

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

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**Before Administrative Judges:
Thomas S. Moore, Chairman
Charles N. Kelber
Peter S. Lam**

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of)

September 13, 2001)

DUKE COGEMA STONE & WEBSTER)

Docket No. 070-03098-ML)

(Savannah River Mixed Oxide Fuel)
Fabrication Facility))

ASLBP No. 01-790-01-ML)

**Duke Cogema Stone & Webster's Answer to
Proposed Contentions Filed by Georgians Against Nuclear Energy**

Duke Cogema Stone & Webster ("DCS") hereby files its Answer to the Georgians Against Nuclear Energy ("GANE") "Contentions Opposing a License for Duke Cogema Stone & Webster to Construct a Plutonium Fuel Factory at Savannah River Site" ("GANE Contentions").

Section I provides an introduction and discusses the procedural history relevant to the Atomic Safety and Licensing Board's ("Board") disposition of the proposed contentions submitted by GANE. Section II discusses the legal standards to be applied in ruling on the proposed contentions, including a discussion of the appropriate scope of the proceeding on the Construction Authorization Request ("CAR") submitted by DCS. Section III addresses each of GANE's contentions and demonstrates that none of those contentions meets the standards for admission in this proceeding. For the reasons discussed below and in DCS' prior Answers, none of GANE's contentions are acceptable for litigation in this proceeding. Because GANE has not

submitted an admissible contention, its petition to intervene and request for hearing should be denied.

I. INTRODUCTION AND PROCEDURAL HISTORY

On May 18, 2001, GANE requested a hearing before the Nuclear Regulatory Commission ("NRC") on the MOX Facility CAR ("Request for Hearing"). DCS filed an Answer to GANE's Request for Hearing on June 1, 2001 ("DCS Answer"). The NRC Staff filed its Answer to the GANE Request for Hearing (and the requests of others) on June 25, 2001 ("Staff Answer"). GANE filed contentions on August 14, 2001.¹ As demonstrated below, although DCS did not oppose GANE's standing to participate in the CAR proceeding, GANE has failed to offer a single admissible contention. Accordingly, its Request for Hearing should be denied.

II. LEGAL STANDARDS GOVERNING THE ADMISSIBILITY OF CONTENTIONS

This section discusses the legal standards governing the admissibility of contentions in this proceeding. Subsections A through I discuss the general standards applicable to contentions in NRC proceedings. Subsection J discusses the appropriate scope of safety and environmental contentions that may be litigated within this particular proceeding.²

¹ GANE's Contentions were served at 12:16 a.m., and amended at 4:02 a.m., on August 14, 2001; GANE submitted 31 alleged "deficiencies" in its original Request for Hearing. Since these 31 issues did not address GANE's standing, DCS treated them as contentions in its June 1, 2001 Answer. GANE's August 14, 2001 filing indicates that "GANE is filing 13 safety and environmental contentions," and makes no reference to the prior 31 alleged "deficiencies." Accordingly, DCS assumes that only 13 proposed contentions have been submitted by GANE. To the extent that the Board finds that the "deficiencies" alleged in the Request for Hearing constitute proposed contentions, DCS' response to those allegations is contained in its June 1, 2001 Answer.

² The following discussion of the applicable legal standards is also included in DCS' Answer to the other petitioners' filings on proposed contentions.

A. Requirements for One Admissible Contention

In order to intervene in an NRC licensing proceeding, an individual or group must demonstrate that it has standing, and “proffer with specificity at least one admissible contention.”³ 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.⁴ When a mandatory hearing is not required (as in this proceeding involving the MOX Facility), licensing boards should “take the utmost care” to assure that at least one good contention is advanced because, absent successful intervention, no hearing need be held.⁵

B. Petitioners Have the Burden

As provided in the NRC’s Notice of Opportunity for a Hearing (“Hearing Notice”), the petitioners “have the burden of showing that the contentions are admissible.”⁶ As stated by the Commission, “[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.”⁷

³ *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 248 (1996); *Gulf States Utility Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994).

⁴ 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, 19,996 (April 18, 2001); *Florida Power & Light Co.* (Turkey Point Nuclear Power Plant, Units 3 and 4), CLI-01-17, NRC slip op. at 1 (July 19, 2001).

⁵ *Cincinnati Gas and Electric Co.* (William H. Zimmer Nuclear Power Station), ALAB-305, 3 NRC 8, 12 (1976).

⁶ 66 *Fed. Reg.* at 19,996. A similar statement appears in the Commission’s referral order; *Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, NRC slip op. at 8 (June 14, 2001) (“It is the responsibility of all petitioners to provide the necessary information to show that their contentions satisfy the requirements for admission”).

⁷ *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

C. Contentions Must Satisfy the Requirements in 10 CFR § 2.714(b)

According to the Hearing Notice,⁸ the admissibility of contentions is governed by 10 CFR § 2.714(b)(2). This section states that “[e]ach contention must consist of a specific statement of the issue of law or fact to be raised or controverted,” and requires that the petitioner provide the following information with respect to each contention:

- (i) A brief explanation of the bases of the contention.
- (ii) A concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing, together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.
- (iii) Sufficient information (which may include information pursuant to paragraphs (b)(2)(i) and (ii) of this section) to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include references to the specific portions of the application (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. On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner can amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's document.

A contention that fails to meet any one of these requirements must be rejected.⁹

The Commission has described Section 2.714(b) as “strict.”¹⁰ 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

⁸ 66 *Fed. Reg.* at 19,996.

⁹ *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

¹⁰ *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 NRC 328, 334 (1999).

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.¹¹

D. Contentions Must be Specific

10 CFR § 2.714 requires that the bases for each contention be set forth with reasonable specificity.¹² For a contention to be admissible, a petitioner must "refer to the specific portion of the license application being challenged, state the issue of fact or law associated with that portion, and provide a basis of alleged facts or expert opinions, together with references to specific sources and documents that establish those facts or expert opinions."¹³ As the Commission has stated, a "contention should refer to those portions of the license application (including the environmental report and safety report) that the petitioner disputes and indicate supporting reasons for each dispute."¹⁴

If the petitioner does not believe that the application adequately addresses a relevant issue, the petitioner is required to explain why the application is deficient.¹⁵ 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."¹⁶

¹¹ *Id.* (citations omitted).

¹² *Id.* at 335.

¹³ As the Commission stated in its referral order, "[c]ontentions must be specific and accompanied by appropriate factual, documentary, or expert support." *Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, NRC slip op. at 8 fn. 2 (June 14, 2001); *see also Yankee Atomic*, CLI-96-7, 43 NRC at 248 (citing 10 CFR § 2.714(b)(2)); *Duke Energy Corp.*, CLI-99-11, 49 NRC at 333.

¹⁴ *Florida Power & Light Co.*, CLI-01-17, NRC slip op. at 22.

¹⁵ *See Arizona Public Service Co.*, CLI-91-12, 34 NRC at 155-56.

¹⁶ *Florida Power & Light Co.*, CLI-01-17, NRC slip op. at 22.

An issue that does not directly controvert a position taken in the application is subject to dismissal.¹⁷

E. Contentions Must Raise a Genuine Issue of Material Fact or Law

Section 2.714(b)(2) requires a petitioner to provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact.¹⁸ “The dispute at issue is ‘Material’ if its resolution would ‘make a difference in the outcome of the licensing proceeding.’”¹⁹ A contention must be dismissed if it is determined that “the contention, if proven, would be of no consequence in the proceeding because it would not entitle petitioner to relief.”²⁰

F. Contentions Must Be Supported by Facts or Expert Opinions

A “contention will be dismissed if the intervenor sets forth no facts or expert opinion on which it intends to prove its contention.”²¹ The NRC will not accept an expert opinion as an adequate basis for an issue if it “merely states a conclusion (e.g., the application is ‘deficient,’ ‘inadequate,’ or ‘wrong,’) without providing a reasoned basis or explanation for that conclusion.”²² Furthermore, “a petitioner may not simply incorporate massive documents by reference as the basis for or as a statement of his contentions.”²³

¹⁷ See *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998).

¹⁸ See *Yankee Atomic*, CLI-96-7, 43 NRC at 248.

¹⁹ *Duke Energy Corp.*, CLI-99-11, 49 NRC at 333-34; 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).

²⁰ 10 CFR § 2.714(d)(2)(ii); 54 *Fed. Reg.* 33,168. A similar requirement is stated in the Hearing Notice of this proceeding (“The contention must be one which, if proven, would entitle the petitioner to relief.”) 66 *Fed. Reg.* at 19,996.

²¹ 54 *Fed. Reg.* at 33,171.

²² *Private Fuel Storage*, LBP-98-7, 47 NRC at 181.

²³ *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989).

