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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
SYSTEM ENERGY RESOURCES, INC.	)	Docket No. 52-009-ESP
	)	
(Early Site Permit for Grand Gulf ESP Site)	)	ASLBP No. 04-823-03-ESP
	)	

NRC STAFF'S RESPONSE TO PETITIONERS' CONTENTIONS REGARDING THE EARLY SITE PERMIT APPLICATION FOR THE GRAND GULF SITE

INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1) and the Chief Administrative Judge's Initial Prehearing Order dated March 8, 2004,[1] the staff of the Nuclear Regulatory Commission ("Staff") hereby files its answer to the proposed contentions of the National Association for the Advancement of Colored People, Claiborne County Mississippi Branch ("NAACP"), Blue Ridge Environmental Defense League ("BREDL"), Nuclear Information and Resource Service ("NIRS"), Public Citizen and Sierra Club - Mississippi Chapter ("Sierra Club") (collectively, "Petitioners"), filed May 3, 2004.[2] The Staff herein addresses the admissibility of Petitioners' proposed contentions. For the reasons set forth below, the Staff opposes admission of Petitioners' contentions.

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[1] "*Exelon Generation Co.* (Early Site Permit for Clinton ESP Site); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site); *System Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), Memorandum and Order" ("Initial Prehearing Order"), slip op. Mar. 8, 2004.

[2] *See* "Contentions of the [NAACP], [NIRS], Public Citizen, and [Sierra Club] Regarding Early Site Permit Application for Site of Grand Gulf Nuclear Power Plant," dated May 3, 2004 ("Contentions"); "Waste Confidence Contentions of the [NAACP], [NIRS], Public Citizen, and [Sierra Club] Regarding Early Site Permit Application for Site of Grand Gulf Nuclear Power Plant," dated May 3, 2004 ("Waste Confidence Contentions").

BACKGROUND

On September 25, 2003, Dominion Nuclear North Anna, L.L.C. ("Dominion" or "Applicant") submitted an application pursuant to 10 C.F.R. Part 52, Subpart A, in which it requested an Early Site Permit ("ESP") for a site within the existing site of the North Anna Power Station.[3] A Notice of Hearing initiating the proceeding on the application and offering an opportunity to petition for leave to intervene was published in the *Federal Register* on December 2, 2003.[4] The Notice of Hearing defined the issues in the proceeding as follows:

> Issues Pursuant to the Atomic Energy Act of 1954, as Amended
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> (1) Whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public (Safety Issue 1); and, (2) whether, taking into consideration the site criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public (Safety Issue 2).
>
> Issue Pursuant to the National Environmental Policy Act (NEPA) of 1969, as Amended
>
> Whether, in accordance with the requirements of subpart A of 10 CFR part 51, the ESP should be issued as proposed.

68 Fed. Reg. at 67,489. In response to the Notice of Hearing, Petitioners filed a joint petition for leave to intervene in the proceeding.[5] In answers to the joint petition dated January 12, 2004[6] and

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[3] *See* Letter from William A. Eaton, SERI, to NRC, "Early Site Permit Application," dated October 16, 2003.

[4] *See* [SERI]; Notice of Hearing and Opportunity to Petition for Leave to Intervene; Early Site Permit for the Grand Gulf ESP Site, 69 Fed. Reg. 2,636 (Jan. 16, 2004).

[5] *See* "Hearing Request and Petition to Intervene by [NAACP], [NIRS], Public Citizen, and [Sierra Club]," dated February 12, 2004.

[6] *See* "Answer by [SERI] to Petition to Intervene," dated February 24, 2004.

January 20, 2004,[7] neither the Applicant nor the Staff challenged the standing of any of the petitioning organizations.

On January 14, 2004, the Commission published its newly promulgated Rules of Practice ("New Part 2") in the *Federal Register (see* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2,182), and on January 16, 2004, the Applicant moved to apply New Part 2 to this proceeding.[8] Petitioners opposed Applicant's motion.[9] In a Memorandum and Order dated March 2, 2004, the Commission directed that this proceeding be conducted pursuant to New Part 2.[10] The Chief Administrative Judge then issued an Initial Prehearing Order, which addressed scheduling, including the filing of contentions, and other administrative matters. Thereafter, on March 22, 2004, this Atomic Safety and Licensing Board ("Board") was established. In response to the Initial Prehearing Order, Petitioners filed proposed contentions on May 3, 2004.

DISCUSSION

I. Legal Standards

The Staff sets forth below the legal standards generally applicable to the admission of contentions in New Part 2. In addition, because analysis of one of Petitioners' proposed

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[7] *See* "NRC Staff's Answer to Hearing Request and Petition to Intervene by [NAACP], [NIRS], Public Citizen, and [Sierra Club]," dated February 27, 2004.

[8] *See* "Motion of [SERI] to Apply Revised Rules of Practice," dated February 19, 2004. Because the Notice of Hearing was published prior to February 13, 2004, the effective date of New Part 2 (*see* 69 Fed. Reg. at 2182), the revised rules initially did not apply to this proceeding. The applicants in two other pending ESP adjudicatory proceedings involving the Clinton and North Anna ESP sites, Exelon Generation Company ("Exelon"), and Dominion Nuclear North Anna, LLC ("Dominion"), respectively, made similar requests.

[9] *See* "Petitioners' Response to [SERI's] Motion to Apply Revised Rules of Practice," dated March 1, 2004.

[10] *See Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site); *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site); *System Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-04-08, 59 NRC 113 (slip op. Mar. 2, 2004). Accordingly, all references herein to 10 C.F.R. Part 2 are to the New Part 2, except as specifically noted.

contentions, Contention 2.1, involves interpretation of the phrase "radiological consequence evaluation factors" in 10 C.F.R. § 52.17(a)(1), and this is a matter of first impression, the Staff also sets forth the legal standards governing applications for ESP as they relate to that subject. The Staff also summarizes the legal standards applicable to the environmental review of an ESP. The Staff first turns to the standards governing the admissibility of contentions, which remain unchanged from those that existed before the effective date of New Part 2. *See* 69 Fed. Reg. at 2,220-21.

A. Legal Standards for the Admission of Contentions

To gain admission to a proceeding as a party, a petitioner must submit at least one valid contention that meets the requirements of 10 C.F.R. § 2.309(f)(1). This section states that a petitioner must provide:

> (i) a specific statement of the issue of law or fact to be raised or controverted;
>
> (ii) a brief explanation of the basis for the contention;
>
> (iii) a demonstration that the issue raised in the contention is within the scope of the proceeding;
>
> (iv) a demonstration 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;
>
> (v) 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; and
>
> (vi) sufficient information to show that a genuine dispute exists with the applicant 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.

10 C.F.R. § 2.309(f)(1). These provisions "incorporate the longstanding contention support requirements of former 10 C.F.R. § 2.714—no contention will be admitted for litigation in any NRC adjudicatory proceeding unless these requirements are met." 69 Fed. Reg. at 2,221. The Commission has emphasized that its rules on admission of contentions establish an evidentiary threshold more demanding than a mere pleading requirement and are "strict by design." *Dominion Nuclear Conn., Inc.* (Millstone Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001). Under the rule, a petitioner "must do more than submit 'bald or conclusory' allegation[s] of a dispute with the applicant." *Id.* Rather, the petitioner must "read the pertinent portions of the license application, . . . state the applicant's position and the petitioner's opposing view." *Id.* Moreover, a petitioner must provide a "clear statement as to the basis for the contentions and the submission of . . . supporting information and references to specific documents and sources that establish the validity of the contention." *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 & 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

The contentions are limited by the scope of the proceeding, which is delineated by the Commission in the notice of hearing for the proposed licensing action. *See Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 118 (1995); *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-825, 22 NRC 785, 790 (1985). In determining the scope of the proceeding, the Licensing Board should be guided by the regulations governing the substantive matters under consideration in the proceeding. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-00-23, 52 NRC 327, 329 (2000). Although the focal point of an NRC adjudication is on contentions rather the underlying than bases, the Commission has recently reiterated, "[w]hen an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention." *Duke Energy Corp.* (McGuire Nuclear Station,

Units 1& 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 379 (2002) (citations omitted).

B. Legal Standards Governing Radiological Consequence Evaluation Factors

Petitioners' proposed contentions assert a safety issue with respect to the application involving the radiological consequence evaluation factors in 10 C.F.R. § 52.17 (*see* Proposed Contentions at 2). Since this is a matter of first impression, the Staff describes, as set forth below, the legal standards relevant to this contention. The Staff first turns to the requirements for ESP applications set forth in 10 C.F.R. Part 52.

The Commission's regulations in 10 C.F.R. Part 52 set the standards for consideration of an application for an ESP. In particular, 10 C.F.R. § 52.17 requires that the application contain:

> [A] description and safety assessment of the site on which the facility is to be located. The assessment must contain an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in § 50.34(a)(1) of this chapter. Site characteristics must comply with part 100 of this chapter.

10 C.F.R. § 52.17(a)(1) (2004). Neither § 50.34(a)(1) nor Part 100 explicitly defines the "radiological consequence evaluation factors" to which § 52.17(a)(1) refers. Part 100, however, applies to "applications for site approval for the purpose of constructing and operating stationary power and testing reactors pursuant to the provisions of part 50 or part 52." 10 C.F.R. § 100.2 (2004). Part 100, therefore, applies equally to ESPs, CPs, and COLs.

In this regard, Part 100 applies as follows: Inasmuch as Dominion filed its application on September 25, 2003, the evaluation factors in 10 C.F.R. Part 100, Subpart B for power reactor site applications filed after January 10, 1997, apply. Pursuant to Part 100, Subpart B, the Commission considers, *inter alia*, the population density and use characteristics of the site environs, including the exclusion area, the population distribution, and site-related characteristics in determining the acceptability of a site for a power reactor. 10 C.F.R. § 100.20(a). Design matters are not subject

to Part 100, Subpart B. *See id*. As relevant to an ESP proceeding, the matters identified in § 100.20(a) must be evaluated to determine whether individual as well as societal risk of potential plant accidents is low. *Id.* In addition, Part 100, Subpart B, requires that applications for site approval for commercial power reactors address the following:

> (a) Every site must have an exclusion area and a low population zone, as defined in § 100.3;[11]
> . . . .
> (c) Site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that:
> . . . .
> (2) Radiological dose consequences of postulated accidents shall meet the criteria set forth in § 50.34(a)(1) of this chapter for the type of facility proposed to be located at the site[.]

10 C.F.R. § 100.21. Similar to § 52.17(a)(1), § 100.21(c)(2) requires dose consequences to meet the "criteria set forth in § 50.34(a)(1)."

The criteria in § 50.34(a)(1) for evaluating radiological dose consequences of postulated accidents are the following:

> (*1*) An individual located at any point on the boundary of the exclusion area for any 2 hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE).
>
> (*2*) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the

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[11] As relevant here, § 100.3 states that:

> *Exclusion area* means that area surrounding the reactor, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area[.]
>
> *Low population zone* means the area immediately surrounding the exclusion area which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident.

