a comprehensive analysis of the projected effects of the MFFF on air quality, and compares the results to applicable CAA standards. Table 4.7 of the MFFF FEIS, in particular, shows that the MFFF process emits 1.48 kg/year (0.00163 tons/year) of Volatile Organic Compounds (VOCs), which represent the HAPs that CAA regulates. HAP emissions were also documented in the MFFF ER, Table 5-7 at 1.03 kg/year (0.00135 tons/year). Since the HAP emission limitation that triggers MACT is 25 tons/year, and the MFFF process will produce a fraction of a percent of this amount, the MFFF does not require MACT pollution air controls. Petitioners clearly have not identified an issue that is litigable in this proceeding.

Finally, Petitioners state that "the NRC must determine the control technology before issuing an operating license." Petition at 10. However, they cite no applicable NRC requirement and provide no factual or legal basis for this assertion. Their call to the NRC to determine the MACT is also an improper challenge to NRC regulations, which impose no such requirement.

For the reasons discussed above, Contention 1.3 should be dismissed.

d. Contention 1.4: NRC Failed to Assess Emissions Based on Accurate Surplus Plutonium Throughput; Fails to Meet Requirements of Clean Air Act.

In this proposed Contention, Petitioners allege that the total "throughput" of plutonium through the MFFF could exceed the amount (37.5 tons) discussed in the EIS because the MFFF "has the potential" to handle a total of 78 tons of plutonium.[15] Petition at 11. Petitioners go on to state that "[d]uring the next two decades, treaty obligations could conceivably result in 78 tons of 'surplus plutonium' being declared, double the amount in the EIS." *Id.* (emphasis added).

Again, Petitioners have not met the late-filing standards. Petitioners cite the MFFF FEIS, the DOE January 2000 Record of Decision, the September 2000 U.S.-Russia Surplus Plutonium Disposition Agreement, and a 1996 DOE publication, but make no effort to show that there is good cause for bringing up these documents at this late stage. *Id.* at 11, 24-25.

[15] In the CAR proceeding, GANE filed and subsequently withdrew Contention 19(b): Assumption Regarding Quantity of Plutonium to be Processed at Proposed MOX Facility. *See* Georgians Against Nuclear Energy Late-Filed Contentions Regarding Inadequacies in the Draft Environmental Impact Statement for the Proposed MOX Plutonium Fuel Factory at Savannah River Site, *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility) at 11, ASLB No. 01-790-01-ML (Mar. 27, 2003). CAR Contention 19(b) alleged that not all of the plutonium assumed to be used in the MOX program had been re-assigned to MOX, and the DEIS was therefore predicated on an invalid assumption. *See id.* In this proceeding, GANE once again alleges that assumptions regarding plutonium throughput are flawed. Petition at 11.

In addition, Petitioners' allegations are pure speculation. They have provided no factual basis for concluding that the MFFF will in fact process a total quantity of plutonium in excess of that analyzed in the EIS.

Furthermore, there is no genuine dispute of material fact or law and no basis in fact or expert opinion to support this Contention. On the contrary, both the ER and FEIS base their analyses of the impacts of air emissions on hourly, daily, and annual emissions, not total emissions or total plutonium throughput for the life of the facility. *See* FEIS at 4-22, ER at Tables 5-7 and 5-8.

Accordingly, Contention 1.4 should be dismissed.

e. Contention 1.5: The Plutonium Fuel Factory LA Does Not Properly Account for the Higher Levels of Morbidity and Mortality in Females and Infants Caused by Low Levels of Radiation.

Petitioners assert that "the plutonium fuel factory LA does not properly account for the higher levels of morbidity and mortality in females and infants caused by low levels of radiation." Petition at 12. Again, there are several reasons why this Contention fails to meet the standards for admissibility.

First, it meets none of the standards for late-filed contentions discussed above.

Second, Petitioners have failed to identify any genuine dispute of material fact or law, nor have they provided facts or expert opinions that support their contention. Petitioners appear to imply that the mere existence of the 2005 National Academ[y] of Science BEIR VII study (NAS Study) creates an issue that warrants consideration by the Licensing Board. *See id.* at 12. However, Petitioners have not made even a cursory attempt to show any connection between the

Study and the MFFF, and have provided no citations to any section of the ER, EIS, or the License Application that could potentially be impacted by the NAS Study. Petitioners likewise have made no allegation that the License Application fails to meet any applicable NRC requirement. Thus, the Contention lacks specificity and basis.

Accordingly, Contention 1.5 should be dismissed.

2. Contention 2: Accidental Release Of Radionuclides

Contention 2 is a Technical Contention. In Contention 2, Petitioners generally allege that the LA "fails to adequately assess consequences of an accidental release of radionuclides from the [MFFF]. The assessment submitted by MOX Services is founded on outdated guidance, invalid models and flawed assumptions." *Id.* at 13. Contention 2 has two separate subcontentions. As discussed below, these Contentions should be dismissed in their entirety.

a. Contention 2.1: Applicant's Method for Calculating Radiological Impacts is Founded on Outdated Guidance

Contention 2.1 alleges that MOX Services "relied on outdated regulatory guidance" (*i.e.*, NRC Reg. Guide 3.35) "to calculate radiological impacts of a hypothetical criticality accident." Petition at 13.

