UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	**Docket Nos. 52-025-COL and 52-026-COL**
Southern Nuclear Operating Company	)	
	)	
(COL Application for Vogtle Electric Generating Plant, Units 3 and 4)	)	**November 6, 2009**

SOUTHERN NUCLEAR OPERATING COMPANY'S ANSWER
OPPOSING MOTION TO AMEND CONTENTION

In accordance with 10 C.F.R. §§ 2.309 and 2.323, and the Atomic and Safety and Licensing Board's ("Board" or "ASLB") Order dated December 2, 2008,[1] Southern Nuclear Operating Company ("SNC" or "Applicant") hereby answers "Joint Intervenors' Motion to Amend Contention Safety-1" submitted on October 23, 2009 ("Motion"). As explained below, Joint Intervenors ("JIs") do not provide any regulatory basis for their assertion that SNC must provide more detail than is included in the proposed Final Safety Analysis Report ("FSAR") revisions, and fail to dispute a material fact as 10 C.F.R. § 2.309(f)(1)(i) and (iv) require or to offer the adequate factual basis or expert opinion that 10 C.F.R. § 2.309(f)(1)(v) requires for the amended contention to be admitted. For these reasons, JIs' Motion must be denied in its entirety.

I. BACKGROUND

On March 28, 2008, SNC submitted an application to the Nuclear Regulatory Commission ("NRC" or "Commission") for a combined license ("COL") for Vogtle Units 3 and 4 ("COLA").[2] The COLA references SNC's Early Site Permit ("ESP"), which was issued on August 17, 2009. The NRC published a Notice of Hearing and Opportunity to Petition for Leave

[1] Memorandum and Order (Initial Prehearing Order), *Southern Nuclear Operating Co.*, Docket Nos. 52-025-COL and 52-026-COL (Dec. 2, 2008), at 6 n.6 ("Initial Prehearing Order").

[2] Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 24,616 (May 5, 2008).

to Intervene in the COL proceeding in the *Federal Register* on September 16, 2008.[3] On November 17, 2008, JIs filed their Petition to Intervene in this COL proceeding.

A. Procedural History of Contention Safety-1

The ASLB admitted contention Safety-1 on March 5, 2009.[4] As admitted, it stated:

> SNC's COLA is incomplete because the FSAR **fails to provide any detail** as to how SNC will comply with NRC regulations governing storage of LLRW in the event an off-site waste disposal facility remains unavailable when VEGP Units 3 and 4 begin operations.[5]

NRC Staff issued a Request for Additional Information ("RAI") on August 24, 2009. On September 23, 2009, SNC responded, including proposed revisions to the COLA FSAR describing the means by which SNC planned to manage LLRW at the Vogtle 3 and 4 site. SNC has not yet amended the FSAR. On October 23, 2009, JIs moved to amend Safety-1 based on the RAI response and seeks to transform Safety-1 from a contention of omission to one alleging inadequacy:

> SNC's COLA is incomplete because the FSAR **fails to provide adequate detail** as to how SNC will comply with NRC regulations governing storage of LLRW in the event an off-site waste disposal facility remains unavailable when VEGP Units 3 and 4 begin operations.[6]

B. SNC's Response to RAI-39 and Associated Proposed Revisions to the FSAR

RAI-39 requested the following information:

> 11.04-1: In Standard COL 11.4-1, the applicant states that "no additional onsite radwaste storage is required beyond that described in the DCD." Please explain why this statement is included or remove it.
>
> 11.04-2: In Section 11.4 of NUREG-1793, the staff states that if a need for onsite storage of low-level waste has been identified beyond that provided in AP1000 Standard Design because of unavailability of offsite storage, the applicant should submit the details of any proposed onsite storage

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[3] *See* Southern Nuclear Operating Company *et al.*; Notice of Hearing and Opportunity to Petition for Leave to Intervene, 73 Fed. Reg. 53,446 (Sept. 16, 2008) ("Hearing Notice").