> entire period of its passage) would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE).

310 C.F.R. § 50.34(a)(1)(ii)(D)(*1*) and (*2*) (2004)(footnote omitted). These dose consequence criteria, by their terms, apply only to the determination of the exclusion area and LPZ, given a postulated release of radioactive material to the environment and the site atmospheric dispersion characteristics.[12] All the other criteria in § 50.34(a)(1) relate to reactor design, which is not mentioned in §§ 100.20 or 100.21.[13] Accordingly, the "dose consequence evaluation factors in § 50.34(a)(1)" in § 52.17(a)(1), read *in pari materia* with Part 100, Subpart B, must refer to the dose consequence criteria for determining the acceptability of the exclusion area and the LPZ in § 50.34(a)(1)(ii)(D)(*1*) and (*2*).[14]

C. Legal Standards Governing the Environmental Consideration of ESPs

In addition to a safety review, the Commission conducts an environmental review of each ESP application pursuant to the National Environmental Policy Act ("NEPA"). The Commission's

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[12] Part 100, Subpart B, requires evaluation of site atmospheric dispersion characteristics, but does not govern the calculation of a postulated release of radioactive material to the environment. *See* 10 C.F.R. § 100.21(c) (2004). Such a radioactive release considered in a CP or COL application is governed by 10 C.F.R. § 50.34(a)(1)(D), which requires that "an applicant shall assume a fission product release from the core into the containment assuming that the facility is operated at the ultimate power level contemplated." In establishing a postulated release of radioactive material to the environment, an applicant for a CP or COL must also perform an analysis and evaluation of the fission product release into the containment, based on the expected demonstrable containment leak rate and a specified category of design features. *See* 10 C.F.R. § 50.34(a)(1)(D) (2004). For an ESP, § 52.17(a)(1) allows for evaluation of a postulated release of radioactive material to the environment by requiring "an analysis and evaluation of the major structures, systems, and components [("SSCs")]of the facility that bear significantly on the acceptability of the site" under the radiological consequence evaluation factors. Whether any SSCs have an effect on such a release and, therefore, "bear significantly on the acceptability of the site" depends on the contents of the application.

[13] These design matters are properly resolved in CP, design certification, or COL proceedings. *See* 10 C.F.R. §§ 50.34(a), 52.47(a)(1)(i), and 52.79(b), respectively.

[14] While there is no need to examine the regulatory history of § 52.17 in order to interpret it, the rulemaking history for this regulation and Part 100 supports the Staff's interpretation, as set forth in the Staff's discussion of Petitioners' Contention 2.1.

regulations implementing NEPA are set forth in 10 C.F.R. Part 51. Environmental review requirements specific to ESPs are set forth in 10 C.F.R. Part 52. Specifically, 10 C.F.R. § 52.18 states, in pertinent part:

> [T]he Commission shall prepare an environmental impact statement during review of the application, in accordance with the applicable provisions of 10 C.F.R. part 51, provided, however, that the draft and final environmental impact statements prepared by the Commission focus on the environmental effects of construction and operation of a reactor, or reactors, which have characteristics that fall within the postulated site parameters, and provided further that the statements need not include an assessment of the benefits (for example, need for power) of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed.

See generally 10 C.F.R. §§ 51.70, 51.71, 51.73, 51.75, 51.90, 51.91, and 51.94 (setting forth general requirements for the Commission's preparation and consideration of environmental impact statements). In connection with this EIS, 10 C.F.R. § 52.17(a)(2) requires that the applicant include with the ESP application:

> A complete environmental report as required by 10 C.F.R. 51.45 and 51.50 . . . provided, however, that such environmental report must focus on the environmental effects of construction and operation of a reactor, or reactors, which have characteristics that fall within the postulated site parameters, and provided further that the report need not include an assessment of the benefits (for example, need for power) of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the proposal.

II. Petitioners' Proposed Contentions

A. Contention 2.1: Failure to provide adequate safety assessment of reactor interaction

> The ESP application for Grand Gulf Unit 1 fails to comply with 10 C.F.R. § 52.17 because its safety assessment does not contain an adequate analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequences evaluation factors identified in 10 C.F.R. § 50.23(a)(1) [*sic*, § 50.34(a)(1)]. In particular, the safety assessment does not adequately take into account the potential effects on radiological

> accident consequences of co-locating new reactors with advanced designs next to an older reactor. The safety assessment should contain a comprehensive evaluation and analysis of the ways in which interaction of the old and new plants under accident conditions may exacerbate the consequences of a radiological accident. Without such an evaluation and analysis, the presiding officer cannot make a finding that, taking into consideration the site criteria in Part 100 of the regulations, the proposed reactors can be operated "without undue risk to the health and safety of the public.

Contentions at 2-3 (citation omitted). Petitioners state in the basis to the proposed contention that "new reactors are designed with fewer features to protect station workers from radiation released during accident conditions, including loss-of-coolant accidents. An accident at the existing reactor could, therefore, have significant adverse effects on the operation of the new reactor." *Id*. at 4-5. This is the essence of Contention 2.1.

Staff Response:

For the reasons set forth below, Contention 2.1 should be rejected because the proposed contention is not within the scope of this proceeding, Petitioners' claimed basis lacks specificity, and Petitioners do not otherwise raise a genuine dispute with the Applicant on a material issue of law or fact.

1. Contention 2.1 is not within the scope of this proceeding

As set forth above, Petitioners must "provide a demonstration that the issue raised in the contention is within the scope of the proceeding." 10 C.F.R. § 2.309(f)(1)(iii). The scope of the proceeding is defined by the Notice of Hearing. *See Georgia Institute of Technology*, CLI-95-12, 42 NRC at 118. The Notice of Hearing, as described above, defines the scope of the safety issues in the proceeding as (1) whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public ("Safety Issue 1"); and, (2) whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public ("Safety Issue 2"). Petitioners specifically invoke

Safety Issue 2. *See* Contentions at 2-3. Safety Issue 2, refers to the "site criteria" of Part 100, and not any design issues. As described below, Petitioners fail to link Safety Issue 2 to the design issues they assert in the basis for Contention 2.1.

As stated above, it is appropriate to refer to the basis of a proposed contention to define its scope. *See McGuire*, CLI-02-28, 56 NRC at 379. As the legal basis for Contention 2.1, Petitioners assert, without support, that the application must address the design matters in 10 C.F.R. § 50.34(a)(1)(ii)(B)-(D). Specifically, Petitioners declare that:

> [a]n ESP application must consider such "radiological consequence evaluation factors" as whether and to what extent "generally accepted engineering standards" are used to design the new plant, whether and to what extent the new reactor design incorporates "unique, unusual, or enhanced safety features having a significant bearing on the probability or consequences" of an accident[al] release of radiation, and plant design features that are "intended to mitigate the radiological consequences of accidents."

Id. at 3 (footnote ommitted). The "radiological consequence evaluation factors" to which § 52.17 refers, however, do not include the regulations that Petitioners cite, which by their terms relate to reactor design, and not site acceptability. Rather, as relevant to the basis of the proposed contention and as described above, § 52.17 requires consideration of whether the boundaries of the exclusion area and the LPZ are determined so as to satisfy the dose criteria in 10 C.F.R. § 50.34(a)(1)(ii)(D)(*1*) and (*2*).[15] The regulations cited by Petitioners are simply irrelevant to this determination. The subject of the application is the adequacy of the site to accommodate a reactor with postulate parameters, and not the design of a specific reactor that might be located there. Since Contention 2.1 involves reactor design considerations, and not siting issues, it is

[15] As set forth above, § 52.17(a)(1) requires consideration of SSCs only to the extent needed to establish a release of radioactive material to the environment, which is used in evaluating the acceptability of the proposed exclusion area and the proposed LPZ, and, ultimately, the proposed ESP site.

outside the scope of this proceeding, and the Board should reject it. This conclusion is supported by the rulemaking history of § 52.17, which is set forth below.

As originally promulgated on April 18, 1989, § 52.17 required, *inter alia,* that an application for an ESP contain the information required by "the first three sentences of § 50.34(a)(1)[.]" Final Rule, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 54 Fed. Reg. 15,372, 15,387 (Apr. 18 1989)("Part 52 Final Rule SOC [Statements of Consideration]"). The first three sentences of § 50.34(a)(1) then required, among other things, assessment of the then-existing site evaluation factors in Part 100. *See* 10 C.F.R. § 50.34(a)(1) (1989).[16] In 1989, Part 100 required consideration of factors "relating both to the proposed reactor design and the characteristics peculiar to the site." 10 C.F.R. § 100.10 (1989). The regulations then specifically required consideration of characteristics of reactor design and intended operation, including the factors identified by Petitioners. *See* 10 C.F.R. § 100.10(a)(1)-(4) (1989). Part 100 also then required determination of an exclusion area and an LPZ. *See* 10 C.F.R. § 100.11 (1989). In sum, as originally promulgated, § 52.17 did require that an application for an ESP contain the information identified by the Petitioners.[17]

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[16] The first three sentences of § 50.34(a)(1) then required an application to contain the following:

> A description and safety assessment of the site on which the facility is to be located, with appropriate attention to features affecting facility design. Special attention should be directed to the site evaluation factors identified in Part 100 of this chapter. Such assessment shall contain an analysis and evaluation of the major structures, systems and components of the facility which bear significantly on the acceptability of the site under the site evaluation factors identified in Part 100 of this chapter, assuming that the facility will be operated at the ultimate power level which is contemplated by the applicant.

10 C.F.R. § 50.34(a)(1) (1989).

[17] The Staff notes that the Commission indicated in the SOC for the Part 52 final rule that (continued...)

In 1996, the Commission amended § 50.34(a), § 52.17, and Part 100 to incorporate the requirements currently reflected in those regulations. *See* Final Rule, Reactor Site Criteria Including Seismic and Earthquake Engineering Criteria for Nuclear Power Plants, 61 Fed. Reg. 65,157 (Dec. 11, 1996) ("Part 100 Final Rule SOC").[18] The 1996 Part 100 rule responded to the 1980 directive of Congress to decouple siting from design, and effected a partial decoupling of these matters. *See id*. at 65,157, 65,159. In the Part 100 Final Rule SOC, the Commission indicated that it was retaining source term and dose calculations to verify the adequacy of a site for a specific plant, but was relocating source term and dose calculations to Part 50 since "experience has shown that these calculations have tended to influence plant design aspects such as containment leak rate or filter performance rather than siting." *Id*. at 65,159.