Petitioners again have failed to raise a genuine dispute of material fact or law. By definition, NRC Regulatory Guides do not constitute binding requirements.[16] Petitioners have thus failed to allege any noncompliance with any applicable NRC requirement. Furthermore,

[16] Regulatory Guide 3.35, Rev. 1, ASSUMPTIONS USED FOR EVALUATING THE POTENTIAL RADIOLOGICAL CONSEQUENCES OF ACCIDENTAL NUCLEAR CRITICALITY IN A PLUTONIUM PROCESSING AND FUEL FABRICATION PLANT (July 1979) (as well as all other NRC regulatory guides) contains the following footnote at the bottom of the first page: "Regulatory guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission."

they have failed to identify any health and safety issue. The mere fact that a Regulatory Guide that was withdrawn was used does not mean that such use results in any adverse impact on health and safety or any substantive inadequacy in MOX Services' accident analysis. In fact, the use of Regulatory Guide 3.35 by MOX Services is not new - Regulatory Guide 3.35 was also cited in the CAR, section 5.5.3.4, at 5.5-63. Because Regulatory Guide 3.35 was withdrawn in 1998- years before the CAR was submitted- Petitioners had the opportunity in the CAR proceeding to attack its use, and did not. They should not be allowed a second opportunity here.

Moreover, although Reg. Guide 3.35 has been superseded by NUREG/CR-6410,[17] the inputs from Reg. Guide 3.35 used in the MFFF calculation are also provided in NUREG/CR-6410).

Finally, in its Final Safety Evaluation Report for the CAR, the NRC Staff acknowledged that Reg. Guide 3.35 had been withdrawn. *See* NUREG-1821, Final Safety Evaluation Report on the Construction Authorization Request for the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site, South Carolina at 9.1.1.4.2 (Mar. 2005). To verify that MOX Services had correctly calculated the radiological impacts of a hypothetical accident, the Staff independently evaluated the Applicant's source terms using the guidance in NUREG/CR-6410 to estimate the downwind consequences to a site worker of a criticality accident. *Id.* The Staff found that the Applicant's analysis was consistent with current guidance and therefore acceptable. *Id.*

Based on the foregoing, Petitioners have failed to allege any genuine dispute of material fact or law with respect to the MFFF radiological impacts analysis. Accordingly, Contention 2.1 should be rejected.

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[17] NUCLEAR FUEL CYCLE FACILITY ACCIDENT ANALYSIS HANDBOOK (Mar. 1998).

b. Contention 2.2: MOX Services Improperly Failed to Submit an Emergency Plan

Petitioners next allege that MOX Services improperly failed to submit an Emergency Plan as part of its LA. *Id.* at 13. Petitioners acknowledge that no such Emergency Plan is required to be submitted to the NRC if radioactive releases to the public offsite are not expected to exceed an effective dose equivalent of 1 rem or an intake of 2 milligrams of soluble uranium. *Id.* at 14; *see also* 10 CFR § 70.22(i)(1)(i). However, Petitioners allege that there are "fatal flaws" in MOX Services' analysis of potential radiological releases. Petition at 15.

First, Petitioners assert that the ARCON96 computer code "is not suitable for calculating radionuclide doses to the general public" and that it "cannot be used as a basis for radiation dose outside of the Savannah River Site because it is not valid beyond the boundary of SRS." *Id.* at 15. The ARCON96 code was developed for near-field atmospheric transport and dispersion estimates and is recognized by the NRC as such a code in Regulatory Guide 1.194.[18] For this reason, ARCON96 was *not* used to calculate public doses beyond the SRS boundary. As is clearly reflected in the *Mixed Oxide Fuel Fabrication Facility Evaluation Pursuant to 10 CFR § 70.22(i)(1)(i) – Emergency Plan Assessment*, (November 2006) (EP Assessment), submitted as part of the LA and specifically referenced by Petitioners (*see* Petition at 14), MOX Services took an extremely conservative approach to demonstrating compliance with the criteria for not submitting an Emergency Plan to the NRC. In particular, rather than calculate a maximum dose at the SRS boundary (which is at its closest point 8.82 km away from the MFFF stack), MOX Services calculated a maximum exposure to a hypothetical "Individual Outside the Controlled

[18] ATMOSPHERIC RELATIVE CONCENTRATIONS FOR CONTROL ROOM RADIOLOGICAL HABITABILITY ASSESSMENTS AT NUCLEAR POWER PLANTS, Rev. 0, (June 2003).

Area" or IOC, situated only 160 meters from the MFFF stack and 68 meters from the Secured Warehouse Building (where the most significant intake of soluble uranium could occur). EP Assessment at 4. In particular, the EP Assessment states:

> [The Assessment] is based on exposure to the Individual Outside the Controlled Area Boundary (IOC), which is a more conservative assumption than dose to "a member of the public offsite."

Id. at 3. As reflected in the EP Assessment, ARCON96 was used in the calculation of maximum dose to the IOC, *not* to an offsite member of the public. EP Assessment at 5, 7, 11. Petitioners themselves acknowledge that the ARCON96 model's "maximum source-receptor distance is 10,000 meters." Petition at 15. MOX Services' application of the model to the IOC is well within that distance. Thus, this aspect of Petitioners' Contention lacks any basis, and fails to identify a genuine dispute of material fact or law.