[4] *See* Memorandum and Order (Ruling on Standing and Contention Admissibility), *Southern Nuclear Operating Co.*, Docket Nos. 52-025-COL and 52-026-COL (March 5, 2009) ("Order Admitting Safety-1").

[5] *Id.* at Appendix A (emphasis added). "Contention SAFETY-1 is a contention of omission." *Id.* at 22.

[6] Motion, at 2-3 (emphasis added).

> facility to the NRC. Please provide any arrangements for offsite storage for low-level waste or submit plans for onsite storage.

In response to RAI-39, SNC confirmed that "additional onsite storage facilities are *not* a part of the COLA plans [] consistent with … DCD Subsection 11.4.2.1, which provides that 'the AP1000 has sufficient radwaste storage capacity to accommodate the maximum generation rate' and…'provide[s] more than a year of spent resin storage at the expected rate [of generation].'"[7] SNC also explained that offsite storage capacity is available. Currently, EnergySolutions' Clive, Utah facility accepts Class A LLRW and certain processors offer to take possession and/or title to Class B and C waste and then transfer the waste to the Waste Control Specialists Texas Site (or similar sites that may be developed) for storage until permanent disposal is available. Moreover, the commercial option to directly ship waste to the Texas Site for storage is currently available.[8] Accordingly, SNC plans to ship its LLRW for offsite storage or disposal rather than placing it in onsite contingency storage, as directed by NUREG-0800, Appendix 11.4-A.[9]

SNC intends to revise FSAR Section 11.4.2.4 to add Section 11.4.2.4.3, explaining the percentage of LLRW that is Class B and C is 5% (approximately 100% of which is wet). SNC expects disposal facilities to be available for this waste when Units 3 and 4 begin operation. If disposal facilities are unavailable, and the storage provided in the DCD is insufficient, SNC plans to use vendor services to process and store the Class B and C waste, or ship it directly to the vendor for storage. "[A]s part of contingency planning SNC is currently in plant-specific discussions with a vendor of LLRW treatment and storage services."[10]

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[7] SNC Response to NRC RAI-39 (ND-09-1540), Docket Nos. 52-025 and 52-026 (Sept. 23, 2009), at 2. SNC's Response to RAI-39 is attached hereto as Exhibit A, and is ADAMS Accession Number ML092680023.

[8] *Id.* at 2. The Texas facility has been licensed by the Texas Department of Environmental Protection to accept Class B and C waste for storage. *Id.*

[9] Standard Review Plan (NUREG-0800), Revision 3 (Mar. 2007). Appendix 11.4-A is the Design Guidance for Temporary Storage of Low-Level Radioactive Waste ("LLRW") (cautioning that "waste should not be placed in contingency storage if it can be disposed at a licensed disposal site").

[10] SNC Response to NRC RAI-39, at 4.

If all of these planned processes do not provide adequate storage, SNC's proposed site-specific FSAR revisions commit SNC to construct and/or expand onsite storage facilities (or use another licensed nuclear plant's facility). SNC identified the applicable regulatory guidance for expanding onsite LLRW storage as an additional contingency plan if sufficient offsite storage or disposal options are unavailable. SNC's onsite contingency plan includes the key design and program features set out by the EPRI Guidelines Report and NRC guidance documents.[11]

SNC's proposed revision to FSAR 11.4.6.3 describes the means by which it would manage radioactive exposures from LLRW within Part 20 limits. SNC's site-specific contingency plan includes information that (1) the outside storage pad for LLWR will be located within a security fence in the Owner Controlled Area and the material from which it will be constructed; (2) the subject LLRW will be stored in high integrity containers inserted into concrete storage containers designed to comply with Part 20 requirements; (3) 100% of Class B and C waste will be wet; (4) requirements for periodic inspection and testing that will be conducted during operation; and (5) the design storage capacity based on expected generation over the plant's life, to be added in phases depending on the availability of SNC's primary plan for waste storage and disposal.[12]

Accordingly, SNC's response to RAI-39 describes the means SNC commits to use to manage LLRW in sufficient detail to comply with NRC regulations and guidance. SNC has provided a plant-specific contingency plan for expanding onsite LLRW storage capacity (including the key design and program features potentially required by the regulatory guidance) and commitments to construct the facilities and follow the applicable regulations in the event the contingency plan to construct or expand onsite storage is implemented.