With respect to the individual siting criteria, the Commission stated that it considered "an exclusion area to be an essential feature of a reactor site and is retaining this requirement, in Part 50, to verify that an applicant's proposed exclusion area distance is adequate to assure that the radiological dose to an individual will be acceptably low in the event of a postulated accident." *Id*. Similarly, the Commission stated that it was "retaining the requirement that the dose consequences be evaluated at the outer boundary of the LPZ over the course of the postulated

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[17](...continued)
design certification would be the vehicle for early resolution of design issues, and an ESP would serve this role for resolving most site issues. *See* Part 52 Final Rule SOC, 54 Fed. Reg. at 15,374, 15,378. The SOC for the proposed rule introduced this concept in discussing the Commission's expectations of how the ESP, design certification, and combined license processes might be used. That SOC stated that "it is possible to describe and evaluate plant designs on a generic basis, . . . and to propose and evaluate plant sites *without plant design details*." Proposed Rule, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 53 Fed. Reg. 32,060, 32,065 (Aug. 23, 1988)(emphasis added). The Part 52 final rule, as issued in 1989, did not appear to fully accomplish this goal.

[18] The seismic and earthquake engineering criteria promulgated in this final rule are not relevant to the proposed contention.

accident[.]"[19] *Id*. at 65,161. These are the "radiological consequence evaluation factors" to which § 52.17 refers. They simply do not include those provisions identified by Petitioners. Accordingly, the scope of this proceeding does not reach the criteria in § 50.34(a)(1)(ii)(B)-(D) identified by Petitioners, and the Applicant need not address them.[20] Petitioners make no showing that the requirements they cite apply to an ESP application other than their bare assertion of applicability, and make no effort to relate these requirements to Safety Issue 2, as set forth in the Notice of Hearing. Therefore, Petitioners fail to satisfy the requirements of § 2.309(f)(1)(iii), and Contention 2.1 should be rejected as beyond the scope of the proceeding.[21]

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[19] When Part 52 was promulgated in 1989, Part 100 provided that the applicant was to assume a fission product release from the core into the containment to determine both the exclusion area and the LPZ. 10 C.F.R. § 100.11(a) (1989). A footnote to the regulation stated:

> The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events, that would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.

10 C.F.R. § 100.11(a), n.1 (1989). This footnote was moved to § 50.34(a)(1)(ii)(D) in the Part 100 Final Rule. *See* Part 100 Final Rule SOC, 61 Fed. Reg. at 65,172.

[20] The Part 100 final rule, as relevant to this proceeding, moved the requirements of former § 100.10 to amended § 50.34(a)(1)(ii)(A)-(D). *See* 10 C.F.R. § 100.10(a)(1)-(4) (1989); Part 100 Final Rule SOC, 61 Fed. Reg. at 65,163, 65,172. In addition, the Part 100 final rule moved the remainder of the "first three sentences of § 50.34(a)(1)" previously invoked by § 52.17 into § 52.17. *See* Part 100 Final SOC, 61 Fed. Reg. at 65,175. The changes to Parts 50, 52, and 100 in 1996 fully achieved the Commission's goal of providing for evaluation of "plant sites without plant design details" in the consideration of ESP applications. *See* Part 52 Proposed Rule SOC, 53 Fed. Reg. at 32,065; n.17, *supra*.

[21] Petitioners also rely on GDC 4 and 19, and 10 C.F.R. § 50.49 as requirements somehow applicable to an ESP proceeding. Petitioners make no attempt to show any relationship between these requirements and an ESP application, and, indeed, there is none. Neither § 52.17 nor § 50.34(a)(1) nor Part 100 mentions or refers to any of these design requirements in the context of an ESP application, and the Applicant need not make any showing with respect to them in this proceeding.

2. The basis asserted for Contention 2.1 lacks specificity

Petitioners' basis for Contention 2.1 lacks the requisite specificity. Petitioners' proposed contention asserts that "the safety assessment does not adequately take into account the potential effects on radiological accident consequences of co-locating new reactors with advanced designs next to an older reactor." Contentions at 2. Further, Petitioners assert that "[t]he safety assessment should contain a comprehensive evaluation and analysis of the ways in which interaction of the old and new plants under accident conditions may exacerbate the consequences of a radiological accident." *Id*. As a basis for these assertions, Petitioners state that "new designs already certified by NRC and those currently under review by NRC are allegedly 'safer' and less likely to have an accident involving significant core damage. . . . Consequently, the new reactors are designed with fewer features to protect station workers from radiation released during accident conditions, including [LOCAs]. An accident at the existing reactor could, therefore, have significant adverse effects on the operation of the new reactor." *Id*. at 4-5.

Petitioners provide an example, involving control room design, in which the asserted lack of design features "may not adequately protect workers from postulated accidents at nearby reactors of different design." *Id*. at 5. Petitioners, however, do not provide any indication of how the site characteristics or design parameters (*i.e.,* "PPE") identified in the application (*see* Site Safety Analysis Report ("SSAR"), Chapter 2) might somehow be affected by the lack of such features. Moreover, even for this example, Petitioners describe the design of current plants in some detail (*id*. at 6), but give no description of the design features they deem lacking from the reactor or reactors that might be constructed at the site. Rather, Petitioners make the bare assertion that "[b]ecause new reactor designs are allegedly safer, the protection for control room operators is less." *Id*. Not only do Petitioners fail to identify any asserted missing features, they also do not identify a source term at the existing reactors, or dispersion or transport characteristics between the existing and new reactors, and do not give any indication as to the dose the control

room operators might receive. Accordingly, the proposed contention lacks the specificity required by 10 C.F.R. § 2.309(f)(1)(v).

As for Petitioners' bare assertion that "[e]nvironmental qualification of electrical equipment provides another example of the potentially adverse interaction between old and new plant designs" (*id*.), Petitioners' basis again lacks specificity. Petitioners suggest that "accidents at nuclear plants of relatively new design are not expected to be as severe as accidents than [*sic*] for older plants" and, therefore, "electrical equipment in the new plants at the North Anna site may not be qualified to withstand levels of heat or radiation that may be generated by an accident at the existing plant." *Id*. at 7. Petitioners assert that this should be of concern because of the "relatively close proximity of the new and existing plants." *Id*. Petitioners, however, do not link their assertions regarding environmental qualification of electrical equipment to the PPE or site characteristics. Further, Petitioners fail to explain how heat and radiation generated in an existing reactor during an accident might somehow be transported to a new reactor that might be built on the proposed ESP site, and how such a new reactor might be affected. Moreover, Petitioners' assertions in this regard are mere speculation, which does not provide an adequate basis for a contention. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (citing *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 267 (1996)).

Neither of the Petitioners' examples has a specific basis, as set forth above. Accordingly, the basis for Contention 2.1 does not provide a concise statement of the alleged facts which support the Petitioners' position on these issues, as required by 10 C.F.R. § 2.309(f)(1)(v), and Contention 2.1 should be rejected.[22]

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[22] The Staff notes that 10 C.F.R. § 52.17(a)(1)(vii) requires that an ESP application describe "[t]he location and description of any nearby industrial . . . facilities," and the Staff believes that the existing North Anna units should be treated as such industrial facilities. Further, (continued...)

3. Petitioners do not identify any dispute with the Applicant other than out-of-scope design issues

In support of Contention 2.1, Petitioners point to § 1.3.1.3 of the SSAR in SERI's application, but do so only to identify three reactor designs that are listed in that section and that might be built on the proposed ESP site. Contentions at 4. That portion of the SSAR, however, identifies the designs on which the Applicant bases its PPE bounding values. *See* SSAR § 1.3.1.3. Petitioners do not identify any dispute with the PPE bounding values.[23] Further, Petitioners refer to the application only once more in a footnote (Contentions at 7 n.2), in the basis to Contention 2.1, but do not take issue with it.[24] Petitioners' complaint that the Applicant omitted information from the application is founded on bases clearly outside the scope of this proceeding, as discussed above; Petitioners do not assert any error in the application in Contention 2.1. Therefore, Petitioners fail to include "references to specific portions of the application . . . that the petitioner disputes," as required by 10 C.F.R. § 2.309(f)(1)(v).[25] Accordingly, the Petitioners fail

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[22](...continued)
10 C.F.R. § 100.21(e) requires that "[p]otential hazards associated with nearby . . . industrial . . . facilities must be evaluated and site parameters established such that potential hazards from such . . . facilities will pose no undue risk to the type of facility proposed to be located at the site." Although these matters might appear related to Contention 2.1, the Staff's consideration of them will be limited to site suitability issues, and will not extend to the reactor design issues Petitioners seek to litigate. The Petitioners did not include any matter related to the requirements of § 52.17(a)(1)(vii) or § 100.21(e) in Contention 2.1, and that proposed contention is limited to its terms. *See Public Service Co. of New Hampshire* (Seabrook Station, Units 1 & 2), ALAB-947, 33 NRC 299, 371-72 n.310 (1991).

[23] To the extent the Petitioners seek to raise any issue with a *specific design* identified in SSAR § 1.3.1.3, the appropriate forum for doing so is (or was) the design certification rule making proceeding on that design, or, if the design is not certified, in a COL proceeding in which an applicant seeks to construct and operate such a design. *See* 10 C.F.R. §§ 52.51, 52.54 and 52.63 (for design certification); 10 C.F.R. §§ 52.85, 52.93, and 52.97 (for COLs).

[24] In the footnote, Petitioners refer to the SSAR as indicating that "the proposed new reactor(s) will be 1,200 feet west and 1,000 feet north of Unit 1." Contentions at 7, n.2.

[25] The Staff construes Petitioners' statement that the "safety assessment does not contain an adequate analysis and evaluation" in Contention 2.1 to mean that the assertedly necessary (continued...)

to raise a genuine dispute with the Applicant on a material issue of law or fact, as required by § 2.309(f)(1)(vi), and the Board should reject Contention 2.1.

B. Contention 2.2: Failure to Evaluate Site Suitability for Below-Grade Placement of Reactor Containment

> The Site Safety Analysis Report for the Grand Gulf ESP is inadequate because it does not evaluate the suitability of the site to locate the reactor containment below grade-level. Below-grade construction is advisable and appropriate, if not necessary, in order to maintain an adequate level of security in the post-9/11 threat environment.

Contentions at 7.

The basis for the proposed contention is offered in parts: a) legal requirements,[26] b) rationale for requiring below-grade construction of containments, and c) viability of below-grade construction.

Staff Response:

The Staff opposes the admission of Contention 2.2. As discussed below, none of the bases on which Petitioners rely provides the support required for admissibility of a contention in this proceeding. *See* 10 C.F.R. § 2.309(f)(1).

1. Rationale for below-grade construction

Petitioners state that the Applicant should be required to evaluate the Grand Gulf site for below-grade construction because, in their opinion, current nuclear plants are vulnerable to terrorist attacks and sabotage. Contentions at 8. However, there is no such statutory or regulatory requirement. A contention that simply states the petitioner's views about what regulatory policy

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[25](...continued)
analysis and evaluation was omitted. To the extent Petitioners intend to identify any errors in the application in this regard, references to the claimed errors in the application are entirely missing from the basis for the proposed contention.