G. Contentions Must Focus on the Application and Cannot Be Based Solely on NRC Staff Requests for Additional Information

An intervenor may not rely solely on an NRC request for additional information ("RAI") as the basis for a contention.²⁴

To satisfy the Commission's contention rule...Petitioners must do more than "rest on [the] mere existence" of RAIs as a basis for their contention. RAIs generally "indicate[] nothing more than that the staff requested further information and analysis from the Licensee." The NRC's issuance of RAIs does not alone establish deficiencies in the application, or that the NRC staff will go on to find any of the applicant's clarifications, justifications, or other responses to be unsatisfactory.²⁵

Merely citing an RAI is "a far cry from the reasonable specificity our contention rule demands."²⁶ "Petitioners seeking to litigate contentions must do more than attach a list of RAIs and declare an application 'incomplete.' It is their job to review the application and to identify what deficiencies exist and to explain why the deficiencies raise material safety concerns."²⁷ To establish a genuine dispute with the applicant, "petitioners must use the RAI to make the issue of concern their own. This means they must develop a fact-based argument that actually and specifically challenges the application....Documents, expert opinion, or at least a fact-based argument are necessary."²⁸ As the Commission has noted:

RAIs are not always "irrelevant to the adjudicatory process." They can, for instance, provide a jumping-off point for the petitioners to focus upon particular parts of the application and thereby develop potential issues of concern. The extent to which an RAI might help support a contention must be considered on a case by case basis, but the Commission expects that in almost all instances a

²⁴ *Duke Energy Corp.* CLI-99-11, 49 NRC at 335-37; *see also Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 147 (1993).

²⁵ *Duke Energy Corp.*, CLI-99-11, 49 NRC at 336 (citations omitted); *See also Baltimore Gas & Elec.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348 (1998).

²⁶ *Duke Energy Corp.*, CLI-99-11, 49 NRC at 336.

²⁷ *Id.* at 337.

²⁸ *Id.* at 341, 342.

petitioner must go beyond merely quoting an RAI to justify admission of a contention into the proceeding.²⁹

H. Contentions May Not Challenge NRC Rules and Regulations

A licensing proceeding is an improper forum for challenging the validity of previously-issued NRC rules and regulations.³⁰

I. Contentions Must Be Within the Scope of the Notice of the Proceeding

The scope of permissible contentions is bounded by the issues specified in the Notice of Opportunity for Hearing.³¹ A contention that raises matters that are not within the scope defined by the notice cannot be admitted.³²

J. The Scope of this Proceeding is Limited to Only Those Issues Relevant to Whether the CAR Should be Granted

1. The Hearing Scope is Limited by the Hearing Notice and Commission's Referral Order in this Proceeding

In this case, the Hearing Notice explicitly limits the scope of contentions “to matters within the scope of the DCS application for authority to construct a MOX fuel fabrication facility.”³³ Furthermore, the Hearing Notice states that contentions are expected to focus on DCS’ CAR, Environmental Report (“ER”), or Quality Assurance (“QA”) Plan for the MOX Facility.³⁴ Similarly, the Commission’s referral order in this proceeding states that

²⁹ *Id.* at 341 (citations omitted).

³⁰ See 10 CFR §2.758; *Florida Power & Light Co.* (Turkey Point Nuclear Plant, Units 3 and 4), CLI-01-17, NRC slip op. at 17; *Yankee Atomic Electric Co.*, CLI-96-7, 43 NRC at 252.

³¹ See *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 118 (1995).

³² See *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979); see also *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976).

³³ 66 *Fed. Reg.* at 19,996.

³⁴ *Id.*

“[c]ontentions must be based on information (or alleged lack thereof) contained in either the Applicant’s CAR or its environmental report.”³⁵

DCS has not yet submitted all of the information required for the NRC to issue a license to possess and use special nuclear material (“SNM”) at the MOX Facility, and will not do so until 2002.³⁶ As is clearly reflected in the Hearing Notice, issues related to the application for possession and use of SNM will “be the subject of a separate notice of opportunity for hearing.”³⁷ Thus, this proceeding must be governed by the following fundamental principle: only those contentions raising issues that are relevant to the findings that must be made by the NRC in ruling upon DCS’ request for authorization to construct the MOX Facility are within the scope of this proceeding.

As provided in the Hearing Notice and referenced NRC regulations, in order to issue the construction authorization, the NRC must make the following specific findings:

1. “the design bases of the principal structures, systems, and components and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents” (10 CFR § 70.23(b)); and
2. “after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for [under the National Environmental Policy Act (“NEPA”)] is the issuance of the proposed license, with any appropriate conditions to protect environmental values” (10 CFR § 70.23(a)(7)).

³⁵ *Duke, Cogema, Stone & Webster*, CLI-01-13, NRC slip op. at 8 fn. 2.

³⁶ 66 *Fed. Reg.* at 19,995.

³⁷ *Id.*

As stated by the Commission in this proceeding, “the presiding officer shall be guided by these safety and environmental regulations [10 CFR §§ 70.23(b) and 70.23(a)(7)] in determining whether proffered contentions are admissible under 10 C.F.R. § 2.714(b)(2) standards.”³⁸ Thus, the only issues that are appropriate for litigation in this phase of the hearings are those that are material to these two findings.

2. Safety Issues Beyond the Scope of the Proceeding

Based upon the above, any proposed contention that addresses any of the following areas clearly is beyond the scope of the hearing on the CAR and would not provide the basis for granting a hearing request:

- any issues that do not call into question the design bases of the principal structures, systems and components (“SSCs”);
- any issues regarding the adequacy of the design of non-principal SSCs;
- any issues that do not question the ability of the principal SSCs to meet the accident consequence performance requirements in 10 CFR Part 70, Subpart H or to provide adequate protection against natural phenomena; and
- any issues associated with MOX Facility normal operations, including, for example, technical or financial qualifications to operate the MOX Facility and radiological exposures resulting from normal operations.

3. Environmental Issues Beyond the Scope of the Proceeding

The scope of the environmental issues that may be litigated in this proceeding is limited to the determination described in 10 CFR § 70.23(a)(7) (*i.e.*, whether “after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values”). These issues revolve around the environmental impacts of construction and operation of the MOX Facility.

³⁸ *Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, NRC slip op. at 7 - 8 (June 14, 2001) (Emphasis added).

Construction and operation of the MOX Facility constitute one part of both a larger fuel cycle and a larger national program to dispose of surplus weapons material under the jurisdiction of the Department of Energy ("DOE"), not the NRC. The components of the national program include the following activities:

1. Transportation of surplus weapons plutonium and uranium oxide to the Savannah River Site ("SRS"), disassembly and conversion of the surplus weapons plutonium, and immobilization or transfer to the MOX Facility as feed material for MOX fuel.
2. Fabrication of MOX fuel at the MOX Facility.
3. Transportation of fresh MOX fuel to reactors.
4. Use of the MOX fuel in the reactors.
5. Transportation of the spent MOX fuel from the reactors to a repository.
6. Disposal of the spent MOX fuel in the repository.
7. SRS receipt and processing of wastes from the MOX Facility.
8. Deactivation of the MOX Facility.
9. Decommissioning of the MOX Facility.

All of these activities have been addressed by DOE in prior Environmental Impact Statements ("EISs").³⁹

In fulfillment of its NEPA obligations, the DOE has prepared several EISs for the surplus plutonium disposition ("SPD") and related programs, including the:

- *Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement* ("S&D PEIS") (DOE/EIS-0229) (December 1996). The S&D PEIS evaluated various alternatives for disposition of surplus weapons material and determined that the preferred strategy was a combination of immobilization of some of the surplus weapons plutonium and use of the remainder as feed material for MOX fuel for use in existing reactors;
- *Surplus Plutonium Disposition Final Environmental Impact* ("SPD EIS") (DOE/EIS-0283) (November 1999).⁴⁰ The SPD EIS evaluated various alternatives for implementing the strategy selected in the S&D PEIS. This included evaluating the percent of plutonium disposed by immobilization or conversion to MOX fuel, and selection of the site for the disposition facilities;

³⁹ Attachment 1 identifies the principal locations within the DOE EISs where these activities have been discussed and their environmental impacts addressed. While transfer and treatment of high alpha liquid waste from the MOX Facility were not specifically addressed in these EISs, the impacts associated with managing the high alpha liquid waste in the SRS HLW system are bounded by these EISs.

⁴⁰ This EIS is available at http://www.doe-md.com/pu_docs.asp.

- *Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*, (“YM DEIS”) (DOE/EIS-0250D) (1999).⁴¹ This EIS examines the impacts of transport of spent nuclear fuel from reactor sites to the geologic repository and the impacts of disposal in the geologic repository. Spent MOX fuel is included in the spent nuclear fuel inventory evaluated.
- *Savannah River Site Waste Management Final Environmental Impact Statement* (DOE/EIS-0217) (1995).⁴² This EIS examines the environmental impacts of continued waste management at SRS under expected, minimum, and maximum waste scenarios. Additional volumes of up to seven million gallons of high level waste are included under the maximum waste forecast.

DOE (not NRC) has overall responsibility for the program for disposing of surplus weapons plutonium, and has reviewed the overall program under NEPA. These facts have several important ramifications with respect to the scope of environmental contentions that are admissible in this proceeding:

- Contentions that pertain to programmatic decisions made by DOE or to the environmental impacts of activities addressed by DOE’s programmatic EISs other than the MOX Facility itself are not admissible in this proceeding.