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[11] *Id*. at 4.

[12] *Id.* at 4. SNC proposed adding FSAR Sections 11.4.6.3.1 and 11.4.6.3.2, and additional references to Section 11.4.7. These sections provide more detail not repeated in this Answer.

II. ARGUMENT

A. JIs Offer No Legal Authority Requiring the FSAR to Contain Detail Additional to That Provided by SNC.

JIs' amended contention must satisfy the requirements of 10 C.F.R. § 2.309(f)(1) in order to be admitted in this proceeding. As described below, the proposed amendment to the contention fails to create a genuine dispute on an issue of fact or law material to the Commission's decision on the COLA, and fails to provide adequate support in the form of fact evidence or expert opinion. Accordingly, JIs' Motion must be denied and the amended contention dismissed.

1. 10 C.F.R. Part 20 Does Not Require SNC to Provide a Detailed Design of the Potential Onsite Storage Facility.

Pursuant to 10 C.F.R. § 52.79(a)(3), a COL applicant is required to show "the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in [10 C.F.R. Part 20.]" In admitting Safety-1, a contention of omission, the ASLB ruled that the intent expressed in SNC's COLA to use expanded LLRW storage facilities on the Vogtle 1 and 2 site did not describe, or contain an actual plan to use, that facility.[13] SNC's response to RAI-39 proposes to amend the Vogtle 3 and 4 FSAR to include a commitment to construct onsite storage compliant with Part 20 requirements if and when a need for such onsite storage is identified. JIs now argue that construction level details are necessary to demonstrate SNC's compliance. However, COL applicants must only comply with 10 CFR § 52.79(a)(3), which only requires that the COLA describe "the means" by which the applicant will comply with Part 20. COLAs are not required to provide detailed storage facility designs, especially for contingent facilities. In the *PPL Bell Bend* COLA proceeding, the ASLB recognized that a general description of the intent to construct onsite storage facilities was adequate: "[t]he Commission's regulations do not dictate the duration and capacity for onsite LLRW storage that COL applicants must provide.

[13] Order Admitting Safety-1, at 26-27.

Applicants must simply comply with [10 C.F.R.] Part 20 dose limits."[14] PPL Bell Bend's COLA stated only that its additional onsite storage would be built in accordance with NRC guidelines, "would have 'minimal' impacts and 'would provide appropriate protection against releases, maintain exposures to workers and the public below applicable limits'" and, in response, the Board in that proceeding stated: "We fail to see any omission in the Application on the LLRW issue, *nor have [Petitioners] shown that this plan is inadequate*."[15]

2. The ASLB's Order Admitting Safety-1 Does Not Require Additional Detail.

JIs fail to cite any regulatory authority for their position that detailed design information is required in the COLA. JIs cite the Order Admitting Safety-1 as requiring SNC to adopt an "actual plan for longer-term LLRW storage" and have "more than a 'concept'" for the FSAR provisions regarding onsite storage to be adequate.[16] JIs misconstrue the ASLB's Order, which did not rule on the merits of Safety-1 or require a particular level of detail, but focused on SNC's commitment to provide an onsite storage option if needed. The ASLB explained, "the discussion [in the FSAR] make[s] it clear that what is *being considered* is no more than a 'concept' that *lacks SNC's adoption* as an actual plan[.]"[17] The ASLB stated "we do not see how, if offsite disposal for LLRW remains unavailable, a COL applicant could address compliance with [Part 20] limits in accordance with section 52.79(a)(3) without addressing *what it intends to do* with the LLRW[.]"[18] SNC's proposed revisions do that as a matter of law and should moot Safety-1

[14] *In re PPL Bell Bend, LLC*, LBP-09-18, 70 NRC __ (Aug. 10, 2009) (slip op. at 45) (citation omitted). That Contention was environmental, but the Board's opinion was based on § 2.309, applicable to environmental and safety contentions, so it is germane to the admissibility of the amended contention. *Id.* at 24-25.