[26] Basis a is not discussed herein, as it provides background information and sets forth no legal or factual argument.

should be does not present a litigable issue. *Philadelphia Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20-21 n.33 (1974); 10 C.F.R. § 2.335(a). Accordingly, this basis cannot support the proposed contention.

To be admissible, a proposed contention must be material to the findings the NRC must make to support the action that is involved in the proceeding. 10 C.F.R. § 2.309(f)(1)(iv). Petitioners have not identified, in Basis b, a regulatory requirement that would require an ESP applicant to address below-grade construction. Thus, contrary to Petitioners' assertion that the application is inadequate for failure to evaluate the suitability of the site for below-grade construction, the omission of such information in the application is not an inadequacy where no such information is required. Accordingly, proposed Contention 2.2 fails to state an issue material to the findings the NRC must make in this proceeding and is, thus, inadmissible. 10 C.F.R. § 2.309(f)(1)(iv).

Moreover, the statement of the contention itself constitutes an attack on the Commission's regulations in that it asserts that "below grade construction is advisable and appropriate, if not necessary, in order to maintain an adequate level of security. . . . " Contentions at 7. In effect, the contention proposes that no reactor containment may be safely built on the North Anna site unless it is below grade. However, 10 C.F.R. Part 52, Appendix A reflects that the Commission has, through rulemaking, approved the design of the ABWR reactor. (This is one of the designs identified in the ESP application.) The design of the ABWR does not require below-grade construction of the reactor containment, contrary to the assertion in the proposed contention. If the contention were admitted, it would present to the Board for determination the question of whether below-grade construction should be required. Since the Commission has approved three advanced reactor designs that do not require below-grade construction, *see* 10 C.F.R. Part 52, Appendices A, B and C, the proposed contention amounts to an attack on an existing regulation and may not be pursued in an adjudicatory proceeding. 10 C.F.R. § 2.335(a).

Petitioners also cite information from NUREGs and other documents in support of their proposed contention regarding the vulnerability of nuclear plants to terrorist attacks and sabotage. Contentions at 8-10. To the extent that Petitioners seek to raise security issues, *i.e.*, issues regarding the defense of any facility that might occupy the site, their proposed Contention 2.2 is inadmissible. Although they purport to rely on 10 C.F.R. § 100.21(f), which provides: "[s]ite characteristics must be such that adequate security plans and measures can be developed," as a basis for the contention, the Petitioners have not provided any factual information or legal argument to demonstrate the existence of a genuine dispute with regard to whether site characteristics preclude development of adequate security plans and measures. 10 C.F.R. § 2.309(f)(1)(vi). Accordingly, this basis does not support the position raised in proposed Contention 2.2 and must be rejected.

Also, as a part of their rationale for requiring below-grade construction, Petitioners state that the new generation of reactors does not have as robust a containment as the current generation. However, the factual basis offered for this statement does not support the statement but rather contradicts it. Three current reactors are mentioned as having containments that are constructed of reinforced concrete 2.5 feet thick, while the AP600, a "new generation" reactor, is said to have a reinforced concrete containment wall 3 feet thick.[27] Because the Petitioners' own factual assertions reflect that the "new generation" reactors will have thicker containment walls than existing reactors, Petitioners' information fails to support the position that Petitioners urge: that the current generation of reactors is more robust than the advanced reactors that might be built at the applicant's site. Thus, the Petitioners have failed to provide sufficient information to show a genuine dispute on a factual issue. 10 C.F.R. § 2.309(f)(1)(vi).

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[27] The text of Petitioners' Contentions references the AP600 as the advanced reactor on which it relies for the comparison with current reactors. However, the Declaration of Paul V. Gunter references the AP1000 reactor.

2. Validity of below-grade construction

The third part of the basis for Contention 2.2 asserts that below-grade construction of nuclear reactor containments is a viable design security measure. Contentions at 11. The only support for the claim that below-grade construction is "viable" is a letter from Edward Teller to the Joint Committee on Atomic Energy written in 1953. Dr. Teller's concern in the passage cited is not security from terrorist attacks but "the danger that a reactor might malfunction and release its radioactive poison." In response to the concern regarding such releases, he states that "underground location or particularly thoughtfully constructed safety devices *might be considered*." Letter from Dr. Edward Teller to the Honorable Sterling Cole, Chairman on the Joint Committee of Atomic Energy, United States Congress (July 23, 1953) (Petitioners' Exhibit 2.2-6); *see* Contentions at 11 (emphasis added). This basis does not support the proposed contention. "A document put forth by an intervenor as supporting a basis for a contention is subject to scrutiny both for what it does and does not show." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996). Here, while the contention is directed at a security concern, the document addresses operational safety—not security. Therefore, the document fails to provide the requisite support to allow a conclusion that a genuine dispute on a material issue exists. 10 C.F.R. § 2.309(f)(1)(vi).

For the reasons discussed, proposed Contention 2.2 is not an admissible contention and should be rejected.

C. Contention 3.1: Inadequate Consideration of Disproportionate Adverse Impacts on Minority and Low-Income Community.

> SERI's Environmental Report ("ER"), prepared in support of its Early Site Permit application, does not comply with the National Environmental Policy Act ("NEPA") because it does not adequately consider the adverse and disparate environmental impacts of the proposed nuclear facilities on the predominately African American and low-income community of Claiborne County.

At the outset, while the ER acknowledges the existence of minority and low-income populations within a 50-mile radius around the Grand Gulf site, *see* ER § 2.5.4, the ER understates the levels of minority representation and poverty in Claiborne County, which hosts the Grand Gulf site and which takes up much of the area in the portion of Grand Gulf's 10-mile-radius emergency planning zone that lies on the east side of the Mississippi River. As a result, the ER falsely minimizes the disparity of the adverse impacts on the minority and low-income community of Claiborne County.

The ER also fails to address the environmental impacts of the proposed reactor(s) in light of the "factors peculiar to" the minority and low-income community Claiborne County. *Louisiana Energy Services* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100 (1998) (hereinafter "CLI-98-3"). For instance, the ER fails to address the fact that, by virtue of the simple factor of its close proximity to the proposed reactor(s), the minority and low-income community bears the highest risk of injury and illness as a result of severe accidents at the proposed facility. Moreover, the ER fails to address the fact that the Claiborne County government is particularly unprepared to respond to a radiological emergency or a security threat at the proposed reactor(s), as a result of the high level of poverty in the county and the effects of a discriminatory tax policy that sends most of the tax revenue from Grand Gulf out of Claiborne County.

The ER also fails to consider the effect of adding two reactors to the Grand Gulf site on property values and the overall economic health of Claiborne County. By concentrating three nuclear power plants on one site, SERI proposes to create a nuclear sacrifice zone in Claiborne County. The ER should consider the predictable decline in property values and the economic health of the area.

The ER is also deficient because it makes no attempt to evaluate the disparity in distribution of the economic benefits yielded by the proposed reactors. For instance, under current tax law, most of the tax revenue generated by the new reactors will go to the State of Mississippi and county governments other than Claiborne County. Most of the jobs generated by the new reactor(s) will go to people who live outside Claiborne County.

Finally, the ER fails to weigh the costs of the proposed reactor(s) to the minority and low-income community against the benefits to the community, or to examine alternatives that would lessen the impact of the facility and/or distribute the costs and benefits more equitably. These alternatives could include consideration of other sites whose surrounding populations are in a better financial position to absorb the costs of mounting an effective response to a radiological emergency at the nuclear plant, or arrangements to more equitably distribute the wealth that is generated by the facility.

Contentions at 12-14.

The Petitioners base their proposed contention on: the requirements of NEPA; the history and demographics of Claiborne County; the ER's representation of minority and low-income populations, purported disproportionate accident risk; purported disproportionate risk due to lack of adequate emergency planning and security resources; purported disproportionate adverse economic impacts; purported disproportionately low benefits of proposed reactors; and a failure to adequately weigh alternatives. Contentions at 14-28.

Staff Response:

The proposed contention asserts that the ER does not comply with NEPA "because it does not adequately consider the adverse and disparate environmental impacts on the predominately African American and low-income community of Claiborne County." Contentions at 12. Contention 3.1 is inadmissible because it fails to demonstrate a genuine dispute with the Applicant regarding the consideration of the environmental impacts of the project on minority and low-income communities, raises issues outside the scope of the proceeding, and lacks the requisite legal or factual basis. *See generally* 10 C.F.R. § 2.309(f)(1). Although not all of Contention 3.1 is explicitly labeled as an environmental justice ("EJ") issue, the Petitioners' assertions and bases focus on the impacts to minority and low-income communities and cite to Commission precedent related to environmental justice concerns. The Commission has made it clear that EJ issues are only considered when and to the extent required by NEPA.

In *Louisiana Energy Services* (Claiborne Enrichment Center), CLI-98-03, 47 NRC 77 (1998), regarding an application to construct and operate a privately owned uranium enrichment facility located between two minority communities, the Commission held that the disparate impact analysis within NEPA is the principal tool for addressing EJ issues and that the "NRC's goal is to identify and adequately weigh or mitigate effects, on low-income or minority communities" by assessing impacts "peculiar" to those communities. *Id.* at 100. The Commission emphasized that the Executive Order

did not establish any new rights or remedies; instead the Commission based its decision on NEPA, stating that "[t]he only 'existing law' conceivably pertinent here is NEPA, a statute that centers on environmental impacts." *Id*. at 102.

The Commission also addressed the possibility that racial considerations affected the facility siting. *Id*. at 100. The Commission concluded that an "agency inquiry into a license applicant's supposed discriminatory motives or acts would be far removed from NEPA's core interest: the physical environment—the world around us, so to speak." *Id*. at 102 (citation omitted). The Commission also noted that the Council on Environmental Quality's draft guidance for implementing the Executive Order "focuses exclusively on identifying and adequately assessing the impacts of the proposed actions on minority populations, low-income populations, and Indian Tribes" and that the guidance "makes no mention of a NEPA-based inquiry in racial discrimination." *Id*. at 102. Accordingly, *LES* limits the scope of an environmental justice contention to issues considered in a NEPA analysis.

More recently, the Commission reiterated its views on environmental justice in *Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002), a proceeding involving the licensing of a proposed fuel storage facility on land owned by the Skull Valley Band of Goshute Indians. *Id*. at 149. The intervenor, Ohngo Gaudadeh Devia ("OGD"), argued that individual members of OGD, including band members who opposed the project, might suffer the environmental impacts of the project without enjoying its benefits as a result of an alleged misappropriation of funds paid on the PFS lease. *Id*.