Ordinarily, when a federal action is part of a larger federal program, an agency will elect to prepare an EIS for the entire program, rather than simply preparing an EIS for each of the individual facilities that are part of the overall program.⁴³ As discussed above, DOE has already prepared two EISs governing the overall SPD program. In both of those cases, furthermore, opportunity was provided for public input and comment on DOE’s environmental reviews. At issue, therefore, is (1) whether the NRC should defer to the DOE’s programmatic EISs, or whether it must conduct its own environmental evaluation of the overall SPD program; and (2)

⁴¹ This EIS is available at <http://www.ymp.gov/timeline/eis/deis.htm>.

⁴² This EIS is available at http://nepa.eh.doe.gov/eis/eis0217/eis0217_toc.html.

⁴³ See *Scientists’ Institute for Public Information v. AEC*, 481 F.2d 1079, 1085-93 (D.C. Cir. 1973); *Kleppe v. Sierra Club*, 427 U.S. 390 (1976).

whether issues related to the broader federal program may be litigated in an NRC licensing proceeding involving only one specific element of the program.

The NRC was faced with these issues in conjunction with licensing of the Clinch River Breeder Reactor ("CRBR"), which was one part of a broader program for developing liquid metal fast breeder reactors ("LMFBRs").⁴⁴ In that case, the Energy Research and Development Administration ("ERDA"), which was the predecessor to DOE, had prepared and issued an EIS for the LMFBR program. The intervenor in the CRBR licensing proceeding proffered contentions that (1) argued that the NRC should perform a NEPA evaluation of the costs and benefits of the LMFBR program and evaluate alternatives to that program, and (2) challenged "ERDA's conclusions concerning the need for an LMFBR program and the validity of ERDA's environmental assessments."⁴⁵ The Commission concluded that the "need" for a demonstration facility should be "assumed as established by the ERDA EIS."⁴⁶ The Commission ruled that its licensing process:

must be tailored in this case to avoid the Commission's substituting its judgment for that of ERDA with respect to broad planning decisions embodied in the LMFBR statement, such as investigating whether LMFBR technology is a worthwhile overall objective, whether a demonstration reactor is a necessary step in this investigation, and whether in view of the needs of the LMFBR program, construction of such a reactor at this juncture is required.⁴⁷

As a result, the Commission limited the scope of the environmental review in the CRBR licensing proceeding to specific CRBR site and design issues related to implementation of

⁴⁴ See *United States Energy Research and Development Administration* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67 (1976).

⁴⁵ *Id.* at 72-73.

⁴⁶ *Id.* at 91-92.

⁴⁷ *Id.* at 84.

ERDA's overall plan for development of the LMFBR that had not been fully addressed by the EIS for the LMFBR program.⁴⁸

Two years after the *Clinch River* decision established the principle that the NRC should defer to decisions reached in another agency's programmatic EIS, the Council on Environmental Quality ("CEQ") implemented its NEPA regulations. One of the CEQ regulations refers to "tiering":

Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (Sec. 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available.⁴⁹

The NRC has incorporated the CEQ regulations on tiering into its own regulations (see 10 CFR Part 51, Appendix A.1.(b)), and courts have upheld the NRC's use of tiering in environmental analyses.⁵⁰

Both the Commission's decision in *Clinch River* and the concept of tiering demonstrate that the scope of this proceeding is limited to specific site and design issues involving the MOX Facility that were not fully addressed in DOE's programmatic or other related EISs. Thus, for example, since DOE has rendered decisions on the need for the MOX Facility and the location of

⁴⁸ *Id.*

⁴⁹ 40 CFR § 1502.20 (emphasis added). See also *Guidance Regarding NEPA Regulations*, 48 Fed. Reg. 34,263 (July 28, 1983) (clarifying intent of promulgating tiering regulation).

⁵⁰ See generally, *Kelley v. Selin*, 42 F.3d 1501, 1518-19 (6th Cir. 1995) (finding NRC's use of tiering "appropriate").

the MOX Facility in the F-Area at SRS, these issues are beyond the scope of this proceeding. Similarly, given DOE's assessment of the environmental impacts of the various related fuel cycle activities (other than the impacts of the MOX Facility itself), these issues as well are beyond the scope of this proceeding. There is no requirement under NEPA, and it would be contrary to administrative efficiency, for the NRC to reconsider DOE's determination of the environmental impacts of activities that are not being licensed in this proceeding.⁵¹

Therefore, the scope of NRC's environmental review in this proceeding is limited to the environmental impacts of construction and operation of the MOX Facility, and alternatives to mitigate those impacts.

- Contentions that attack programmatic decisions made by DOE, or that request the NRC to mitigate environmental impacts beyond the MOX Facility are not admissible in this proceeding because, even if proven, they would not entitle the petitioner to relief.

NRC has no jurisdiction over, and cannot change, the programmatic decisions made by DOE regarding the various disposal options for surplus weapons material. (Examples of such programmatic decisions include the decision to pursue MOX fuel fabrication as part of the program for dispositioning surplus weapons materials and the decision to site the MOX Facility at SRS.) Therefore, to the extent that a contention asks NRC to reconsider DOE's decisions, the contention seeks relief that the NRC cannot provide in this proceeding. Accordingly, such contentions must be dismissed under 10 CFR § 2.714(d)(2)(ii).

Similarly, while the NRC has the authority to order DCS to take action to mitigate the environmental impacts of the MOX Facility, it does not have the authority to order the entities

⁵¹ NRC's *Scoping Summary Report for Mixed Oxide Fuel Fabrication Facility, Savannah River Site* (August 2001) ("Scoping Summary Report"), Section 4.1, states that "Because the scope of the MOX FFF EIS is limited to the licensing action now under review by NRC, which is specific to the MOX FFF, issues pertaining to decisions already made by DOE will be addressed by referencing the appropriate DOE

responsible for the other SPD program-related activities to take action to mitigate the environmental impacts of their activities. Therefore, contentions that request the NRC to take action to mitigate such activities (such as mitigation of the impacts of transporting feed material to the MOX Facility) must be dismissed, because NRC cannot grant such relief in this proceeding.

- Contentions that pertain to activities that will be the subject of separate NRC licensing actions are not admissible in this proceeding.

The scope of this proceeding is limited to the construction authorization for the MOX Facility. Use of MOX fuel in a reactor and disposal of MOX fuel in a repository will be subject to separate NRC licensing proceedings. The NRC will be determining the environmental impacts of those activities in those separate licensing proceedings.⁵² Therefore, contentions that seek to litigate the environmental impacts of those activities in this proceeding are premature and outside the scope of this proceeding.⁵³

III. ANALYSIS OF GANE'S CONTENTIONS

GANE has submitted 13 proposed contentions. The first six are labeled as "safety" contentions, and the last seven are labeled as "environmental" contentions. DCS reproduces each of the contentions below and demonstrates that none of the contentions meets the requirements for admissibility in a hearing on the CAR.

analysis." Accordingly, only the proposed action—to license the MOX Facility in the F-Area at SRS—and No action Alternatives will be discussed. *See id.*, Section 3.0.

⁵² *See Scoping Summary Report*, Sections 4.3 and 4.5; 10 CFR § 60.21(a).

⁵³ *See, e.g., Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, NRC slip op. at 17 (October 6, 2000) (in the context of a license transfer proceeding, the Commission rejected a contention that requested the NRC to consider the cumulative impacts of other license transfers involving the same applicant, holding that "[s]uch an inquiry would go well beyond the scope of the proceeding").

A. Contention 1: Lack Of Consideration Of Safeguards In Facility Design

The DCS Construction Authorization Request (CAR) does not contain detailed information on MFFF design features relevant to the ability of DCS to implement material control and accounting (MC&A) measures capable of meeting or exceeding the regulatory requirements of 10 CFR Part 74, and there is no indication that MC&A considerations were taken into account in the MFFF design. As a result, the CAR does not provide a basis for NRC to "establish that the applicant's design basis for MC&A and related commitments will lead to an FNMCP (Fundamental Nuclear Material Control Plan) that will meet or exceed the regulatory acceptance criteria in Section 13.2.4 [of the MFFF Standard Review Plan (SRP)]," SRP at 13.2.5.2A. Failure to adequately consider MP&A [*sic*] issues during the MFFF design phase not only exhibits poor engineering practice but also greatly increases the probability that DCS will not be able to operate the MFFF in compliance with 10 CFR Part 74 without significant retrofitting (and may not be able to even with retrofitting), and thus that NRC ultimately will deny DCS a license to possess and use SNM at the MFFF. Consequently, Chapter 13.2 of the CAR in its current form is grossly inadequate and should be rejected.

This contention should be rejected because it pertains to a matter that is outside the scope of this proceeding. As discussed in Section II.J.2 above, the scope of this construction authorization proceeding is limited to whether "the design bases of the principal structures, systems, and components and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents."⁵⁴ The material control and accounting ("MC&A") program is relevant to the application for possession and use of SNM. As explained in the Commission's Hearing Notice, such issues will be addressed at a later hearing.⁵⁵ Section 13.2 of the CAR confirms that the MC&A program will be addressed during the license application stage.⁵⁶

⁵⁴ See 10 CFR § 70.23(b).

⁵⁵ See 66 *Fed. Reg.* at 19,995.