[15] *Id.* at 27 (emphasis added). *PPL Bell Bend* also distinguishes *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-04, 69 NRC __ (Mar. 24, 2009), which JIs here also cite. *Id.*

[16] Motion, at 3-4.

[17] Order Admitting Safety-1, at 26-27.

[18] *Id.* at 24 (emphasis added).

as soon as the FSAR is amended. Specifically, SNC's commitment to provide onsite storage is the actual contingency plan for the absence of offsite storage or disposal.[19]

The ASLB's only arguable references to the level of detail it expected were (1) "the single sentence in the FSAR referring to the 'planned VEGP Units 1 and 2 [LLRW] Storage Facility' without more, would not seem to provide the level of detail necessary to determine whether SNC's plan … would comply with 10 C.F.R. Part 20 limits;" and (2) "[i]t also is not clear why, if the matter of LLRW storage sufficiency is significant enough to merit some staff discussion in the context of the Vogtle Units 1 and 2 renewal proceeding, it does not deserve equivalent treatment in the SNC COLA for Vogtle Units 3 and 4."[20] SNC's response to RAI-39 clearly addresses both of the ASLB's concerns, first by noting the 10 C.F.R. Part 20 requirements and applicable regulatory guidance, and second by describing the means by which the expanded storage capacity would meet 10 C.F.R. Part 20 requirements.[21]

B. SNC's Proposed FSAR Revisions Satisfy 10 C.F.R. § 52.79(a)(3).

In response to RAI-39, SNC satisfied the requirement in 10 C.F.R. § 52.79(a)(3) that a COLA describe "the means for controlling and limiting radioactive" exposures within Part 20 limits. SNC's response follows NUREG-0800, Section 11.4 Appendix 11.4-A, the Standard Review Plan for approval of an onsite storage facility, which SNC is not seeking at this time, making NUREG-0800 merely instructive.[22] NUREG-0800 discourages temporary storage in favor of offsite disposal, and indicates that licensees should plan their facilities with the duration of intended storage and new offsite disposal sites in mind.[23] SNC has followed NUREG-0800's

[19] SNC Response to NRC RAI 39, at 5.

[20] Order Admitting Safety-1, at 26-27.

[21] SNC Response to NRC RAI 39, at 5-7.

[22] Appendix 11.4-A makes clear that the detailed design plans JIs seek are not necessary until implementation. NUREG-0800, Appendix 11.4-A at 11.4-25 ("Before implementing any additional onsite storage capacity…").

[23] *Id.* at 11.4-26. The NRC has expressed preference for disposal over storage since at least 1990. Info. Notice No. 90-09: Extended Interim Storage of LLRW by Fuel Cycle and Materials Licensees (Feb. 5, 1990), at 3.

guidance, focusing first on offsite disposal and storage options, and relying on onsite temporary storage only if necessary.

The proposed revisions describe the plan based on NUREG-0800 although the need for onsite storage is speculative.[24] SNC describes the means by which the potential onsite storage will comply with Part 20, meeting the only regulatory requirement applicable to COL applicants in this area, 10 C.F.R. § 52.79(a)(3). Commitments to follow regulations, rather than being "lip service" as charged by JIs, will be subject to NRC's inspection and enforcement program. Further, under section 50.59, SNC may construct the onsite storage without NRC approval, meaning the specific design details are not material to any decision the ASLB must make in this proceeding.[25] SNC's recognition of the applicable regulations for onsite LLRW storage and its commitment to follow them in the event such a need arises is sufficient under section 52.79(a)(3).[26]

C. Joint Intervenors Fail to Satisfy the Requirements of 10 C.F.R. § 2.309(f) for a Contention Alleging Inadequacy of the COLA.