Petitioners' second basis for this Contention (the other alleged "fatal flaw" in MOX Services' analysis) is that doses to the IOC allegedly are not "low" because MOX Services calculated a Total Effective Dose Equivalent (TEDE) of 868 mrem, or 86% of the "benchmark for submitting a complete emergency plan" and that the thyroid dose from various iodine isotopes is 232 mrem. Petition at 15-16. Petitioners' allegations on their face fail to identify a genuine dispute of material fact or law. As reflected in Table 3 of the EP Assessment, the TEDE from all radionuclides from a hypothetical criticality event is 868 mrem. That is, of course, below the 1 rem threshold without accounting for the obviously far lower doses that a member of the public offsite, situated much farther away, might hypothetically receive. Furthermore, the five iodine isotopes identified in Petitioners' table (*see* Petition at 16), are expressly included in MOX Services' TEDE calculation. EP Assessment, Table 3, at 13.

Finally, without any basis whatsoever, Petitioners assert that an "accurate assessment" of the impact of iodine on the thyroid would use Federal Radiological Monitoring and Assessment Center dose conversion factors and would produce a thyroid dose of 5.43 rem. Petition at 16. The effect of dose from iodine has been evaluated in the MFFF dose analysis using appropriate methodologies. Effective dose equivalent conversions factors used were taken from Federal Guidance Report 11,[19] Table 2.1. These factors include the effective dose impacts to the thyroid from iodine. This methodology is consistent with the effective dose thresholds of 10 CFR § 70.22.

Again, Petitioners have raised no genuine issue of material fact or law and Contention 2.2 should therefore be dismissed.

3. Contention 3: Extended Onsite Storage of Radioactive Waste Not Addressed in EIS

Contention 3 is an Environmental Contention. It alleges that the EIS "is inadequate to satisfy the requirements of [NEPA] ...because it fails to address new and significant information." Petition at 16-17. In particular, Petitioners allege that there are no "concrete plans for construction and operation of the Waste Solidification Building ("WSB") that was proposed in the EIS" and that, as a result, MOX Services will need to store high-alpha liquid waste "for an extended period of time." *Id.* at 17. Petitioners assert that such extended storage "poses environmental and safety hazards that have not been addressed by the NRC in the EIS." *Id.*

Petitioners allege, without any basis or citation, that:

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[19] K. Eckerman, A. Wolbarst, and A. Richardson, U.S. EPA, LIMITING VALUES OF RADIONUCLIDE INTAKE AND AIR CONCENTRATION AND DOSE CONVERSION FACTORS FOR INHALATION, SUBMERSION, AND INGESTION (1988).

> there is no concrete prospect that the WSB will be built before plutonium fuel processing begins or even that it will be built at all . . . DOE has taken no steps to make that plan a reality.

Id. at 18. Petitioners cite a letter from the Chairman of the Advisory Committee on Reactor Safeguards from over two years ago regarding waste storage and receipt. *Id.* at 19. They then go on to cite a litany of alleged "DOE failures" concerning unrelated prior or on-going matters which are not subject to NRC licensing. *Id.* at 19-23.[20] Whatever Petitioners' disagreement may be with DOE's practices, Petitioners do not cite any new significant information concerning the WSB or MFFF relevant to environmental concerns. Nor do they address "good cause" or any of the other factors required for the admission of this environmental-based Contention. Instead, Petitioners engage in mere speculation regarding the likelihood and timing of DOE's development of the WSB.

Petitioners allege that there is "[n]ew and significant information" but fail to cite any such information. *Id.* at 18. Indeed, Petitioner GANE proffered essentially the same contention ("Contention 21. Environmental Impacts of Liquid Radioactive Waste Disposal if WSB Is Cancelled") in the CAR proceeding.[21] *See* GANE Late-Filed Contentions Regarding FEIS at 2 The ASLB in the CAR proceeding found that GANE's Contention 21 " fail[ed] to raise a material issue of law or fact showing that a genuine dispute [existed]," and was therefore

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[20] Petitioner BREDL continues to try to litigate DOE's competence - an area clearly outside the scope of the MFFF proceeding - despite the fact similar contentions were summarily dismissed by the ASLB in the CAR proceeding. *See* LBP-01-35 (Dec. 6, 2001) at 70 (Dismissing BREDL Contention 5C, which alleged that DOE had a "record of long cost overruns and time delays ...[in which] obvious 'cutting corners' safety issues are raised"), 54 NRC at 45; *see also id.* at 46 (Dismissing Contention Group 8: Department of Energy NEPA Violations).

[21] In the CAR proceeding, Petitioners alleged that "DOE has suspended its plan to build the WSB" and as a result "the FEIS assumption that liquid radioactive waste will be processed at the [WSB] is no longer valid" *Duke Cogema Stone & Webster*, Georgians Against Nuclear Energy's Late-Filed Contentions Regarding Final Environmental Impact Statement for Proposed Plutonium MOX Fuel Fabrication Facility, ASLB No. 01-790-01-ML at 2 (Feb. 28, 2005). The resulting liquid waste would need to be "stored at the MOX Facility site before it is disposed of." *Id.* at 2-3. Petitioners now assert "there is no concrete prospect that the WSB will be built" and "as a result high-alpha liquid waste ...may have to be stored on site." Petition at 17.

inadmissible. Memorandum and Order (Denying Admission of Late-Filed Contentions), *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), ASLB No. 01-790-01-ML at 1-2 (Mar. 24, 2005)(unpublished).