First, the Commission reiterated its view that NEPA is the only pertinent statute and stated that environmental justice, as applied at the NRC, "means that the agency will make an effort under NEPA to become aware of the demographic and economic circumstances of local communities where nuclear facilities are to be sited, and take care to mitigate or avoid special impacts attributable to the special character of the community." *Id.* at 156. The Commission then reasoned

that "the essence of an environmental justice claim, in NRC practice, is disparate environmental *harm*." *Id*. at 153 (emphasis added). Accordingly, in the Commission's view, NEPA does not call for an investigation into disparate economic benefits as a matter of environmental justice because "nothing" in the executive order or NEPA suggests "that a failure to receive an economic benefit should be considered tantamount to a disproportionate impact." *Id*. at 154. The Commission went on to note that "the executive order asks agencies to consider environmental justice implications only when disparate environmental effects are 'high and adverse.'" *Id*. Thus, NEPA does not call for a detailed examination of the distribution of the financial benefits of a proposed project. *Id.*

Most recently, the Commission recently published a draft policy statement setting out its views and policy on the significance of the Executive Order and guidelines on when and how EJ will be considered in NRC licensing and regulatory actions. Draft Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 68 Fed. Reg. 62,642 (Nov. 5, 2003). The Commission confirmed that the "the basis for admitting EJ contentions in NRC licensing proceedings stems from the agency's NEPA obligations." *Id*. at 62,643. Procedurally, an EJ review is a tool, within the normal NEPA process, "to identify communities that might otherwise be overlooked and identify impacts due to their uniqueness as part of the NRC's NEPA review process." *Id*. at 62,643-44. Thus, admissible contentions in this area are "those which allege, with the requisite documentary basis and support as required by 10 C.F.R. Part 2, that the proposed action will have *significant adverse impact* on the physical or human environment that were not considered because the impacts to the community were not adequately evaluated." *Id*. at 62,644 (emphasis added). The Commission reiterated that "racial motivation and fairness or equity issues are not cognizable under NEPA." *Id*. Thus, the focus of an EJ review should be on "identifying and weighing disproportionately significant and adverse environmental impacts on minority and low-income populations that may be different from the impacts on the general population." *Id*.

The Draft Policy Statement also includes some procedural guidelines for implementing an EJ review through identification of minority and low-income communities and assessing the environmental impacts they may experience. *Id*. The Commission specifies the components of an EJ review including defining the geographic area for assessment, identifying low-income and minority communities, and emphasizing scoping. *Id*. at 62,644-45. The Commission also chose to endorse the Staff's use of numerical guidance as a useful tool for performing an EJ review to be augmented through the NEPA scoping process. *Id*. For example, the Commission noted that under current Staff guidance, an area is defined as low-income or minority if the impacted area's percentage of minority or low-income population significantly (defined as greater than 20 percent) exceeds that of the State or County. *Id*. at 62,645. Thus, the "goal of the EJ portion of the NEPA analysis is (1) to identify and assess environmental effects on low-income and minority communities by assessing impacts peculiar to those communities; and (2) to identify significant impacts, if any, that will fall disproportionately on minority and low-income communities." *Id*.

2. Contention 3.1 is Inadmissible

In light of the foregoing, the proposed contention, on the whole, is inadmissible on the grounds that it does not set forth sufficient information to show that a genuine dispute exists regarding the Applicant's discussion of the environmental impacts on minority and low-income communities. *See* 10 C.F.R. § 2.309(f)(1)(vi). While NEPA requires agencies to assess the impacts of a proposed action and determine whether those impacts are significant, the Executive Order seeks consideration of "environmental justice implications only when the disparate environmental impacts are 'high and adverse.'" *PFS*, 56 NRC at 154 (citing E.O. 12898, § 1-101). The process endorsed by the Commission for identification of environmental justice concerns consists of: a) identification of minority and low income populations, and b) determining whether there are disproportionately high and adverse impacts on those populations. *See, e.g.*, Draft Policy Statement, 68 Fed. Reg. at 62,643-44. Here, the environmental report found that "while there are

substantial minority populations and a few localized low-income populations in the region of the GGNS site, there are *no significant adverse effects* from facility operation that would disproportionately affect these populations." ER, § 5.8.3.3 (emphasis added).

Nowhere in its proposed contention and bases do the Petitioners allege that the environmental impact from the proposed reactor(s) will have a significant and disproportionate impact on the minority or low-income population relative to the general population. Absent a claim to the contrary, the environmental justice considerations of NEPA are not pertinent. *Cf. PFS*, 56 NRC at 154; Draft Policy Statement, 68 Fed. Reg. at 62,644 ("If there will be no significant impact as a result of the proposed action, it follows that an EJ review would not be necessary."). Since the proposed contention fails to identify a significant impact on a minority or low-income population different from the impact to the population-at-large, it does not demonstrate a genuine dispute implicating environmental justice considerations and NEPA. Therefore, proposed Contention 3.1, on the whole, fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi), and should be rejected.

While the proposed contention is inadmissible for the reason discussed above, Petitioners also raised a series of sub-contentions that are discussed individually below.

a. Distortion of Minority and Low-Income Populations

(1) *Minority Population*

First, Petitioners charge that the ER understates the levels of minority representation and poverty in Claiborne County and thus falsely minimizes the impacts on the minority and low-income community. Contentions at 18. This portion of the proposed contention is inadmissible because the Petitioners have neither identified a genuine dispute on a material issue of fact or law nor shown that the contention, if proven, would entitle Petitioner to any relief. 10 C.F.R. § 2.309(f)(1)(vi); 10 C.F.R. § 2.309(f)(1)(iv). The Petitioners claim that SERI distorts the minority populations surrounding the Grand Gulf site by failing to note the exact level of minority

population inside the 10-mile radius emergency planning zone (n.b. plume exposure and ingestion emergency planning zones have no bearing on NEPA assessments, rather they are safety artifacts under the Atomic Energy Act). However, as noted by the Petitioners, the ER does acknowledge the areas where minority representation is greater than 50 percent.[28] *See* ER, Figure 2.5-6, 2.5-7. Once that threshold for conducting a in-depth environmental justice review is exceeded (as SERI acknowledges in its application), the precise demographics of a given area are not critical; instead, the focus of the environmental justice review shifts to assessing the impacts on the minority populations.[29] Because the ER correctly identifies "minority populations" and conducts an in-depth environmental justice review, there is no effective relief that could be granted. Additionally, the Petitioners have not provided any information asserting that the application failed to identify a specific minority community. Thus, the Petitioners have not demonstrated that the Applicant's identification of minority populations is inadequate and has not identified a genuine dispute regarding the identification of minority populations in the ER. Therefore, the proposed contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi) and should be rejected.

(2) *Low-Income Population*

The Petitioners further assert that the ER distorts the levels of low-income population in the affected area by failing to follow the guidance of LIC-203.[30] Contentions at 18. This portion of the

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[28] he Staff guidance considers a minority or low-income population to be present if: 1) the minority or low-income population in the census block groups or environmental impact site exceeds 50 percent, or 2) the minority or low-income population is significantly greater (typically at least 20 percentage points) than the minority or low-income population percentage in the geographic area chosen. NRR Office Instruction, LIC-203, "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues" at D-8, D-9.

[29] For example, using LIC-203, minority populations of 50%, 60% and 84% would all trigger an environmental justice review.

[30] Although the ER used state-wide poverty levels instead of poverty levels for an overall geographic area that encompasses all of the alternative site geographic areas as urged by Petitioners, the ER nevertheless identifies low-income populations in the area surrounding the (continued...)

proposed contention is inadmissible because the Petitioners have neither identified a genuine dispute on a material issue of fact or law nor shown that the contention, if proven, would entitle Petitioner to any relief. 10 C.F.R. § 2.309(f)(1)(vi); 10 C.F.R. § 2.309(f)(1)(iv). Since the purpose of identifying the low-income and minority populations is to aid in assessing potentially significant impacts to those communities, whether an area is defined as low-income or minority is effectively inconsequential as long as the review ultimately considers impacts unique to those communities. Because the ER identifies "low-income populations" and conducts an in-depth environmental justice review covering both low-income and minority communities, there is no effective relief that could be granted. Thus, even if the Petitioners are correct that the low-income population is distorted, they would not be entitled to any relief because the ER already considers impacts to the minority and low-income communities throughout the affected area. In its application, once SERI acknowledged the need to do an EJ analysis, the review shifted focus to an assessment of the impacts to a low-income population rather than concentrating on formulating ever more precise census statistics. Additionally, the Petitioners have not provided any information asserting that the application failed to identify a specific low-income community.

Accordingly, the portion of the proposed contention that asserts that the ER understates the levels of minority representation and poverty in Claiborne County is inadmissible because it fails to demonstrate an issue that would entitle Petitioner to any relief. 10 C.F.R. § 2.309(f)(1)(iv).

b. Failure to Address Environmental Impacts Peculiar to the Minority and Low-Income Population

Petitioners assert that the ER fails to address the environmental impacts of the proposed

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[30](...continued)
proposed site. ER at § 2.5.4. In addition, there is no regulatory requirement prescribing the use of a particular geographic scope for comparison and certainly not for emergency planning zones. *See e.g.*, Draft Policy Statement, 68 Fed. Reg. 62644-45 ("[N]umerical guidance is helpful" in identification of EJ communities, but the procedural guidelines for EJ review should allow for "flexibility"). Moreover, the SERI did consider environmental justice in its evaluation of alternative sites. *See* ER at § 9.3.5.

reactor(s) in light of the "factors peculiar to" the minority and low-income community Claiborne County. Contentions at 12-13. According to the Petitioners, "the ER fails to address the fact that, by virtue of the simple factor of its close proximity to the proposed reactor(s), the minority and low-income community bears the highest risk of injury and illness as a result of severe accidents at the proposed facility." *Id*. at 13. However, this portion of the proposed contention does not raise a genuine issue of material fact or law because the Petitioners have provided no information to support their assertion that minority or low-income populations surrounding the proposed reactor face any special, unique or particularized impacts apart from those faced by the general population. Under NEPA, the purpose of the EJ review is "to become aware of the demographic and economic circumstances of local communities where nuclear facilities are to be sited, and take care to mitigate or avoid *special impacts* attributable to the *special character* of the community." *PFS*, 56 NRC at 156 (emphasis added). Thus, the focus of the EJ review should be on "identifying and weighing disproportionately significant and adverse environmental impacts on minority and low-income populations that *may be different from the impacts on the general population*." Draft Policy Statement, 68 Fed. Reg. at 62,644 (emphasis added).