⁵⁶ DCS' approach is consistent with the Standard Review Plan for the MOX Facility (SRP) (NUREG-1718), Section 13.2.5.1.A, which states that the applicant should address the MC&A program "at the level of

GANE attempts to avoid this conclusion by arguing that DCS *should* be required to describe the design bases for MC&A SSCs at this stage. However, at the CAR stage, DCS is not required to describe the design basis of all SSCs. Instead, it is only required to describe the design basis of those SSCs needed to “provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.”⁵⁷ By their very nature, the design functions needed for MC&A are not intended to protect against natural phenomena and or accidents; rather, they prevent the loss of special nuclear material. Therefore, since the MC&A function of SSCs does not come within the scope of 10 CFR § 70.23(b), there is no requirement to describe the design basis for those functions at the CAR stage. Accordingly, Section 13.2 of the CAR is not deficient.

GANE argues that the failure to describe the design basis of MC&A SSCs at the CAR stage will greatly increase the probability that DCS will not be able to operate the MFFF in compliance with 10 CFR Part 74.⁵⁸ This presents no genuine issue of material fact or law. If DCS cannot demonstrate compliance with Part 74 at the license application stage, it will not be able to obtain a license for the MOX Facility. In other words, DCS bears the risk that it may not be able to construct MC&A SSCs in compliance with NRC requirements. As the Supreme Court has stated in the context of the two-step licensing process for reactors:

The respondents’ argument is tantamount to an insistence that the Commission cannot be counted on, when the time comes to make a definitive safety finding, wholly to exclude the consideration that PRDC [the applicant] will have made an enormous investment. The petitioners concede that the Commission is absolutely denied any authority to consider this investment when acting upon an application for a license for operation. PRDC has been on notice

commitments and program goals.” Section 13.2 of the CAR contains such commitments for the performance objectives for MC&A.

⁵⁷ 10 CFR § 70.23(b).

⁵⁸ GANE Contentions at 2-3.

long since that it proceeds with construction at its own risk, and that all its funds may go for naught. With its eyes open, PRDC has willingly accepted that risk, however great.⁵⁹

This reasoning applies equally in this case.

Accordingly, since Contention 1 raises a matter that is outside the scope of the CAR proceeding, it should not be admitted.

B. Contention 2: Lack Of Consideration Of Physical Protection In Facility Design

The DCS Construction Authorization Request (CAR) does not contain detailed information on MFFF design features relevant to the ability of DCS to implement physical protection measures capable of meeting or exceeding the regulatory requirements of 10 CFR Part 73, and there is no indication that physical protection considerations were taken into account in the MFFF design. As a result, the CAR does not provide a basis for NRC to "establish that the applicant's proposed design, location, construction technique and material for elements of the physical protection system and related commitments will lead to a physical protection plan that will meet or exceed the regulatory acceptance criteria in Section 13.1.4 [of the MFFF Standard Review Plan (SRP)]." SRP, § 13.1.5.2A.

Failure to adequately consider physical protection issues during the MFFF design phase not only exhibits poor engineering practice but also greatly increases the probability that DCS will not be able to operate the MFFF in compliance with 10 CFR Part 73 without significant retrofitting (and may not be able to even with retrofitting), and thus that NRC ultimately will deny DCS a license to possess and use SNM at the MFFF. Consequently, Chapter 13.1 of the CAR in its current form is grossly inadequate and should be rejected.

Contention 2 also should be rejected because it pertains to a matter that is outside the scope of this proceeding. As discussed in Section II.J.2 above, the scope of this proceeding is limited to whether "the design bases of the principal structures, systems, and components and the

⁵⁹ *Power Reactor Development Co. v. International Union of Electrical, Radio and Machine Workers*, 367 U.S. 396, 414-15 (1961).

quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.”⁶⁰ The physical security plan is relevant to the application for possession and use of SNM. As explained in the Commission’s Hearing Notice, such issues will be addressed at a later hearing.⁶¹ As discussed in Section 13.1 of the CAR, this plan will be provided at the license application stage.⁶²

Once again, GANE attempts to avoid this conclusion by arguing that DCS *should* be required to describe the design bases for security-related SSCs at this stage. However, at the CAR stage, DCS is not required to describe the design bases of all SSCs. Instead, it is only required to describe the design basis of those SSCs needed to “provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.”⁶³ By their very nature, the design functions needed for physical security are intended to prevent sabotage or the theft of special nuclear material, not to protect against natural phenomena or accidents. Therefore, since the security function of SSCs does not come within the scope of 10 CFR § 70.23(b), there is no requirement to describe the design basis for those functions at the CAR stage. Accordingly, Section 13.1 of the CAR is not deficient.

Therefore, Contention 2 is outside the scope of this proceeding and should not be admitted.

⁶⁰ See 10 CFR § 70.23(b).

⁶¹ See 66 *Fed. Reg.* at 19,995.

⁶² DCS’ approach is consistent with the SRP (NUREG-1718), Section 13.1.5.1.A, which states that the “applicant is not expected to submit a physical protection plan for construction approval, [but] should commit to developing and implementing a physical protection system that meets or exceeds” applicable acceptance criteria. Section 13.1 of the CAR contains such a commitment.

⁶³ 10 CFR § 70.23(b).

C. Contention 3. Inadequate Seismic Design

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

Section 1.3.6.6 of the CAR defines the design earthquake for the MOX Facility based upon conservative design criteria. Essentially all of the information cited by GANE in support of this contention pertains to individual seismic events and other details related to the geology and seismology of the region. Even if GANE's allegation are accepted as true, GANE has provided no basis for believing that the information it cites would result in any changes in the design earthquake for the MOX Facility. Therefore, Contention 3 should be rejected because it does not identify a genuine dispute on a material issue of fact or law as required by 10 CFR § 2.714(b). Each of the bases for GANE's contention is discussed below.

1. *Talwani and Schaefer ("T&S") Study*

First, GANE states that the T&S study, issued after filing of the CAR, "indicates ... that the frequency of major events is higher in the South Carolina Coastal Plain than previously thought, and that major events need not be limited to the Charleston seismic zone." In support, GANE states that the T&S study looked at seismic data in the region and identified two possible scenarios for interpreting this data: 1) a magnitude seven earthquake at Charleston with a 600 year recurrence interval, or 2) a magnitude six earthquake near Bluffton, South Carolina, about 100 miles for the SRS. As a result, GANE concludes that major events may have occurred much closer to SRS than the Charleston Seismic Zone.⁶⁴

⁶⁴ GANE's Contentions at 14-15.

GANE's reference to the T&S study does not raise any genuine issue of material fact. The CAR addresses an earthquake of magnitude 6.9 at Charleston (which occurred less than 100 miles from SRS).⁶⁵ Thus, regardless of which scenario in the T&S study is accepted (i.e., a magnitude 7 event at Charleston or a magnitude six event within 100 miles of SRS at Bluffton), the scenario is bounded by the events considered by DCS and therefore does not raise a genuine issue of material fact.

2. *Alleged Lack of References*

GANE next alleges that "it is impossible to evaluate the accuracy of" Section 1.3.6.2 of the CAR because of the "report's lack of references" or because it references Westinghouse SRS documents that are not publicly available.⁶⁶

Page 1.3.1-1 of the CAR states that WSRC-TR-2000-00454, *Natural Phenomena Hazards Design Criteria and Other Characterization Information for the Mixed Oxide (MOX) Fuel Fabrication Facility at Savannah River Site (U)* is the source for most of the information contained in Section 1.3 of the CAR. Additionally, Section 1.3.8 provides other references for seismic information in the CAR. Thus, contrary to the GANE's allegation, the CAR does contain references for the information provided therein.

In any event, even if GANE's allegations were assumed to be true, they would not be sufficient to admit this contention. As discussed in Section II.B above, the petitioner has the burden of providing an adequate basis for its contentions and establishing that there is a genuine issue of material fact. GANE's claim that it is unable to evaluate whether the statements in the application are accurate obviously does not satisfy its burden of establishing a genuine issue of material fact.

⁶⁵ See Table 1.3.6-1 of the CAR.

3. *August 2, 1974 Event and GANE's Table of Seismic Events*

Next, GANE states that the United States Geological Survey ("USGS") has identified a larger magnitude for a seismic event on August 2, 1974 than reported in the CAR, and it provides a table that identifies other seismic events since 1974 within 200 miles of the SRS with a magnitude greater than 3.0 that allegedly were "omitted" from the CAR.

With respect to the event on August 2, 1974, GANE alleges that the event had a magnitude of 4.9, whereas the CAR reports that it had a magnitude of 4.3. As indicated on Table 1.3.6-1 of the CAR, there are different methods for calculating the magnitude of a seismic event, and the magnitude of an event can vary depending upon the method selected. GANE has not identified which method was used in its reference, and therefore has not provided a sufficient basis for contesting the magnitude reported in the CAR. However, even if GANE's value were accepted, it would not raise a genuine issue of material fact. The value cited by GANE is bounded by the magnitude of the Charleston earthquake as provided in Table 1.3.6-1 of the CAR. Therefore, even if GANE's allegation is accepted, it would not affect the design earthquake for the MOX Facility.

GANE identifies 10 seismic events allegedly omitted from the CAR. Three of those events are in fact included in CAR Table 1.3.6-1.⁶⁷ Four of the events cited by GANE occurred after the 1993 cutoff date for Table 1.3.6-1 data. The remaining three events range in magnitude from 3.0 to 3.7 and add nothing of any significance to the data in the CAR table, which includes over 250 seismic events - - several with magnitudes in excess of 3.7. Thus, data in the CAR table bounds the data introduced by GANE.