Contrary to Petitioners' speculative assertions, DOE is in fact on schedule to design and construct the WSB. Indeed, the current schedule for development of the WSB is explicitly addressed in the President's 2008 budget request to Congress. *See* Exhibit 1 (FY 2008 Congressional Budget Request for 99-D-141 Pit Disassembly and Conversion Facility Savannah River Site Aiken, South Carolina) at 3. The WSB is funded as "Subproject 02- Waste Solidification Building" under the "Pit Disassembly and Conversion Facility" project. *Id.* The WSB has a projected date for approval for the start of operations in the first quarter of 2013. *Id.* at 4. Thus, Petitioners' claims are pure speculation and lack any factual or legal basis. They provide no new information that would warrant admission of this Contention.

Petitioners assert that there is "no information in the license application regarding the WSB." Petition at 18. The MFFF EIS evaluated the environmental impacts of the WSB. *See* EIS § 2.2.4. Petitioners have provided no basis for concluding that there is any NRC requirement to further discuss the WSB in the License Application. The WSB is, after all, a DOE facility separate from the MFFF, and not subject to NRC licensing.

Petitioners also allege that the EIS "contains no analysis of ... the hazards [of MFFF waste handling operations] described in [the letter from the ACRS Chairman]; thus it is inadequate to satisfy NEPA's requirement to address significant environmental impacts." *Id.* at 19. As described above, there is no requirement for the EIS to address the impacts of long-term

storage of high-alpha waste at the MFFF based upon speculation that the WSB will not be built. Accordingly, Contention 3 should be dismissed.

4. Contention 4: License Application Fails to Address Radioactive Waste Storage

Contention 4[22] is a Technical Contention that alleges that the LA is inadequate because it "does not address safety and public health risks posed by indefinite storage of high-alpha waste at the site or certain measures for the safe storage of that waste." *Id.* at 23. To the extent that Petitioners "rely on the basis of Contention 3 ... for this Contention," Contention 4 should be dismissed for the same reasons discussed above. *Id.* at 23.

In addition, Petitioners state that there is "no indication" in MOX Services Integrated Safety Analysis Summary that it analyzed the possibility of unplanned interruptions in the receipt of high-alpha liquid waste by DOE or the ability to bring the facility to a safe configuration in the event that waste receipt is interrupted (recommendation made by the ACRS Chairman in his February 2005 letter). *Id.* at 19. Again, Petitioners' Contention is highly speculative, given that they have provided no basis supporting the assertion that high-alpha waste will be stored "indefinitely" onsite. Moreover, Petitioners have failed to cite any legal requirement that would require such an analysis.

Based on the forgoing, Contention 4 should be dismissed.

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[22] Petitioners' Contention 4 is reminiscent of GANE's CAR Contention 11, which also concerned the potential build-up of liquid radioactive waste at the SRS. CAR Contention 11 alleged that the "ER fails to Address Waste Stream from Aqueous Polishing." *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), Georgians Against Nuclear Energy Contentions Opposing a License for Duke Cogema Stone & Webster to Construct a Plutonium Fuel Factory at Savannah River Site, at 41 (Aug. 13, 2001). Contention 11 alleged, *inter alia*, that the Applicant would add to the "burden of radioactive waste at SRS without designing a plan for managing the waste." *Id.* On October 31, 2003, the ASLB in the CAR proceeding granted the Applicant's Motion for Summary Judgment on Contention 11. *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), Memorandum and Order (Granting DCS Motion for Summary Disposition on Contention 11), ASLB No. 01-790-01-ML (Oct. 31, 2003).

5. Contention 5. Failure to Address Impact of Terrorist Attacks on Plutonium Fuel Facility and Transport

Finally, Petitioners assert that the FEIS for the MFFF is inadequate to satisfy NEPA because it "does not evaluate the environmental impacts of a terrorist attack on the proposed plutonium fuel factory or transport [sic]." Petition at 24. The relief Petitioners seek is for the NRC Staff to prepare a supplemental EIS that addresses the "impacts of the proposed facility in light of significant new information regarding the potential for a terrorist attack on the facility." *Id.*

First, as discussed above, Contention 5 is NEPA-based, and is therefore beyond the scope of this proceeding absent compliance with the late-filed contention standards. Second, the *identical* NEPA-terrorism contention was unequivocally rejected by the Commission during the CAR proceeding. Finally, Petitioners have failed to identify any "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts"[23] that would trigger the need to develop a supplemental EIS.