As the Petitioners recognize, the ER does evaluate the potential environmental, human health and socioeconomic impacts on the minority and low-income populations. *See* ER, § 5.8.3.2. Petitioners, however, claim that the ER fails to consider the impacts of severe accidents and offsite costs on the minority and low-income populations within the 10-mile radius emergency planning zone. Yet, the Petitioners do not provide any information to suggest that the impacts of severe accidents on the adjacent minority and low-income populations are unique, special, or particularized relative to the general population surrounding the proposed site. The Petitioners simply do not describe a nexus between the effect on minority and low-income populations and factors affecting risk in a severe accident, *e.g.*, meteorology and demography (the factors mentioned by Petitioners). Absent any indication that there are impacts peculiar to the minority or

low-income populations, the portion of the proposed contention that relates to "factors peculiar to" minority and low-income populations is inadmissible because the Petitioners have not demonstrated that a material dispute exists. Therefore, the contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi), and it should be rejected.

c. County Government's Ability to Respond as a Result of Poverty and an Alleged Discriminatory Tax Policy

Third, the Petitioners contend that the "ER fails to address the fact that the Claiborne County government is particularly unprepared to respond to a radiological emergency or security threat at the proposed reactor(s), as a result of the high level of poverty in the county and the effects of a discriminatory tax policy that sends most of the tax revenue from Grand Gulf out of Claiborne County." Contentions at 13. This portion of the proposed contention is inadmissible since it fails to show that a genuine dispute exists regarding the adequacy of emergency preparedness, constitutes a generalization of Petitioners' views on what regulatory standards it believes should apply, and is otherwise outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(vi); 10 C.F.R § 2.335(a); 10 C.F.R. § 2.309(f)(1)(iii).

In support of its assertion, Petitioners point to alleged shortages of funding and equipment at various agencies that are responsible for responding to an emergency at Grand Gulf, including local fire, police, and hospital services. Contentions at 23-25. However, at the ESP stage, SERI is only required to "include a description of contacts and arrangements with local, state and federal governmental agencies with emergency planning responsibilities." 10 C.F.R. § 52.17(b)(3).[31] To satisfy this requirement, SERI provided letters from various Claiborne County officials who indicated a willingness to work with SERI to extend the current emergency planning arrangement to a new facility. *See* Emergency Planning Information, Appendix A, "Agency Letters of Agreement." In these letters prepared as part of the ESP application, some of the same officials

[31] SERI did not select the option set forth in 10 C.F.R. § 52.17(b)(2)(ii).

who provided declarations in support of Petitioners' assertion that Claiborne County is particularly unprepared to respond to a radiological emergency indicate that they are "aware of no significant impediments to the development and implementation of emergency plans for the site." *See* Letters of Agreement for Sheriff Frank Davis, Appendix A at 9, and Claiborne County Hospital Administrator Wanda C. Fleming, Appendix A at 18. In addition, as noted in the ER, "[I]f the new facility at the GGNS ESP Site increased the demands on local police and fire departments, the additional burden could be mitigated through the addition of police or fire staff, additional vehicles, and building new facilities or improvements and additions to existing facilities . . . Costs incurred by local fire and police departments would likely be offset by the additional tax revenues generated by plant personnel living in the affected community, and through tax revenues generated by the operation of a new facility." ER, § 5.8.2.3.3.

Finally, as discussed previously, Petitioners allege that "Claiborne County Sheriff's Department, fire department, and hospital, have grossly insufficient resources and personnel to respond to a radiological emergency at Grand Gulf." Contentions at 32. To the extent this basis for the proposed contention challenges the adequacy of the existing emergency planning for Grand Gulf Unit 1, which has not been demonstrated, it is outside the scope of this proceeding. In addition, to the extent the contention alleges that offsite emergency planning will be insufficient after adding a new facility, the Petition fails to demonstrate that the Applicant's showing is deficient under 10 C.F.R. § 52.17(b)(3) and further fails to demonstrate a genuine dispute regarding the ability of offsite agencies to address emergency preparedness because they have provided no factual information or expert testimony to challenge the Applicant's conclusion that adequate emergency plans can be developed. *See* 10 C.F.R. § 2.309(f)(1)(v). For the reasons described above, this portion of the contention is inadmissible.

With respect to the assertions regarding the effects of a discriminatory tax policy, that portion of the contention is inadmissible as outside the scope of the proceeding.

10 C.F.R. § 2.309(f)(1)(iii). The Commission has declared that NEPA "[does] not call for an investigation into the disparate economic benefits as a matter of environmental justice." *PFS*, 56 NRC at 154. Even though money (or social services) might make it easier to tolerate environmental impacts, "nothing" in NEPA suggests "that a failure to receive an economic benefit should be considered tantamount to a disproportionate environmental impact." *Id*. Moreover, since an "agency inquiry into a license applicant's supposed discriminatory motives or acts would be far removed from NEPA's core interest: the physical environment—the world around us, so to speak," an inquiry into a state's tax policy motives is even more removed. *LES*, 47 NRC at 102 (citation omitted). "NEPA is simply not the vehicle, and the NRC not the forum, for resolving the question of whether a state's tax policies are discriminatory." *PFS*, 56 NRC at 159. Accordingly, the portion of the proposed contention that relates to effect of the state's tax policy on Claiborne County's ability to respond to radiological emergency or security threat is inadmissible because it is outside the scope of the proceeding. Therefore, the contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii), and it should be rejected.

d. Disparity of Distribution of Economic Benefits

The Petitioners assert that the ER makes no attempt to evaluate the disparity in distribution of economic benefits yielded from a potential reactor because most of the tax revenue from a new reactor would go to the State of Mississippi and other county governments and because most of the jobs will go to people who live outside Claiborne County. Contentions at 13. This portion of the proposed contention is inadmissible because it is outside the scope of the proceeding. 10 C.F.R. § 2.309(f)(1)(iii). As discussed above, "the executive order, and NEPA generally, do not call for an investigation into disparate economic benefits as a matter of environmental justice," and should look instead to disparate environmental harm—NEPA's "core interest." *PFS*, 56 NRC at 153-54. Here, the Petitioners mistakenly focus on the distribution of the economic benefits (i.e. tax revenue and jobs) of the proposed reactor rather than the environmental effects.

Since a "failure to receive an economic benefit should not be considered tantamount to a disproportionate environmental impact," the Petitioners have not raised an issue that is cognizable under NEPA. *Id*. at 154. Therefore, the contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1), and it should be rejected.

e. Effect of Adding Reactors on Property Values and Overall Economic Health

Petitioners also assert that the ER fails to consider the effect of adding two reactors to the Grand Gulf site on property values and the overall economic health of Claiborne County. Contentions at 13. To the contrary, the ER discusses the effect of adding new reactors on the economic health of the minority and low-income community and concludes that the effect will be positive due to increased employment opportunities and tax revenues. ER, § 5.8.3.2.3. In addition, Petitioners have provided no information to support its assertion that a new reactor(s) will lead to a "predictable decline in property values and the economic health of the area." Contentions at 13. A bald assertion that a matter ought to be considered is not a sufficient basis to admit a contention. *Private Fuel Storage* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998). Thus, this portion of the proposed contention is inadmissible because it fails to provide a statement of the alleged facts or expert opinion to support its assertion that the property values and economic health of the county will decline. 10 C.F.R. § 2.309(f)(1)(v). In the absence of factual information or expert opinion demonstrating a genuine dispute on a material issue, the contention lacks the necessary basis required by 10 C.F.R. § 2.309(f)(1)(ii), and should be rejected.

f. Failure to Weigh the Costs on Minority and Low-Income Populations Against the Benefits

Lastly, the Petitioners assert that the ER "fails to weigh the costs of the proposed reactor(s) to the minority and low-income community against the benefits to the community, or to examine alternatives that would lessen the impact of the facility and/or distribute the costs and benefits more

equitably." Contentions at 13-14. For support, the Petitioners note that the evaluation of alternative sites and energy sources did not take environmental justice issues into account. As an initial matter, contrary to the Petitioners' assertions, the ER does address the environmental impacts to minority and low-income groups in the evaluation of the alternative sites and energy sources. *See* ER at § 9.2.2.5.5 (coal-fired generation); § 9.2.2.6.4 (gas-fired generation); § 9.3.5 (preferred site selection); and § 9.3.6.1.5 (greenfield alternative site). Thus, an alleged failure to consider environmental justice in weighing alternatives cannot form the basis of the proposed contention. Also, to the extent this portion of the proposed contention seeks to discuss the distribution of benefits more equitably, it is outside the scope of the proceeding for the reasons discussed *supra*.

As to the portion of the proposed contention that asserts failure to weigh the costs and benefits to the minority and low-income communities surrounding the Grand Gulf site, the Petitioners do not demonstrate that a genuine dispute exists on a material issue because Petitioners have not provided sufficient information to show that the impact on the minority or low-income populations are disproportionately high and adverse. The ER is required, as part of the NEPA analysis, to consider "environmental justice implications only when the disparate environmental impacts are 'high and adverse'" relative to the general population. *PFS*, 56 NRC at 154 (citing E.O. 12898, § 1-101); Draft Policy Statement, 68 Fed Reg. at 62,644. Since the Petitioners do not claim that SERI failed to take into account high and adverse impacts to the minority and low-income communities relative to the remaining population, the contention does not demonstrate a genuine dispute of a material issue. Therefore, the contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi), and it should be rejected.

D. Contention 3.2: Inadequate Discussion of Severe Accident Impacts

> The ER's discussion of severe accident[s] is inadequate, because it relies on the findings and conclusions of NUREG-1437, Vol. 1, the Generic Environmental Impact Statement for License Renewal of

> Nuclear Power Plants (1996) ("NUREG-1437"), without providing specific design information that would justify the applicability of the NUREG.

Contentions at 12.

As a basis for the proposed contention, Petitioners assert that the ER is deficient because it incorporates the findings and conclusions of the "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants," NUREG-1437 (1996)("NUREG-1437"), which contains a generic evaluation of the impacts of severe accidents based on plant-specific data (*see* NUREG-1437, § 5.3.3), without justifying its applicability. Contentions at 27-28. In explaining this argument, Petitioners refer to informal Staff guidance in two letters from James E. Lyons, NRC, to Dr. Ronald Simard, Nuclear Energy Institute ("NEI"), dated April 1, 2003, and June 25, 2003 (Petitioners' Exhibit 3.1-2 and Exhibit 3.1-3, respectively)("Staff letters"). *See id*. at 28-29. The Staff letters set forth the Staff's views on how an applicant for an ESP should treat in an ER previous generic and plant-specific environmental impact statements ("EISs"), such as NUREG-1437 or NUREG-0974, "Limerick 1 and 2 Operating License," assessing the impacts of severe accidents. *See* Petitioners' Exhibit 3.2-2 at 2; Petitioners' Exhibit 3.2-3 at 2. Petitioners complain that the application does not follow the guidance in the Staff letters on how an applicant should treat the evaluation of severe accidents in the context of a request for an ESP. *See* Contentions at 29-30. In addition, Petitioners protest that the application "fails to justify the use of NUREG-1437" at all. *Id.* For these reasons, Petitioners conclude that "SERI's severe accident analysis is fatally deficient." *Id*. at 30.