⁶⁶ GANE Contentions at 15.

⁶⁷ Those events are dated 1974/10/28; 1974/11/05; and 1988/01/23.

In summary, the fact that GANE has been able to identify a few seismic events not included in the lengthy listing of such events in the CAR (or that two databases provide somewhat differing values for a particular event) does not raise a genuine issue of material fact.

4. *Potential for Shaking or Liquefaction*

GANE states that DCS has not evaluated the potential for intense shaking or soil liquefaction at the MOX Facility site in particular, but instead relies upon site response studies performed for the SRS.⁶⁸

This statement does not accurately characterize the CAR. Investigations have in fact been performed at the MOX Facility site in F-Area of the SRS. As shown in Section 1.3.5.2 and Figure 1.3.5-22 of the CAR, 13 exploration borings and 63 cone penetrometer tests (“CPT”) were taken in calendar year 2000 to define site-specific subsurface conditions at the MOX Facility site (referred to as the MFFF site in the following quotation). CAR Section 1.3.5.2 CAR goes on to state:

The exploration borings and CPT holes indicate that subsurface conditions encountered at the MFFF site are consistent with all previous investigations performed at SRS in F Area, at and near the site. No unusual subsurface geological or groundwater hydrologic conditions were encountered.

...

A comprehensive laboratory testing program has been conducted to establish both static and dynamic design parameters for use in analysis. Preliminary laboratory results also indicate that the subsurface geologic units and soil parameters at the MFFF site are consistent with those identified in previous investigations in F Area. The same geologic units described for SRS and F Area are found at the MFFF site.

⁶⁸ GANE Contentions at 16-17.

As described above, DCS undertook site-specific investigations of the MOX Facility site and determined through those investigations that the SRS site-wide seismic criteria apply to the MOX Facility site. Thus, contrary to GANE's claims, the MOX Facility site has been investigated, and the results of those investigations are consistent with the results of previous investigations of SRS. Again, GANE has not raised a genuine issue of material fact.

5. *Probabilistic Seismic Hazard Assessment*

Fifth, GANE states that the probabilistic seismic hazard assessment ("PSHA") for the MOX Facility is incomplete. GANE's only basis for this claim is a reference to an RAI issued by the NRC Staff.⁶⁹

As discussed in Section II.G above, a contention cannot be based simply upon the issuance of an RAI. GANE has failed to identify any genuine issue of material fact or law. Furthermore, as discussed in DCS' responses to CAR RAIs 13 and 14, detailed site investigations were performed to demonstrate the applicability of the SRS PSHA to the MOX Facility site. Therefore, the contention should not be admitted.

6. *Site-Specific Design Spectrum*

GANE states that, contrary to an NRC Standard Review Plan applicable to nuclear power plant license applications, DCS has not developed a "site-specific" spectrum of seismic events, but has instead relied upon a spectrum developed in 1997 for the entire SRS.⁷⁰ There is obviously no requirement for DCS to comply with the terms of an NRC Staff guidance document prepared for nuclear power plant license applications. Furthermore, as described above, DCS' site-specific studies have demonstrated the applicability of the SRS site-wide seismic criteria to

⁶⁹ GANE Contentions at 17.

⁷⁰ GANE Contentions at 17.

the MOX Facility site. GANE therefore has failed to identify a genuine issue of material fact or law.

7. *Return Intervals*

Finally, GANE states that the CAR estimates a return period of 2700 years for a 0.375g event at 5 hz, whereas the USGS estimates a return period of 1200 years for the same event.⁷¹ However, even if GANE's allegations are accepted as true, GANE has provided no basis for questioning the design earthquake for the MOX Facility.

As shown in Table 1.3.6-7 of the CAR, the values cited by GANE are associated with the PC-3 spectrum for the SRS. However, DCS is not using the PC-3 spectrum as the design earthquake for the MOX Facility. Instead, as discussed in Section 1.3.6.6 and Table 1.3.6-7 of the CAR, the design earthquake for the MOX Facility is based upon a scaling of the PC-3 earthquake (which has peak ground acceleration of a 0.16g) up to the spectrum of Regulatory Guide 1.60 with a peak ground acceleration of 0.20g. As a result, as discussed in Section 1.3.6.6 of the CAR, the design earthquake for the MOX Facility is therefore more conservative than the PC-3 spectrum, and has a return interval of 10,000 years for frequencies of practical, structural interest. GANE has not questioned the design earthquake or its return interval for the MOX Facility. Therefore, its allegations do not raise a genuine issue of material fact.

In summary, GANE has not provided any basis for believing that any of the information it cites, even if true, is material to the design earthquake for the MOX Facility or would lead to a different result. Therefore, Contention 3 should be dismissed because it does not raise a genuine issue of material fact as required by 10 CFR § 2.714(b)(2).

⁷¹ GANE Contentions at 17-18.

D. Contention 4. Inadequate Licensing Review by NRC Staff.

The NRC lacks recent, relevant experience necessary to regulate plutonium fuel processing activities and effectively protect the public and environment from harm thereby.

Contention 4 raises an issue that is not litigable in an NRC licensing proceeding. In general, contentions pertaining to the adequacy of the review by the NRC staff are not admissible. As the Commission has stated, a contention will not be admitted if the allegation pertains to the performance of the NRC staff.⁷² Similarly, the Appeal Board has held that a contention that pertains to the adequacy of the staff's activities is not litigable.⁷³ Furthermore, as the Commission recently held, general attacks on the NRC's competence do not raise admissible issues.⁷⁴ Therefore, this contention raises a matter that is outside the scope of this proceeding, and therefore should be dismissed.

Finally, in the 1999 Defense Authorization Act, Congress specifically established the NRC as the licensing authority for the MOX Facility.⁷⁵ To the extent that this contention challenges that decision, it is an impermissible attack on the statute.

Since Contention 4 raises a matter that is not litigable and is not within the scope of this proceeding, it should not be admitted.

⁷² 54 *Fed. Reg.* at 33,171.

⁷³ *Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 55-56 (1985).

⁷⁴ See *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, NRC slip op. at 8 (Oct. 6, 2000).

E. Contention 5. Incorrect Designation of Controlled Area.

DCS incorrectly designates the entire Savannah River Site as the controlled area of the MOX Facility. The proposed controlled area does not satisfy the NRC's requirement that a controlled area "means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason," because DCS does not have control over the entire Savannah River Site. As a result of this improper controlled area designation, DOE improperly characterizes members of the public as MOX Facility workers for purposes of calculating radiological doses to the public during normal operations and accidents. DCS's incorrect assumption about the appropriate controlled area boundary also adversely affects the adequacy of its physical security measures. As a result, the design basis of the MOX facility is not adequate to support approval of construction. Another result is that the Environmental Report incorrectly minimizes the environmental impacts of the MOX Facility on the public, by defining the public in an overly narrow way. *See* Contention 8, *infra*.

Contention 5 is based upon an incorrect legal interpretation of "controlled area," and therefore should be rejected as inconsistent with the Commission's regulations.

The contention alleges that DCS has incorrectly designated the controlled area boundary, in part because "DCS does not have control over the entire Savannah River Site." In support of its contention, GANE cites 10 CFR § 20.1003, which states that the controlled area is one in which access "can be limited by the licensee"

As explained in CAR Section 1.1.2.1, the MOX Facility controlled area will be controlled by DCS through an Agreement, or "protocol," with the DOE that will, among other things, provide for limitation of site access in the event of an emergency. GANE has pointed to no provision prohibiting DCS from exercising control through a protocol with DOE. DCS'

⁷⁵ See Pub. L 105-261 § 3134 (amending § 62 of the Energy Reorganization Act).

approach of including DOE facilities within the controlled area boundary was specifically sanctioned by the NRC in promulgating the final amendments to 10 CFR Part 70 in 2000.⁷⁶

Furthermore, the NRC has already accepted such an arrangement with respect to the Gaseous Diffusion Plants (“GDPs”). The GDPs are operated by the United States Enrichment Corporation (“USEC”), but are located on DOE sites with activities and workers not regulated by the NRC. The Controlled Area at the GDPs is coincident with the boundary of the DOE reservations, and doses to the public for the GDPs are calculated at the boundary of the DOE reservations, not at the boundary of the GDPs operated by USEC.⁷⁷

GANE claims that, “[a]s a result of this improper controlled area designation, DOE [*sic*] improperly characterizes members of the public as MOX Facility workers” As discussed above, the controlled area has been properly designated. Furthermore, DCS does not intend to classify members of the public as “workers.”