Petitioners concede that they are resubmitting the same contention regarding the environmental impacts of a terrorist attack that was filed in the MFFF CAR proceeding by NWS' predecessor, GANE. *Id.* Indeed, Contention 5 restates (in its entirety) Contention 12 from the CAR proceeding. *Id.* While the ASLB in the CAR proceeding originally had admitted CAR Contention 12, the Commission reversed the Board's decision, holding that "the NRC has no obligation under NEPA to consider intentional malevolent acts, such as those directed against the United States on September 11, 2001, in conjunction with licensing of the MOX fuel fabrication facility." *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication

[23] 10 CFR § 51.92(a)(2).

Facility), CLI-02-24, 56 NRC 335, 338 (2002). The Commission had reached its decision after careful consideration of briefs provided by DCS, the NRC Staff, GANE and BREDL. *See id.* GANE and BREDL elected not to appeal that decision in 2002. Accordingly, the Board should reject this Contention on procedural grounds to preclude Petitioners from inappropriately gaining a second opportunity to appeal an already-settled issue to the Commission or the courts. In summary, because the NEPA terrorism issue has been resolved by the Commission already, Contention 5 should be rejected here on procedural grounds.

Petitioners assert, without support, that "new information and changed circumstances" require the Staff to prepare a supplemental EIS that addresses the impacts of terrorism. *See* Petition at 27. Although the Petition is not clear, it appears that the "new and significant information" is Petitioners' assertion that the tragic events of September 11, 2001, have made terrorist attacks "reasonably foreseeable," and the Commission itself has changed its views regarding the foreseeability of such attacks. *Id.* To support their position, Petitioners discuss in general terms "new authority" given to the NRC in responding to a nuclear or radiological terrorist incident, and development of a National Response Plan. *Id.* at 28.

This argument fails on its face, however, because there is nothing "new or significant" regarding the effect of September 11th or the Commission's reasoning with respect to NEPA. The September 11th attacks on the United States happened over a year *before* the Commission's decision reversing Contention 12 in the CAR proceeding. *See Duke Cogema Stone & Webster*, 56 NRC 335. The Commission held that the possibility of a terrorist attack was "speculative and simply too far removed from the natural or expected consequences of agency action to require a study under NEPA." *Id.* at 338.

Petitioners speculate that the NRC may now believe that terrorist attacks on nuclear facilities are reasonably foreseeable, and that it no longer has a "reasonable basis to claim that the environmental impacts of terrorist attacks need not be considered." Petition at 29. Petitioners cite *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006), as the basis for the Commission's presumed change of opinion. *Id.* However, the Commission has clearly stated its opinion regarding the Ninth Circuit's holding:

> Respectfully, however, we disagree with the Ninth Circuit's view. We of course will follow it, as we must, in the *Diablo Canyon* proceeding itself. But the NRC is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question.

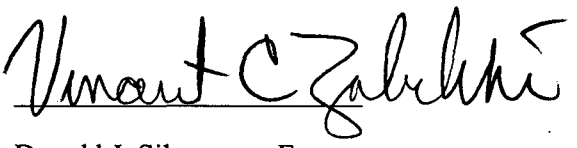
Memorandum and Order, *Amergen Energy, LLC* (License Renewal for Oyster Creek Nuclear Generating Station), CLI-07-08 (slip op. at 4-5) (Feb. 26, 2007). It is therefore obvious that any speculation regarding a change in position by the Commission regarding NEPA and terrorism is baseless, because the Commission continues to hold (as it did in the MFFF CAR proceeding) that NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities. *See id.*; *see also* Nuclear Mgmt. Co., LLC (Palisades Nuclear Plant), CLI-07-09 (slip op.) (Feb. 26, 2007).

Accordingly, Contention 5 should be dismissed.

V. CONCLUSION

Petitioners each lack standing and have not identified any admissible contentions. Accordingly, Shaw AREVA MOX Services, LLC respectfully requests that Petitioners' Petition for Intervention and Request for Hearing be denied.

Respectfully submitted,



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COUNSEL FOR
SHAW AREVA MOX SERVICES, LLC

Exhibit 1

FY 2008 Congressional Budget Request
for
99-D-141
Pit Disassembly and Conversion Facility
Savannah River Site
Aiken, South Carolina

99-D-141, Pit Disassembly and Conversion Facility
Savannah River Site, Aiken, South Carolina[a]

1. Significant Changes

- The cost and schedule to design, construct, and complete the cold start-up activities (including sunk costs) for the Pit Disassembly and Conversion Facility (PDCF) subproject has been revised. The revised total project cost estimate of $2.4 billion represents an increase from the Department's FY 2007 Budget Request cost estimate of $1.5 billion. Approximately 60 percent of the increase can be attributed to an increase in the cost of equipment and construction materials as well as escalation and facility start-up activities. The remaining 40 percent is attributable to increases in design costs and contingency funds necessary to address project risks.

- The revised cost estimate must still undergo an external independent review in accordance with the Department's Critical Decision process.

- Previous project planning included construction of a PDCF training module to mitigate facility start-up risks. However, an alternate approach consisting of equipment and glove box module assembly and functional testing and demonstration prior to facility startup is being pursued to mitigate these risks. This new approach has been determined to be technically sufficient and more cost-effective.