Staff Response:

The Staff opposes admission of the proposed contention because, as explained below, (1) the guidance in the Staff letters is not binding, and merely describes one method for complying with NRC requirements, and (2) the basis for the proposed contention is flawed, in that Petitioners fail to identify a genuine dispute with the information the Applicant does provide in the ER

explaining why it relies on NUREG-1437 in its severe accident analysis.

1. Failure to follow NRC guidance does not equate to failure to meet NRC requirements.

Petitioners' complaint that the Applicant has failed to justify the applicability of the severe accident analysis in NUREG-1437 to its application because it assertedly did not follow the guidance in the Staff letters on how to do so flies in the face of settled NRC case law as follows: NRC guidance documents are not legally binding regulations. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001)("PFS"). A guidance document is advisory in nature, and does not itself impose legal requirements on either the Commission or an applicant. *See Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 397 (1995). A licensee is free either to rely on NRC guidance or to "take alternative approaches to meet legal requirements (as long as those approaches have the approval of the Commission or NRC Staff)." *Id.* at 397. Accordingly, the Applicant's asserted failure to follow the guidance in the Staff letters with respect to the applicability of the severe accident analysis in NUREG-1437 to the ESP application does not establish that the Applicant has failed to demonstrate such applicability of NUREG-1437. Therefore, Petitioners have not demonstrated that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

2. The basis for the proposed contention lacks specificity, since it does not dispute specific information set forth in the application that is material to the proposed contention.

As set forth above, the Petitioner must "read the pertinent portions of the license application, . . .[and] state the applicant's position and the petitioner's opposing view." *Millstone*, CLI-01-24, 54 NRC at 358. In an attempt to address this requirement, the Petitioners cite ER Section 7.2.2 as providing "only broad generalizations in support of the applicability of NUREG-1437, related to the characteristics of the site, whether regulatory controls can be

assumed to work, and whether plant lifetime has an effect on risk." Contentions at 30. Petitioners then outline the portions of the NRC guidance they cite and believe have not been met, but fail to identify any specific statement in the ER, much less dispute it. *Id*. The Applicant's ER, however, does set forth a framework for applying the severe accident analysis in NUREG-1437 to the ESP application, as set forth below.

The Staff summarizes the rationale set forth in the ER as follows: first, the ER indicates that the method for measuring severe accident risk used in NUREG-1437 also applies in the context of an ESP. Specifically, the ER states that "[t]he GEIS [Generic Environmental Impact Statement, NUREG-1437] use of severe accident risk per reactor-year of operation as the principal metric for evaluating severe accident environmental impacts and the assumption that this risk remains constant over the life of the plant are equally applicable and appropriate in the license renewal context as in the ESP and COL contexts." ER, § 7.2.2 at 7.2-2. The Applicant connects this measure to an ESP review through the "Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants," 50 Fed. Reg. 32,138 (Aug. 8, 1985) ("Severe Accident Policy Statement"), which stated the Commission's expectation that new plants would achieve a higher standard of severe accident safety performance than prior designs. *See id*., § 7.2.5 at 7.2-7. The Applicant refers to NRC staff findings on the Advanced Boiling Water Reactor, System 80+, and AP600 designs, which are design certifications codified as Appendices A, B, and C to 10 C.F.R. Part 52, as evidence that the Commission's expectations set forth in its Severe Accident Policy Statement have been borne out. *See id*., at 7.2-8.

Second, the Applicant states in the ER that it recognizes that "the changing environment around the plant is not subject to regulatory controls" but states that this is addressed since the "site-specific environmental considerations (population and meteorology) are evaluated in the GEIS" as further described in the ER. *Id*., § 7.2.2 at 7.2-2. As set forth in the ER, the Applicant, using future population estimates, then evaluates the atomospheric exposure pathway. *See id*.,

§ 7.2.2.1 at 7.2-4. Specifically, the Applicant calculates the exposure index ("EI") defined in NUREG-1437 for a new power plant at the proposed Grand Gulf ESP site, and compares this EI with the EI's for the existing units and other current plants, which are documented in NUREG-1437. *See id*., § 7.2.2.1 at 7.2-3. Next, the Applicant evaluates the atmospheric fallout onto surface water and groundwater exposure pathways. *See id*., §§ 7.2.2.2, 7.2.2.3. The Applicant reasons that the values of pertinent environmental parameters "have been identified in the GEIS for the GGNS site" and that "[t]hese same parameters are applicable for the GGNS ESP site (since [they] are generally constant for a given site, and no major changes have been identified that would impact [them]) . . . . " *Id*., § 7.2.2.2 at 7.2-5. Finally, the Applicant summarizes the results of the evaluation of economic impacts of severe accidents in NUREG-1437, and argues that "this evaluation and conclusion is broadly applicable to beyond the license renewal context" as are the other aspects of NUREG-1437. *Id*., § 7.2.4 at 7.2-7.

Based on the foregoing rationale, SERI claimed that the severe accident risk of any new plant that might be built on site will be equivalent to or lower than that of the existing units, and bounded by the evaluation in NUREG-1437. Petitioners, however, do not specifically mention, much less dispute, any one of these statements in the ER. Accordingly, Petitioners fail to "state the applicant's position and the petitioner's opposing view," as required by *Millstone*, 54 NRC at 358. Petitioners, therefore, fail to provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact with respect to Contention 3.1, and the Board should reject it.[32]

E. Contention 3.2.1: Failure to Evaluate Whether and in What Time Frame Spent Fuel Generated by Proposed Reactors Can Be Safely Disposed Of

[32] The Staff has summarized the ER only to show that Petitioners have not met their burden to demonstrate the admissibility of Contention 3.1. The Staff is evaluating the ER, and has made no determination on the validity or acceptability of the Applicant's statements therein, including the Applicant's rationale summarized above in the Staff response to Contention 3.1.

> The ER for the Grand Gulf ESP is deficient because it fails to discuss the environmental implications of the lack of options for permanent disposal of the irradiated (i.e, "spent") fuel that will be generated by the proposed reactors if they are built and operated. Nor has the NRC made an assessment on which SERI can rely regarding the degree of assurance now available that radioactive waste generated by the proposed reactors "can be safely disposed of [and] when such disposal or off-site storage will be available." Final Waste Confidence Decision, 49 Fed. Reg. 34,658 (August 31, 1984), citing State of Minnesota v. NRC, 602 F.2d 412 (D.C. Cir. 1979). Accordingly, the ER fails to provide a sufficient discussion of the environmental impacts of the proposed new nuclear reactors.

Waste Confidence Contentions at 2.

> Contention 3.2.1: Even if the Waste Confidence Decision Applies to This Proceeding, It Should be Reconsidered.[33]
> Even if the Waste Confidence Decision applies to this proceeding, it should be reconsidered, in light of significant and pertinent unexpected events that raise substantial doubt about its continuing validity, *i.e.*, the increased threat of terrorist attacks against U.S. facilities.

Waste Confidence Contentions at 6-7.

Staff Response:

Petitioners' contentions are inadmissible. Petitioners' Contention 3.2.1.a constitutes an impermissible challenge to the Commission's regulations. *See* 10 C.F.R. § 2.335(a) (generally prohibiting attack on Commission regulations in adjudicatory proceedings).[34] This is because the contention is based on concerns associated with the ultimate disposal of spent fuel. These concerns have been generically addressed by the Commission through rulemaking. *See* 10 C.F.R. § 51.23(a). Since the Commission has decided to generically address matters

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[33] Although the Petitioners have numbered both of their contentions identically, the Staff herein addresses the contentions separately since they seem to advance different arguments. Also, for clarity the Staff has renumbered the first and second Contention 3.2.1 as 3.2.1.a and 3.2.1.b accordingly.

[34] The narrow circumstances under which regulations may be waived during an adjudication are addressed *infra*.

related to the ultimate disposal of spent fuel through rulemaking, Petitioners cannot, in an adjudicatory proceeding, attack the pertinent rule. *See* 10 C.F.R. § 2.335(a) ("[N]o rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding subject to this part.").

As basis for Contention 3.2.1.a, the Petitioners make several assertions.[35] First, the Petitioners argue that SERI's ER is "fatally deficient" because it does not address ultimate disposal of spent fuel. Waste Confidence Contentions at 2 (citing *Minnesota v. NRC*, 602 F.2d 412, 416-17 (D.C. Cir. 1979)).[36] Additionally, Petitioners argue that the Commission's determinations regarding ultimate disposal of spent fuel are "inapplicable because [they] concern[] plants that are currently operating, not new plants." Contentions at 2. Further, the Petitioners argue that "[t]he Commission gives no indication that it has confidence that repository space can be found for spent fuel and other high-level radioactive waste from new reactors licensed after December of 1999." *Id.* at 3. Lastly, the Petitioners assert that the Commission has not expressed confidence that additional repository space will be made available for the ultimate disposal of waste generated by a new generation of reactors. *See id.* at 3-6.

None of the bases advanced by the Petitioners regarding the ultimate disposal of spent fuel

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[35] Notably, the Petitioners fail to address at all the Commission's rule resolving waste disposal matters generally, 10 C.F.R. § 51.23.

[36] Although the Petitioners cite *Minnesota v. NRC* to support their argument that SERI's ER is fatally flawed for failing to address ultimate disposal of spent reactor fuel, the reference is inapposite. In *Minnesota v. NRC*, the Court of Appeals for the D.C. Circuit remanded to the Commission the issue of ultimate disposal of spent fuel in a case involving two license amendments. *Minnesota,* 602 F.2d at 419. The D.C. Circuit, however, did not reverse the agency's determination that the amendments should be issued. *Id.* at 418. Rather, the court held that the petitioners were not entitled to an adjudicatory proceeding on issues related to the disposal of spent fuel and that the NRC "could properly consider the complex issue of nuclear waste disposal in a 'generic' proceeding such as a rulemaking, and then apply its determinations in subsequent adjudicatory proceedings." *Id.* at 416. Since the NRC has engaged in the rulemaking envisioned by the D.C. Circuit in the *Minnesota* decision, the reference to the case by the Petitioners is misplaced. In fact, the case envisions that the NRC would apply 10 C.F.R. § 51.23(a) in future proceedings such as the instant adjudicatory proceeding.

addresses the Commission's controlling regulations regarding ultimate disposal of spent fuel and high-level waste. However, the Commission's regulations clearly state that:

> The Commission has made a generic determination that, if necessary, spent fuel generated in *any* reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation . . . of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of *any* reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

10 C.F.R. § 51.23(a) (emphasis added). As stated in the regulation, the Commission does not qualify its ultimate finding on the disposal of spent fuel. In fact, the Commission states that it has confidence that waste generated by "any" reactor will be safely disposed of. *See id.* The word "any" suggests no limitation of time or kind. Thus, the distinctions advanced by the Petitioners (*i.e.*, that the Commission's consideration of ultimate disposal solely addressed the current fleet of reactors and not a new generation of reactors) are simply incorrect. The regulation does not reflect that the Commission's findings regarding ultimate disposal of high-level waste and spent fuel from "any" reactor was intended to exclude new reactors. Therefore, in light of the plain language of the rule,[37] the Petitioners' argument that new reactors are not covered by the Commission's finding is

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[37] In addition to the Commission's plain language in the rule (*i.e.*, that it has confidence that "any" reactor's spent fuel will be disposed of safely), an examination of the Commission's statements made at the time it issued its most recent amendments to 10 C.F.R. § 51.23(a) provides further evidence that the Petitioners' assertions are inaccurate. Even though the Petitioners argue that the Commission's findings (and, by inference, the regulations) did not address new plants and failed to address additional repository space for spent fuel generated by new reactors, the Commission's "Review and Final Revision of Waste Confidence Decision" clearly reflects the contrary. *See* 55 Fed. Reg. 38,474, 38,501, 38,502, 38,503-04 (1990). For example, while performing its review of the Waste Confidence Decision, the Commission stated:

> The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of [the current

(continued...)

without merit.