GANE also references an RAI from the NRC staff, which states that SRS workers should be considered as members of the public. It is important to understand the distinction in the treatment of SRS workers. For purposes of determining *accident* doses, DCS intends to treat SRS workers who engage in activities within the MOX Facility controlled area as workers in accordance with 10 CFR § 70.61(f)(2). With respect to doses to SRS workers resulting from *normal operations*, DCS has committed to control non-occupational exposures to SRS workers outside the more narrowly-defined MOX Facility “restricted area” to below the 100 mrem/yr

⁷⁶ See Domestic Licensing of SNM; Possession of a Critical Mass of SNM, 65 *Fed. Reg.* 56,211, 56,212 (September 18, 2000) (“The licensee can set the controlled area at any location around its facility as long as it maintains control of that area as specified in Part 20 and retains the authority to exclude or remove personnel and property from the area. If the controlled area included the nearby Department of Energy (DOE) facilities, then NRC would consider the personnel working at those facilities to be “workers” for the purposes of the performance requirements of Sec. 70.61, provided the conditions of Sec. 70.61(f)(2) are met”).

⁷⁷ See Safety Analysis Reports (SAR) for Portsmouth and Paducah GDPs § 2.1.2.5, and Figures 2.1-5 and 2.1-6.

dose limits set forth in Part 20.⁷⁸ As a result, doses during normal operation to members of the public who are within the SRS but outside the restricted area for the MOX Facility will also comply with the dose limits in Part 20 that are applicable to the public. Therefore, with respect to normal operation, GANE's contention is moot.

Finally, GANE argues that DCS' designation of the controlled area "affects the adequacy of its physical security measures . . . and "incorrectly minimizes . . . environmental impacts on the public" ⁷⁹ As discussed above, DCS' definition of the controlled area is proper. Furthermore, as discussed with respect to Contention 2, the adequacy of DCS' physical security measures is beyond the scope of this proceeding, and GANE has not provided any explanation of how physical security may be adversely affected by DCS' proposed controlled area boundary.

For all of these reasons, Contention 5 should not be admitted.

F. Contention 6. Inadequate Safety Analysis

The Safety Analysis (SA) submitted as part of the DCS Construction Authorization Request (CAR) is seriously flawed and provides neither a comprehensive assessment of all potential accident consequences nor a credible assessment of all potential accident likelihoods. The SA does not provide information of sufficient detail and quality to enable the NRC to make a determination pursuant to 10 CFR §70.23(b) that "the design bases of the principal structures, systems and components [of the MFFF] ... provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents."

In particular, the SA fails to correctly identify and carry out consequence assessments for accident scenarios with "bounding" consequences. The applicant's failure to identify the actual bounding accident scenarios implies that it has underestimated the consequences of these scenarios, and hence may not have applied engineered and/or administrative controls to the extent necessary to meet the performance requirements established in 10 CFR §70.61 and the defense-in-depth requirements of 10 CFR §70.64(b). In

⁷⁸ See CAR RAI Response 1.

⁷⁹ GANE Contentions at 19-20.

addition, the SA incorrectly considers the controlled area boundary of the MFFF to be coincident with the SRS site boundary when evaluating accident impacts to the public, which leads to projected doses to the public considerably below the correct values. Hence, the CAR SA fails to demonstrate that the MFFF as designed is likely to be in compliance with 10 CFR Part 70. NRC should therefore deny authorization of MFFF construction based on this document.

GANE provides several bases for this contention. As discussed below, none of the bases is sufficient to support admission of this contention.

First, GANE states that the NRC Staff has posed numerous RAIs related to the ER and CAR safety assessments.⁸⁰ As discussed in Section II.G above, RAIs by themselves are not a sufficient basis for a contention.

Second, GANE alleges that “the CAR does not analyze a bounding case with respect to the source term” for a fire involving the PuO₂ buffer storage unit.⁸¹ In particular, GANE states that the CAR should have provided “considerably more detailed justification” regarding its assumptions, that “examination” of DCS’ assumptions is warranted, and that it is “unclear” to GANE whether DCS’ references are relevant.⁸² However, GANE has not provided any facts, expert opinions, or other documentation that actually call into question the acceptability of DCS’ analyses, or that would lead to a different result. To be admissible, a contention must do more than ask for further evaluation of the applicant’s analysis; it must provide a basis for contesting that analysis.⁸³ Since GANE has not done so in this case, this part of Contention 6 should be rejected.

⁸⁰ GANE Contentions at 23.

⁸¹ *Id.*

⁸² *Id.* at 24.

⁸³ *Florida Power & Light Co.*, CL1-01-17, NRC slip op. at 22 (July 19, 2001).

GANE also alleges that the CAR does not provide an adequate evaluation of a hydrogen explosion in a sintering furnace.⁸⁴ In particular, GANE questions DCS' assumption that two banks of HEPA filters will continue to operate during such an event and will provide a leak path factor of 10^{-4} .

Initially, it should be noted that the safety assessment in the CAR does not rely upon the HEPA filters for the purpose of demonstrating compliance with the requirements of 10 CFR § 70.61. The CAR designates the Process Safety Instrumentation and Control ("I&C") System as the principal SSC for a hydrogen explosion, and DCS is relying upon this system to prevent hydrogen explosions from occurring (*i.e.*, to render the possibility "highly unlikely" and thus acceptable under 10 CFR § 70.61(b)).⁸⁵ Although the I&C System will preclude hydrogen explosions and satisfy Section 70.61, Section 5.5.3.5 of the CAR nevertheless conservatively postulates a "general hypothetical explosion." Under this highly unlikely scenario, DCS considered the protection provided by the HEPA filters as a defense-in-depth feature and beyond what is required to satisfy 10 CFR § 70.61.⁸⁶ Although the HEPA filters are not needed for compliance with 10 CFR § 70.61, DCS has conservatively classified them as principal SSCs because they are used to provide defense-in-depth.⁸⁷

The HEPA filters for the MOX Facility will have an efficiency of 99.95%.⁸⁸ Nevertheless, based upon the assumptions in NUREG/CR-6410, DCS conservatively assumed

⁸⁴ GANE Contentions at 24.

⁸⁵ Table 5.5-19 and Section 5.5.2.4.6.1.

⁸⁶ See Letter from Peter S. Hastings to NRC, Response to CAR RAI 60 (August 31, 2001).

⁸⁷ CAR Section 5.5.5.2.

⁸⁸ CAR Section 11.4.9.1.

that during a hydrogen explosion event, the efficiency of each HEPA filter would be 99% (which provides a leak path factor of 10^{-4} for two filters in series).⁸⁹

GANE provides two bases for its allegation that the HEPA filters would not be able to achieve this efficiency during a hydrogen explosion. First, GANE refers to an RAI from the NRC staff. However, as discussed in Section II.G above, an RAI is not a sufficient basis for a contention. Second, GANE refers to a paper that says that there are large gaps and limitations in data that introduce significant error in HEPA filter efficiencies under design basis accident conditions, and therefore that conservative values of filter efficiency should be used. However, this statement does not raise a genuine issue of material fact - - DCS in fact has used conservative values for HEPA filter efficiencies during events involving hydrogen explosions by assuming that the efficiency of the filters is reduced from 99.95% to 99% (i.e., reduction in efficiency by a factor of 20). GANE has provided no basis for questioning this value.

GANE also questions whether reliance upon the I&C System is sufficient to satisfy the defense-in-depth principle.⁹⁰ As discussed in Section 11.6.7 of the CAR, the design basis for I&C systems that are principal SSCs “is based on defense-in-depth practices.” In this regard, the design includes “redundant and/or diverse instrument channel with coincident logic providing automatic actuation with additional manual operation capability as necessary.”⁹¹ Additionally, the design includes features to ensure that there is “[n]o credible single failure vulnerability.”⁹² GANE has not cited this section of the CAR, nor contested any of the statements in it. Therefore, GANE has not provided an adequate basis for questioning the defense-in-depth

⁸⁹ CAR Section 5.5.3.5, as amended by DCS Response to CAR RAI 59.

⁹⁰ GANE Contentions at 26.

⁹¹ CAR Section 11.6.7.

⁹² *Id.*

provided by the I&C System. Furthermore, as discussed above, HEPA filters provide an additional layer of defense-in-depth protection.

For all of the above reasons, GANE has not provided a sufficient basis for Contention 6. Accordingly, this contention should be rejected.

G. Contention 7: ER Inadequate to Address the Environmental Impacts of Using MOX Fuel in the Catawba and McGuire Reactors

The ER is deficient because it does not provide an adequate analysis of the impacts of irradiating MOX fuel in the Catawba and McGuire reactors.

The basis for Contention 7 is GANE's assertion that DOE's SPD EIS did not adequately address "significant new information" regarding the ice condenser containments at the McGuire and Catawba nuclear power plants. DCS' ER is alleged to be deficient simply because it cross-references the SPD EIS.

This contention addresses a matter that is outside the scope of this proceeding and therefore should be rejected. As discussed in Section II.J.3 above, the scope of this proceeding is limited to the MOX Facility. Furthermore, there will be separate proceedings to license use of MOX fuel in Catawba and McGuire. The proceeding on the MOX Facility license is not the appropriate forum to litigate the alleged unreliability of ice condenser containments.

GANE attempts to avoid this conclusion by pointing out that the ER for the MOX Facility discusses use of MOX fuel in Catawba and McGuire. However, as is indicated in the contention itself, the ER simply provides a summary of the information in DOE's prior EISs. Thus, Contention 7 essentially represents an attack upon the assessments by DOE.