2. Design, Construction, and D&D Schedule

(fiscal quarter)

	Preliminary Design start	Final Design Complete	Physical Construction Start	Physical Construction Complete	D&D Offsetting Facilities Start	D&D Offsetting Facilities Complete
FY 2000	2Q FY 1999	4Q FY 2001	2Q FY 2001	4Q FY 2004	N/A	N/A
FY 2001	3Q FY 1999	1Q FY 2002	1Q FY 2002	3Q FY 2005	N/A	N/A
FY 2002	3Q FY 1999	TBD	TBD	TBD	N/A	N/A
FY 2003	3Q FY 1999	1Q FY 2004	TBD	TBD	N/A	N/A
FY 2004	3Q FY 1999	2Q FY 2004	TBD	TBD	N/A	N/A
FY 2005	3Q FY 1999	4Q FY 2005	2Q FY 2005	TBD	N/A	N/A
FY 2006	3Q FY 1999	4Q FY 2005	3Q FY 2010	TBD	N/A	N/A
FY 2007	3Q FY 1999	4Q FY 2007	1Q FY 2011[b]	4Q FY 2015[b]	N/A	N/A
FY 2008	3Q FY 1999	4Q FY 2009	1Q FY 2011[b]	4Q FY 2016[b]	N/A	N/A

[a] The Total Estimated Cost (TEC) and Total Project Cost (TPC) for this project are predicated on the specific schedule shown in this project data sheet. Under a year-long FY 2007 Continuing Resolution, this ongoing construction project may be impacted. Cost and schedule impacts to this project will be determined after passage of an appropriation.

[b] These are preliminary schedules for PDCF that will be finalized once the Project Performance Baseline is established in FY 2007. The planned construction start and completion dates for the Waste Solidification Building (WSB) are 1Q FY 2009 and 1Q FY 2012 respectively.

3. Baseline and Validation Status [a]

(dollars in thousands)

	TEC	OPC, except D&D Costs	Offsetting D&D Costs	Total Project Costs	Validated Performance Baseline	Preliminary Estimate
FY 2000	346,192	0	N/A	N/A	N/A	N/A
FY 2001	346,192	0	N/A	N/A	N/A	N/A
FY 2002	TBD	TBD	N/A	N/A	N/A	N/A
FY 2003	TBD	TBD	N/A	N/A	N/A	N/A
FY 2004	TBD	TBD	N/A	N/A	N/A	N/A
FY 2005	TBD	TBD	N/A	N/A	N/A	N/A
FY 2006	TBD	TBD	N/A	N/A	N/A	N/A
FY 2007	1,243,428	481,628	N/A	1,725,056	4Q FY 2007[b]	1,725,056
FY 2008	1,845,813	848,343	N/A	2,694,156	4Q FY 2007[b]	2,694,156

4. Project Description, Justification, and Scope

This project is comprised of two subprojects: 99-D-141-01, Pit Disassembly and Conversion Facility and 99-D-141-02, Waste Solidification Building (WSB).

Subproject 01-Pit Disassembly and Conversion Facility (PDCF)

The PDCF is a first-of-a-kind facility. The United States has never before constructed and operated a large-scale production facility for disassembling various categories of nuclear weapons pits. The PDCF, which will be built at the Savannah River Site, will disassemble surplus nuclear weapon pits and convert the resulting weapon-grade plutonium metal to an oxide form that can be fabricated into mixed oxide (MOX) fuel for irradiation in U.S. commercial nuclear reactors. Once irradiated and converted into spent fuel, the plutonium can no longer be readily used for nuclear weapons. The facility's operating life is expected to be approximately 7.5 years but could easily be extended to disassemble and convert additional quantities of surplus nuclear weapon pits. After completing its mission, the PDCF will be deactivated, decontaminated, and decommissioned over a three to four year period.

The PDCF is a complex of facilities, consisting of a main hardened building that will contain the pit disassembly plutonium processes and a number of conventional buildings and structures that will contain support personnel, systems, and equipment. The main plutonium processing building will occupy approximately 115,000 square feet and contain the following key areas: pit receiving, assay and storage; plutonium metal extraction and conversion to oxide; and plutonium oxide packaging, assay, storage, and shipment. This building will be equipped with storage for incoming pit materials and for plutonium oxide and also includes areas for recovery, decontamination, and declassification of other components resulting from the disassembly of the nuclear weapon pits. The conventional buildings and structures, which do not contain any radioactive materials, will occupy approximately 50,000 square feet and will contain offices; change rooms; a central control station; non-radioactive waste treatment; and packaging, storage, and shipment systems.

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[a] All outyear numbers are preliminary estimates and will be finalized once a Project Performance Baseline is established in FY 2007.

[b] No construction funds will be used until the Performance Baseline has been validated.

The scope of this subproject consists of the following activities: design and construction of the buildings and structures, including design, procurement, installation, testing, demonstration and start-up of equipment to disassemble pits and convert the plutonium metal from nuclear weapon pits to oxide form, as well as associated supporting equipment, components, and systems. The PDCF is being designed and constructed to meet U.S. Nuclear Regulatory Commission (NRC) licensing standards, but will not be licensed by the NRC.

FY 2008 activities include completing 90% of the final design and awarding a systems integration contract to integrate software and hardware control and information systems.