In the alternative, the Petitioners argue that, if the Board rules that the Commission's determination regarding waste confidence applies in this proceeding, the rule's validity should be reconsidered. *See* Waste Confidence Contentions at 7. As basis for their proposition that the current rule is no longer viable, the Petitioners refer to statements made by the Secretary of Energy regarding the Department of Energy's ("DOE") proposed Yucca Mountain repository.[38] *Id.* at 8. Additionally, the Petitioners assert that the terrorist attacks of 9/11 should cause the Board to revisit the validity of the Commission's rule and "whether nuclear power should be phased out as quickly as possible." *Id.* at 7-8.

The Petitioners' alternative contention likewise is inadmissible. As discussed above, under the Commission's regulations the Board is without authority to consider, as the Petitioners have proposed, the validity of a regulation promulgated by the Commission. *See* 10 C.F.R. § 2.335.

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[37](...continued)

> fleet of] reactors' OLs. The same would be true of the spent fuel discharged from *any new generation of reactor designs.*

Id. at 38,504 (emphasis added). In light of the Commission's statements cited above, it is evident that, contrary to Petitioners' blanket assertions, the Commission did consider the disposal of spent fuel from a new generation of operating reactors when it amended 10 C.F.R. § 51.23(a). Thus, the Petitioners have failed to provide legitimate bases for their allegations that SERI's ER is deficient.

[38] Petitioners' reference to the Secretary of Energy's statements as a basis for their assertion that the Board should reconsider the current validity of the Commission's regulation is unavailing. *See Yankee Rowe*, LBP-96-2, 43 NRC at 90 ("A document put forth by an intervenor as the basis for a contention is subject to scrutiny both for what it does and does not show."). Although the Petitioners rely on statements made by the Secretary of Energy to support their assertion that the Commission's waste confidence findings should be revisited, an examination of those statements, however, reveals that the statements support the Commission's finding that the federal government will endeavor to provide for the ultimate disposal of spent fuel and high level waste at a centrally-located repository. *Compare* Waste Confidence Decision Review: Status, 64 Fed. Reg. 68,005, 68,007 (Dec. 6, 1999) (finding that no major shifts in national policy have occurred that would cause the Commission to revisit its waste confidence findings) *with Yucca Mountain Repository Development: Hearing on S.J. Res. 34 Before the Committee on Energy and Natural Resources United States Senate*, 107th Cong. 15 (2002) (prepared statement of Spencer Abraham, Secretary of Energy) (reaffirming, on homeland security grounds, that the federal government intends to proceed with the repository program).

This is the case whether a petitioner's attack on the regulations is based on concerns related to 9/11 or any other concerns.

The Commission has provided litigants in an adjudicatory proceeding subject to 10 C.F.R. Part 2 the opportunity to request that a Commission rule or regulation "be waived or an exception made for the particular proceeding." 10 C.F.R. § 2.335(b). The Commission has specified that "[t]he sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." *Id.* The Commission requires that any request for such waiver or exception "be accompanied by an affidavit that identifies . . . the subject matter of the proceeding as to which application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." *Id.* Additionally, "[t]he affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested." *Id.*

In the instant case, the Petitioners have failed to establish that they meet any of the requirements imposed by the Commission on litigants wishing that a rule be waived or an exception be granted.[39] *See* Waste Confidence Contentions 7-9. They have failed to establish that application of the Waste Confidence Rule in this particular proceeding would not serve the purpose for which the rule was adopted. To the contrary, 10 C.F.R. § 51.23 reflects, on its face, that the rule was designed to dispense with the need for NRC adjudications to address the impacts associated with the ultimate disposal of spent fuel and high-level waste.

For the reasons described above, the proposed contentions relating to waste confidence issues are inadmissible.

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[39] Particularly, the Petitioners have failed to show any special circumstances or provide an affidavit to support a request for the rule to be set aside in the instant proceeding. *See* 10 C.F.R. § 2.335(b) (requiring that a party moving to suspend applicability of a rule must plead certain special circumstances and support their argument with an affidavit).

F. Contention 4.1: Emergency Planning Deficiencies

> SERI's ESP application is inadequate because it fails fully to identify "physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site that could pose a significant impediment to the development of emergency plans." 10 C.F.R. § 52.17(b)(1). In particular, Part 4 of the ESP application, entitled "Emergency Planning Information," fails to identify the significant impediment to the development of emergency plans posed by the gross inadequacies in offsite emergency response facilities, including the Claiborne County Sheriff's Department, the Claiborne County Fire Department, and the Claiborne County Hospital.

Contentions at 31.

Staff Response:

Contention 4.1 is inadmissible because it fails to raise an issue material to the findings that the NRC must make to support the ESP permit and is outside the scope of the proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iv); 10 C.F.R. § 2.309(f)(1)(iii). In this proposed contention, the Petitioners assert that SERI has not complied with the Commission's requirements of 10 C.F.R. § 52.17(b)(1), contending that the Claiborne County Sheriff's Department, fire department, and hospital, have grossly insufficient resources and personnel to respond to a radiological emergency at Grand Gulf. Contentions at 32. However, Petitioners erroneously equate the county's economic characteristics, *i.e.*, lack of resources, with the requirements of 10 C.F.R. § 52.17(b)(1) which require the ESP application to identify the "physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site that could pose a significant impediment to the development of emergency plans." The site criteria at 10 C.F.R. Part 100 clarify that "physical characteristics" of a site "include seismology, meteorology, geology and hydrology." 10 C.F.R. § 100.20(c). Financial considerations are not included in that definition. Supplement 2 to NUREG-0654/FEMA-REP-1, "Criteria for Emergency Planning in an Early Site Permit Application," describes some additional physical characteristics necessary to support an ESP application such as transportation networks, topographical features and the effects of adverse

weather conditions, *e.g.*, the potential for flooding or seasonal impassability of roads. There is nothing to suggest that economic information on county agencies, including available resources, is a "physical characteristic" of the site.[40] Accordingly, the proposed contention is inadmissible as outside the scope of the proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

Furthermore, while the Petitioners correctly note that the Commission must make a determination that "there is no significant impediment to the development of emergency plans," Contentions at 31, they fail to acknowledge that Section 52.18[41] explicitly associates the Commission's findings with the information submitted pursuant to Section 52.17(b)(1), *i.e.*, the physical characteristics of the site. The regulation states that "[t]he Commission shall determine, after consultation with the Federal Emergency Management Agency, whether the information required of the applicant by § 52.17(b)(1) shows that there is no significant impediment to the development of emergency plans."[42] The "no significant impediment" finding explicitly references impediments that were identified as physical characteristics of the site, not economic characteristics or resources available to Claiborne County agencies. Thus, the proposed contention is inadmissible because the Petitioners do not raise an issue material to the findings that the NRC must make with respect to the ESP permit. 10 C.F.R. § 2.309(f)(1)(iv).

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[40] While the financial health and ability of Claiborne County emergency personnel to respond to a radiological incident is outside the scope of an ESP proceeding, such issues would nevertheless be addressed at the combined license ("COL") stage when the staff reviews the actual emergency plans to determine whether reasonable assurance exists that adequate protective measures can and will be taken in the event of a radiological emergency at the site. *See* 10 C.F.R. § 52.79(d). Consideration of such issues at the ESP stage would be premature.

[41] Although Petitioners cite to 10 C.F.R. § 52.19, they presumably intended to cite 10 C.F.R. § 52.18.

[42] The three separate findings in § 52.18 are all explicitly limited to the information submitted pursuant to § 52.17. *See* 10 C.F.R. § 52.18 (connecting the "no significant impediment" finding to the information submitted in § 52.17(b)(1), the "major feature are acceptable" finding to the information submitted in § 52.17(b)(2)(i), and the "reasonable assurance" finding to the information submitted in § 52.17(b)(2)(ii)).

In addition, the Staff opposes the admission of the proposed contention of the grounds that it does not set forth sufficient information to show that a genuine dispute exists regarding the Applicant's discussion of site characteristics that could present an impediment to developing emergency plans. *See* 10 C.F.R. § 2.309(f). In its application, SERI discusses the physical features of the site and provides an analysis of possible impediments to implementation of protective actions. *See* Emergency Planning Information, § 2.0. Yet, the proposed contention fails to challenge any portion of the physical description of the site contained in the application as an error or omission with regard to a specific physical characteristic or associated impediment. Accordingly, the Staff opposes the admission of this contention on the additional grounds that it fails to demonstrate a genuine dispute on an issue of fact as required of contentions pursuant to 10 C.F.R. § 2.309(f)(1)(vi).

Finally, as discussed previously, Petitioners allege that "Claiborne County Sheriff's Department, fire department, and hospital, have grossly insufficient resources and personnel to respond to a radiological emergency at Grand Gulf." Contentions at 32. To the extent this basis for the proposed contention challenges the adequacy of the existing emergency planning for Grand Gulf Unit 1, it is outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii).

For the reasons above, the proposed contention lacks the requisite regulatory or factual basis and should be rejected.

CONCLUSION

For the foregoing reasons, the Staff submits that the Petitioners' contentions are inadmissible. Therefore, Petitioners' request to intervene in the instant hearing should be denied.

Respectfully submitted,

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/RA/
Tyson Smith
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Dated at Rockville, Maryland
this 28th day of May, 2004

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

In the Matter of	)	
	)	
SYSTEM ENERGY RESOURCES, INC.	)	Docket No. 52-009-ESP
	)	
(Early Site Permit for Grand Gulf ESP Site)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC STAFF'S RESPONSE TO PETITIONERS' CONTENTIONS REGARDING THE EARLY SITE PERMIT APPLICATION FOR THE GRAND GULF SITE" in the above-captioned proceeding have been served on the following by electronic mail and with copies by deposit in the Nuclear Regulatory Commission's internal mail system, or, as indicated by an asterisk (*), through electronic mail with copies by deposit in the U.S. Mail on this 28th day of May, 2004:

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