As discussed in Section II.J.3 above, given the fact that DOE has issued programmatic EISs that address the environmental impacts of the MOX fuel cycle (including the impacts from using MOX fuel in reactors), NRC is not required (and should not) conduct its own assessment

of such impacts in this proceeding. Instead, as provided in the Commission's *Clinch River* decision, NRC should incorporate the determinations made in the DOE EISs.⁹³ Accordingly, this contention should not be admitted.

H. Contention 8. Impacts Minimized Through Incorrect Designation of Controlled Area.

As discussed above in Contention 5, DCS incorrectly designates the entire Savannah River Site as the controlled area of the MOX Facility. The proposed controlled area does not satisfy the NRC's requirement that a controlled area "means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason," because DCS does not have control over the entire Savannah River Site. As a result of this improper controlled area designation, DOE improperly characterizes members of the public as MOX Facility workers for purposes of calculating radiological doses to the public during normal operations and accidents. Therefore, the Environmental Report incorrectly minimizes the environmental impacts of the MOX Facility on the public, by defining the public in an overly narrow way.

Contention 8 is essentially a repeat of Contention 5, designated as an "environmental" contention rather than a "safety" contention. For the reasons discussed in our response to Contention 5, Contention 8 also should not be admitted.

I. Contention 9. Inadequate Cost Comparison

The Environmental Report does not provide any discussion of the costs of the proposed MOX Facility, or make a comparison to the costs of other alternatives.

This contention is an impermissible challenge to NRC regulations and does not raise a material issue of law or fact within the scope of this proceeding.

As one of its bases, GANE (incorrectly) states that 10 CFR § 51.45(c) "requires" an analysis of the economic costs and benefits of the proposed MOX Facility and alternatives.

⁹³ See *United States Energy Research and Development Administration*, CLI-76-13, 4 NRC at 67.

There is no requirement that an ER include an analysis of the economic costs and benefits of the proposed action. 10 CFR § 51.45(c) requires that an ER include “an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects.” Section 51.45(c) also states that an ER “should . . . include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives.” Nothing in this language requires an economic cost/benefit analysis in the ER.

GANE also states that recent cost information for the MOX Facility and alternatives supercedes the DOE’s SPD EIS. For example, GANE alleges that costs to immobilize plutonium have “stayed flat” while costs for MOX fuel fabrication have risen.⁹⁴ However, DOE policy decisions are not within the scope of this proceeding. DOE has already performed a cost-benefit analysis and a consideration of alternatives to the MOX Facility as part of its programmatic EIS.⁹⁵ GANE is attempting to use the NRC as a forum to challenge DOE’s policy decisions. A re-examination of the cost/benefit of MOX fuel fabrication compared with immobilization is not within the scope of this proceeding. As discussed in Section II.J.3 above, such a re-examination challenges a policy decision solely within the jurisdiction of the DOE.

For these reasons, Contention 9 should not be admitted.

J. Contention 10. Inadequate Discussion of Transportation Impacts.

The transportation of plutonium pits and plutonium oxides to Savannah River Site threatens life and health along every transportation corridor, including the State of Georgia which provides the most likely entranceway to South Carolina from the western states from which the plutonium shipments are expected to originate. Inadequate analysis of environmental impacts resulting from transportation has been performed in the 1999 Special

⁹⁴ GANE Contentions at 31.

⁹⁵ See SPD EIS Record of Decision (ROD), p.21-22.

Plutonium Disposition Environmental Impact Statement of the U.S. Department of Energy. This inadequacy has not been remedied by Duke Cogema Stone & Webster's Environmental Report at Section 1.2.6 which declares it "[r]elies on SPD EIS (DOE 1999)."

NEPA requires that all foreseeable impacts be analyzed. This licensing process should not be allowed to proceed until this substantial defect is cured.

Contention 10 raises a matter that is outside the scope of this proceeding and on which NRC cannot grant relief. Shipments of plutonium to the SRS are under the control of DOE and, therefore, neither NRC nor DCS have responsibility for such shipments.⁹⁶

Transportation of plutonium to SRS is discussed in DOE's programmatic EISs.⁹⁷ In fact, essentially all of GANE's basis for Contention 10 consists of comments submitted on DOE's draft EISs on this subject by a Georgia State agency official. As discussed in Section II.J.3 above, given the fact that DOE has issued programmatic EISs addressing the environmental impacts of the MOX fuel cycle (including the impacts from transportation of plutonium to the SRS), NRC is not required (and should not) conduct its own assessment of such impacts. Instead, as provided in the Commission's *Clinch River* decision, NRC should incorporate the determinations made in the DOE EISs.⁹⁸

Therefore, Contention 10 should not be admitted.

K. Contention 11. ER Fails to Address the Waste Stream from Aqueous Polishing.

ER understates the impacts of the waste stream from aqueous polishing to remove gallium, doesn't acknowledge problems with the same process in Europe, adds to burden of radioactive waste at SRS without designing a plan for managing the waste as required under NEPA.

⁹⁶ See, e.g., SPD EIS Sections 2.4.4, L.3.1.5, and L.3.2.

⁹⁷ See, e.g., SPD EIS, Sections 2.4.4, 4.4.2.6, and Appendix L.

⁹⁸ *United States Energy Research and Development Administration*, CLI-76-13, 4 NRC at 67.

GANE first asserts that it cannot verify that DCS has based its processes on similar processes at MELOX and La Hague because “Cogema’s French operations are secret and unavailable to the public.”⁹⁹ The fact that certain aspects of the French operations may not be publicly available does not raise a valid contention. As discussed in Section II.B above, the petitioner has the burden of providing an adequate basis for its contentions and establishing that there is a genuine issue of material fact. A claim that the petitioner is unable to do so obviously does not satisfy its burden.

Second, GANE argues that Cogema’s record at MELOX and La Hague “must be made available ...” However, DCS is the applicant in this proceeding, not Cogema. DCS has not relied upon Cogema’s expertise or performance record as a basis for demonstrating the qualifications of DCS personnel. Therefore, Cogema’s record of performance in France is irrelevant. As the Commission has recently held, contentions regarding the experience or performance of a parent company of an applicant are not admissible, if the applicant does not rely on the technical personnel from the parent company to run the plant.¹⁰⁰

Third, GANE states that neither DCS nor NRC has proposed a plan to accommodate wastes from the aqueous process, such as wastes contaminated with americium.¹⁰¹ This statement does not accurately reflect the record. As stated in the Section 5.2.12 of the ER, wastes from the aqueous polishing process (high alpha liquid waste) will be transferred to the SRS F-Area Tank Farm, under DOE’s jurisdiction; neither DCS nor NRC has responsibility or jurisdiction over the aqueous wastes once they leave the MOX Facility.

⁹⁹ GANE Contentions at 41. -

¹⁰⁰ *Vermont Yankee Nuclear Power Corp.*, CLI-00-20, NRC slip op. at 11 (Oct. 2000); *see also* Staff Answer at 35.

¹⁰¹ GANE Contentions at 42.

The environmental impacts associated with the SRS High Level Waste (HLW) system, including the F-Area Tank Farm, are described in *SRS Waste Management Final EIS* (DOE-EIS-0217).¹⁰² That EIS analyzed management and treatment of the approximately 35 million gallons of existing HLW, as well as additional quantities under various scenarios up to an additional 7.1 million gallons (EIS Section 2.4.2). With the MOX Facility expected to generate less than 100,000 gallons per year of high alpha liquid waste for 20 years, the environmental impacts of treating the MOX Facility high alpha waste are bounded by existing analyses.¹⁰³

Fourth, GANE claims that use of DOE's waste tanks represents "an egregious breach of trust between DOE and the population of South Carolina and Georgia."¹⁰⁴ This claim does not allege any deficiency or inadequacy in the ER for the MOX Facility. To the extent that GANE may be claiming that DOE should not be storing liquid waste in tanks, NRC has no jurisdiction over DOE and cannot compel DOE to close those tanks. Thus, this part of the contention, even if true, would not entitle GANE to any relief in this proceeding. Therefore, this part of the contention is not admissible in accordance with 10 CFR § 2.714(d)(2)(ii).

Finally, GANE cites comments, provided by the State of Georgia during the NRC's EIS scoping process for the MOX Facility, criticizing the ER for discussing the waste stream in terms of mass rather than curies. However, the State of Georgia did not take any issue with the figure actually provided in the ER. Therefore, this part of the contention does not identify any genuine

¹⁰² The operation of the SRS F-Area Tank Farm was encompassed within several prior DOE EISs. *Final Environmental Impact Statement, Waste Management Operations* (ERDA-1537) (September 1977); *Double-Shell Tanks for Defense High-Level Radioactive Wastes Storage, Final Environmental Impact Statement* (DOE/EIS-0062) (April 1980) (Supplement to ERDA-1537); *Savannah River Site Waste Management Final Environmental Impact Statement* (DOE/EIS-0217) (1995).

¹⁰³ Mixed Oxide Fuel Fabrication Facility Environmental Report, Section 5.2.12 and Table 5-12.

¹⁰⁴ GANE Contentions at 43.

issue of material fact, and consequently does not provide an adequate basis for a contention under 10 CFR § 2.714(b)(2).

For the reasons discussed above, GANE has not provided an adequate basis for Contention 11. Accordingly, Contention 11 should be not be admitted.

L. Contention 12. SPD EIS and ER are deficient in their failure to analyze malevolent acts of terrorism and insider sabotage.