Subproject 02-Waste Solidification Building (WSB):
The WSB will be built adjacent to the PDCF and is designed to process radioactive liquid waste streams coming from the MOX facility and PDCF, into a solid form for ultimate disposal. The radioactive liquid waste streams consist of one high-activity and two low-activity streams. The high-activity stream contains significant amounts of americium removed from plutonium oxide during MOX polishing operations. The WSB operating life is expected to be approximately 15 years but could easily be extended to accommodate fabrication of additional surplus plutonium. After completing its mission, the WSB would be deactivated, decontaminated, and decommissioned over three to four years.

The scope of this subproject consists of the following activities: design, construction, procurement, installation, and startup testing of structures and equipment. The facility, which would not exceed 48,000 square feet, would be a single story structure of hardened concrete. A concrete-cell configuration would be provided to process the high-activity waste stream in the building. An additional separate structure consisting of a covered concrete pad will be constructed to provide temporary storage of containerized waste following treatment and prior to packaging for shipment. The major pieces of process equipment would include tanks, evaporators, and solidification equipment.

FY 2008 activities include completion of the detailed design of the WSB and procurement of long-lead equipment, as necessary.

The project will be conducted in accordance with the project management requirements in DOE Order 413.3 and DOE Manual 413.3-1, Program and Project Management for the Acquisition of Capital Assets.

Compliance with Project Management Order

- PDCF Critical Decisions – 0/1: Approve Mission Need – 1Q FY 1998
- PDCF External Independent Review Final Report – 4Q FY 2007
- PDCF Critical Decision – 2: Approve Performance Baseline – 4Q FY 2007
- PDCF Critical Decision – 3: Approve Start of Construction – 2Q FY 2009
- PDCF Critical Decision – 4: Approve Start of Operations – 2Q FY 2019

- WSB Critical Decision – 0: Approve Mission Need – 1Q FY 1998
- WSB Critical Decision – 1: Approve Preliminary Baseline Range – 3Q FY 2007
- WSB External Independent Review Final Report – 4Q FY 2008
- WSB Critical Decisions – 2/3: Approve Performance Baseline and Start of Construction – 4Q FY 2008
- WSB Critical Decision – 4: Approve Start of Operations – 1Q FY 2013

5. Financial Schedule[a]

(dollars in thousands)

	Appropriations	Obligations	Costs
Design/Construction by Fiscal Year			
Design			
1999	20,000	20,000	211
2000	18,751	17,396	13,449
2001	19,956	17,804	17,834
2002	11,000	14,507	23,377
2003	34,657	34,657	42,662
2004	42,520	41,920	35,140
2005	32,044	32,644	33,368
2006	23,760	23,760	19,387
2007	42,000	42,000	40,750
2008	25,586	25,586	27,640
2009	16,300	16,300	32,756
Total, Design (99-D-141)	286,574	286,574	286,574
Construction			
2006	0	0	0
2007	36,700	36,700	1,600[b]
2008	34,414	34,414	22,200
2009	42,200	42,200	76,200
2010	148,500	148,500	140,000
2011	212,100	212,100	213,914
2012	216,342	216,342	215,000
2013	223,658	220,000	245,000
2014	300,000	300,000	295,607
2015	201,000	200,000	205,000
2016	90,000	90,000	70,550
2017	54,325	58,983	70,238
2018	0	0	3,930
Total, Construction	1,559,239	1,559,239	1,559,239
Total TEC	1,845,813	1,845,813	1,845,813

[a] All outyear numbers are preliminary estimates and will be finalized once a Project Performance Baseline is established in FY 2007.

[b] A Critical Decision 3A to approve start of Title III engineering for subproject 01, PDCF, will be requested in FY 2007.

6. Details of Project Cost Estimate[a]

Total Estimated Costs

Sub-Project 01 – Pit Disassembly and Conversion Facility

(dollars in thousands)

Cost Element	Current Estimate ($000)	Previous Estimate ($000)
Preliminary and Final Design	255,391	213,000
Construction Phase		
Site Preparation	10,000	6,100
Equipment	256,900	138,000
All other construction	866,552	615,528
Contingency	254,774	81,500
Total, Construction	1,388,226	841,128
Total, TEC	1,643,617	1,054,128

Sub-Project 02 – Waste Solidification Building

(dollars in thousands)

Cost Element	Current Estimate ($000)	Previous Estimate ($000)
Preliminary and Final Design	31,183	29,300
Construction Phase		
Site Preparation	1,300	1,300
Equipment	38,393	35,600
All other construction	81,784	93,100
Contingency	49,536	30,000
Total, Construction	171,013	160,000
Total, TEC	202,196	189,300

[a] All outyear numbers are preliminary estimates and will be finalized once a Project Performance Baseline is established in FY 2007.

Other Project Costs

Sub-Project 01 – Pit Disassembly and Conversion Facility

(dollars in thousands)

Cost Element	Current Estimate ($000)	Previous Estimate ($000)
Conceptual Planning	328,394	251,970
Start-up	370,804	153,380
Offsetting D&D		
D&D for removal of the offsetting facility	N/A	N/A
Other D&D to comply with "one-for-one" requirements	N/A	N/A
D&D contingency	N/A	N/A
Total, D&D	N/A	N/A
Contingency for OPC other than D&D	106,237	39,570
Total, OPC	805,435	444,920

Sub-Project 02 – Waste Solidification Building

(dollars in thousands)

Cost Element	Current Estimate ($000)	Previous Estimate ($000)
Conceptual Planning	11,435	19,208
Start-up	20,076	16,000
Offsetting D&D		
D&D for removal of the offsetting facility	N/A	N/A
Other D&D to comply with "one-for-one" requirements	N/A	N/A
D&D contingency	N/A	N/A
Total, D&D	N/A	N/A
Contingency for OPC other than D&D	11,397	1,500
Total, OPC	42,908	36,708

7. Schedule of Project Costs [a]

Sub-Project 01 – Pit Disassembly and Conversion Facility

(dollars in thousands)

	Prior Years	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Outyears	Total
TEC (Design)	203,321	19,314	32,756	0	0	0	0	255,391
TEC (Construction)	300	11,600	36,200	92,000	151,001	206,800	890,325	1,388,226
OPC Other than D&D	261,435	38,105	50,747	69,425	65,842	71,408	248,473	805,435
Offsetting D&D Costs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total, Project Costs	465,056	69,019	119,703	161,425	216,843	278,208	1,138,798	2,449,052

Sub-Project 02 – Waste Solidification Building

(dollars in thousands)

	Prior Years	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Outyears	Total
TEC (Design)	22,857	8,326	0	0	0		0	31,183
TEC (Construction)	1,300	10,600	40,000	48,000	62,913	8,200	0	171,013
OPC Other than D&D	8,124	3,900	4,200	8,284	12,200	6,200	0	42,908
Offsetting D&D Costs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total, Project Costs	32,281	22,826	44,200	56,284	75,113	14,400	0	245,104

[a] All outyear numbers are preliminary estimates and will be finalized once a Project Performance Baseline is established in FY 2007.

8. Related Operations and Maintenance Funding requirements

Sub-Project 01 – Pit Disassembly and Conversion Facility

Start of Operation or Beneficial Occupancy (fiscal quarter)	2Q FY 2019
Expected Useful Life (number of years)	7-1/2
Expected Future start of D&D for new construction (fiscal quarter)	N/A

Sub-Project 02 – Waste Facility

Start of Operation or Beneficial Occupancy (fiscal quarter)	1Q FY 2013
Expected Useful Life (number of years)	15
Expected Future start of D&D for new construction (fiscal quarter)	N/A

(Related Funding Requirements)

Sub-Project 01 – Pit Disassembly and Conversion Facility

(dollars in thousands)

	Annual Costs		Life cycle costs	
	Current Estimate	Prior Estimate	Current Estimate	Prior Estimate
Operations	TBD	N/A	TBD	N/A
Maintenance	TBD	N/A	TBD	N/A
Total Related funding	TBD	N/A	TBD	N/A

Sub-Project 02 – Waste Facility

(dollars in thousands)

	Annual Costs		Life cycle costs	
	Current Estimate	Prior Estimate	Current Estimate	Prior Estimate
Operations	TBD	N/A	TBD	N/A
Maintenance	TBD	N/A	TBD	N/A
Total Related funding	TBD	N/A	TBD	N/A

9. Required D&D Information

Sub-Project 01 – Pit Disassembly and Conversion Facility

N/A

Sub-Project 02 – Waste Facility

N/A

10. Acquisition Approach

Sub-Project 01 – Pit Disassembly and Conversion Facility

A cost plus fixed-fee contract for preliminary design and a cost plus award-fee contract for detailed design have been awarded for the PDCF. The procurement strategy includes an option for construction inspection services (Title III), which DOE will decide whether to exercise during the Title II design phase. A purchase order for procurement of long-lead equipment fabrication will be issued approximately one to two years prior to the start of construction.

It is anticipated that fixed-price construction sub-contracts for the PDCF will be awarded on the basis of competitive bidding, with an incentive and award fee contract for construction management services. In addition, the value of the highly enriched uranium resulting from the disassembly of surplus pits contained in the 34 MT mission is approximately $475 million at today's uranium prices.

Sub-Project 02 – Waste Solidification Building
The WSB design service was procured through the Savannah River Site M&O contract. A purchase order for procurement of long-lead equipment for the WSB would be issued approximately one year prior to start of construction. It is anticipated that fixed-price construction sub-contracts for the WSB will be awarded on the basis of competitive bidding.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	June 13, 2007
Shaw AREVA MOX Services, LLC	)	Docket No. 70-3098
(Mixed Oxide Fuel Fabrication Facility Possession and Use License)	)	ASLBP No. 07-856-02-MLA-BD01

CERTIFICATE OF SERVICE

I hereby certify that copies of the "Notice of Appearance for Donald J. Silverman," "Notice of Appearance for Vincent C. Zabielski," and "Shaw Areva MOX Services, LLC Answer Opposing BREDL *et al.*, Petition for Intervention and Request for Hearing" were served upon the persons listed below, by e-mail and first class mail, this 13th day of June 2007.

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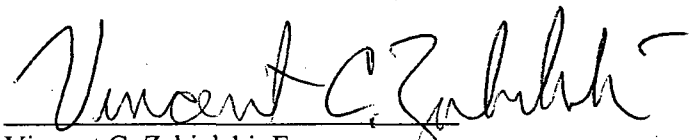

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