GANE contends that a license must not be given for construction and subsequently for operation of a plutonium fuel factory at the Savannah River Site which is situated on the border of Georgia on the Savannah River because it is vulnerable to malevolent acts such as terrorism and insider sabotage which could create an unacceptable beyond design basis accident. DOE did not analyze terrorism or insider sabotage in its Special *[sic]* Plutonium Disposition Environmental Impact Statement published in 1999. Neither did DCS in its 2000 Environmental Report which, while dismissing out-of-hand as inconsequential many credible scenarios, did not even acknowledge the real possibility of terrorism and insider sabotage (see Section 5.5 of the Mixed Oxide Fuel Fabrical *[sic]* Facility Environmental Report). This deficiency may be terminal to this licensing effort. In any event, malevolent acts must be analyzed as a foreseeable environmental impact under NEPA. Lack of analysis of the malevolent acts scenario leads to failure to design safeguards and failure to plan for emergency response and mitigation measures.

Contention 12 should be dismissed because it raises a matter that need not be considered under NEPA. NRC's regulations are designed to ensure that licensees protect against terrorism and sabotage. In particular, 10 CFR Part 73 requires applicants such as DCS to establish security and safeguards plans to protect against acts of terrorism and sabotage.¹⁰⁵ Additionally, Part 26 requires applicants such as DCS to establish fitness-for-duty programs to ensure that personnel with access to the facility perform their duties in a trustworthy manner.¹⁰⁶

¹⁰⁵ See generally Introduction to Appendix C to Part 73, as referenced in 10 CFR § 72.22(g)(2).

¹⁰⁶ See generally 10 CFR § 26.10.

NEPA does not require an assessment of the environmental impacts of terrorism.¹⁰⁷

Also, the consequences of sabotage and terrorism are similar to the consequences of other types of accidents that are addressed in environmental reports and environmental impact statements. Therefore, there is no reason to discuss specifically sabotage and terrorism in such environmental documents.¹⁰⁸

Further, GANE claims that the CAR is deficient and that DCS' "plan to submit the safeguards and security program at a later date ... is illegal both under NEPA and the NRC's own Part 70 requirements."¹⁰⁹ As discussed with respect to Contention 2 above, issues related to the safeguards and security programs are not relevant to the CAR and, therefore, are outside the scope of this proceeding.

Accordingly, Contention 12 should not be admitted.

M. Contention 13. ER Lacks Probability Calculations.

The Environmental Report does not satisfy NEPA or the NRC's regulations because it contains an inadequate assessment of the probability and consequences of accidents.

Contention 13 is legally infirm and mischaracterizes the MOX Facility ER.

First, GANE claims that because the ER "is not supported by a detailed license application describing how the facility will be operated,"¹¹⁰ the assessment of risk is merely speculative. However, neither NEPA nor NRC's Part 51 regulations require that an ER or an EIS be supported by a license application or a detailed description of operation. *See, e.g.*, 10 CFR § 51.45. In fact, in several cases, NRC's regulations contemplate that an ER and an EIS

¹⁰⁷ See *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973).

¹⁰⁸ See *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 697-701 (1985), *aff'd on this ground and rev'd on other grounds Limerick Ecology Action v. NRC*, 869 F.2d 719, 743-44 (3rd Cir. 1989). See also *Long Island Lighting Co.*, ALAB-156, 6 AEC at 851.

¹⁰⁹ GANE Contentions at 47.

will be issued, without a license application or detailed description of operation. *See, e.g.*, Subpart A to Part 52, which provides for issuance of an ER and EIS for an early site permit before the filing of a license application.

Second, GANE claims that, “in violation of 10 C.F.R. § 51.45(d), the ER does not quantify the probability of accidents, nor does it explain why it is not ‘practicable’ to quantify them.”¹¹¹ Additionally, GANE cites several cases for the proposition that “environmental impacts are worthy of consideration by looking at quantitative estimates of their probability.”¹¹² As discussed below, these claims do not correctly reflect the regulations or the cases.

The regulation in question is § 51.45(c), not § 51.45(d). Section 51.45(c) states that “analyses for environmental reports shall, to the fullest extent practicable, quantify the various factors considered.” This requirement is not specifically directed at accident analyses, nor does it require that an ER explain why it is impracticable to provide quantitative estimates of accident probabilities.

Furthermore, the next sentence in Section 51.45(c), which GANE neglects to mention, states that “[t]o the extent that there are important qualitative considerations that cannot be quantified, those considerations or factors shall be discussed in qualitative terms.” In short, NRC regulations do not require a quantitative discussion of accident probabilities, nor do they require an ER to explain why a quantitative discussion of accident probabilities is not possible.

Similarly, the cases cited by GANE do not require a quantitative estimate of accident probabilities. Instead, as indicated in GANE’s own summary of these cases, they merely state

¹¹⁰ GANE Contentions at 48-49.

¹¹¹ *Id.* at 49.

¹¹² *Id.*

that the probability of some accidents is so low that they are “remote and speculative” and therefore need not be considered under NEPA.

Finally, GANE has mischaracterized the ER. Contrary to GANE’s allegation, the ER does include upper probability bounds for some accidents, and does explain why other accident scenarios are not discussed in quantitative terms. In particular:

- The accident analysis is contained in Section 5.5 of the ER, and includes both accidents initiated by natural phenomena and accidents initiated by other events. In general, the discussion of the accidents caused by natural phenomena provides the probability of the design basis event that the MOX Facility is designed to withstand without a release. For example, Section 5.5.2.1.3 states that the Facility is designed to withstand a seismic event with an annual exceedence probability of approximately $1\text{E-}04$, and 5.5.2.1.4 states that the Facility is designed to withstand a tornado with an annual exceedence probability of $2\text{E-}06$. Other events involving natural phenomena are also assigned a probability number.
- Appendix F to the ER describes the methodology for determining the risks of accidents at the MOX Facility. Contrary to GANE’s allegation, Appendix F does explain why the ER provides qualitative rather than quantitative estimates of accident risks. In particular, Section F.5 states:

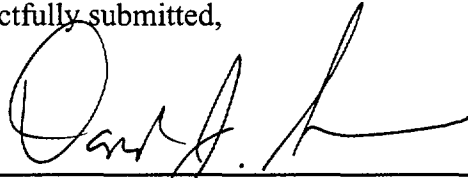
The estimation of event frequency is especially subject to considerable uncertainty. The uncertainty in estimates of the frequency of Highly Unlikely events can be several orders of magnitude. For this reason, event frequency is reported qualitatively, in terms of broad frequency bins, as opposed to numerically.

Accordingly, the bases provided by GANE to support this contention do not accurately reflect the contents of the ER. Therefore, Contention 13 should not be admitted.

IV. CONCLUSION

For the reasons set forth above, none of GANE's proffered contentions is admissible in this proceeding. Therefore, GANE's petition to intervene and request for hearing should be denied.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Donald J. Silverman", written over a horizontal line.

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Dated September 13, 2001

**Duke Cogema Stone & Webster's Answer to
Proposed Contentions Filed by Georgians Against Nuclear Energy**

ATTACHMENT 1

DOE Action	NEPA Citation
1a. Transportation of surplus weapons plutonium and uranium oxide to SRS	SPD FEIS: Section 4.4.2.6
1b. Disassembly and conversion of surplus weapons plutonium	SPD FEIS: Section 4.4.2
1c. Immobilization of surplus weapons plutonium	SPD FEIS: Section 4.4.2
2. Fabrication of MOX fuel	SPD FEIS: Section 4.4.2 MFFF ER: Section 5
3. Transport of MOX Fuel to mission reactors	SPD FEIS: Section 4.4.2.6
4. Use of MOX Fuel in mission reactors	SPD FEIS: Section 4.28
5. Transportation of spent MOX fuel from mission reactors to a repository	YM DEIS: Chapter 6
6. Disposal of spent MOX fuel in the repository	YM DEIS: Chapter 5
7. SRS receipt and processing of wastes from the MOX facility	SPD FEIS: Sections 4.4.1.2 & 4.4.2.2 SRS FEIS: Section 2.4.2
8. Deactivation of the MOX Facility	SPD FEIS: Section 4.31.1 MFFF ER: Section 5.3
9. Decommissioning the MOX facility	SPD FEIS: Section 4.31.2

MFFF ER—*Mixed Oxide Fuel Fabrication Facility Environmental Report*

SPD FEIS—*Surplus Plutonium Disposition Final Environmental Impact Statement*

SRS FEIS—*Savannah River Site Waste Management Final Environmental Impact Statement*

YM DEIS—*Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman

Charles N. Kelber

Peter S. Lam

In the Matter of)

DUKE COGEMA STONE & WEBSTER)

(Savannah River Mixed Oxide Fuel
Fabrication Facility))

) Docket No. 070-03098-ML

) ASLBP No. 01-790-01-ML
)
)

CERTIFICATE OF SERVICE

I hereby certify that copies of "Duke Cogema Stone & Webster's Answer to Proposed Contentions Filed by Georgians Against Nuclear Energy" were served this day upon the persons listed below, by both e-mail and United States Postal Service, first class mail, with the exception of Environmentalists, Inc, which was served by Federal Express.

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