JIs presumably intend to avoid the dismissal of Safety-1 for mootness by converting it to a contention alleging inadequacy.[27] In order to support a contention of inadequacy, however, 10 C.F.R. § 2.309(f)(1) requires the JIs to identify the provisions of SNC's FSAR which it disputes, how those facts are material to the findings the Commission must make, and provide factual or

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[24] *Compare supra* Section I.B. of this Answer *with* NUREG-0800, Appendix 11.4-A.

[25] NRC Regulatory Issue Summary 2008-32: Interim [LLRW] Storage at Reactor Sites (Dec. 30, 2008), at 3-4 (explaining that licensees do not need a separate licensing approval but only need to perform the required licensee evaluation in 10 C.F.R. § 50.59 before adding additional onsite storage); *In re Va. Elec. and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 315 (2008) ("To satisfy [§] 2.309(f)(1)(iv) … the subject matter of the contention must impact the grant or denial of a pending license application.").

[26] *See PPL Bell Bend* at 27; *In re Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-99-32, 50 NRC 115, 158-60 (1999) (citing *Public Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-734, 18 NRC 11 (1984) ("[Applicant] declares that…the focus of the staff's review is the *commitments contained* within the QA plan, *not the details of the implementing methodology that may be developed at a later date*…[W]e … conclude[] that the matters of QA plan detail…appear to have been adequately addressed[.]")).

[27] *See* Motion at 5. "To satisfy Section 2.309(f)(1)(i)-(ii), the contention of omission must describe the information that should have been included … and provide the legal basis that requires the omitted information[.]" *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-04, 2009 WL 1492096, *10, (Mar. 24, 2009) *aff'd*, CLI-09-20, __ NRC __ (Oct. 13, 2009).

expert support for their position.[28] The JIs Motion does not present any evidence, or even assert, that any of the measures described by SNC in its RAI response are inadequate to contain exposures from LLRW within Part 20 limits and, therefore, do not raise a dispute as to a material fact pursuant to 10 C.F.R. § 2.309(f)(1)(i) and (iv). "[T]here must be some significant link between the claimed deficiency and the agency's ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment" in order for a contention to satisfy § 2.309(f)(1)(iv).[29]

Section 2.309(f)(1)(v) requires that JIs "[p]rovide a concise statement of the alleged facts or expert opinions which support the [JIs] 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 [JIs] intend[] to rely to support [their] position on the issue[.]"[30] JIs offered no expert opinion or regulatory requirements and references essentially limited to only quotations to RAI-39 and SNC's response, neither of which provide any basis for an inadequacy contention supporting JIs argument.[31] In fact, other than vague references to "10 C.F.R. Parts 20 and 52,"

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[28] *See* 10 C.F.R. § 2.309(f)(1)(i) and (iv).

[29] *In re Va. Elec. and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC at 315 (citations omitted); s*ee also In re South Carolina Elec. and Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-02, 69 NRC 87, 98 (2009) (contention inadmissible because Petitioner "has not *contradicted* a single item" in the COLA after Applicant showed where each allegedly omitted item was included); *In re Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Unit 3), 67 NRC 421, 433 (2008), *aff'd* CLI-08-17, 68 N.R.C. 231 (2008) ("Any contention that fails *directly to controvert* the application … can be dismissed."); *In re Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 322 (2006) ("[I]n the absence of any more specific statement … *showing how the specific actions of Applicant fall short* … we find the contention fails to show any genuine dispute on a material issue of fact...") (emphasis added throughout).

[30] *In re Calvert Cliffs 3 Nuclear Project, LLC* (Combined License Application for Calvert Cliffs Unit 3), LBP-09-04, 2009 WL 1492096 at *21 ("[B]ald assertion that … a factual dispute exists is not sufficient; rather, a petitioner must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention. Without providing supporting sources or expert opinion to justify the need for additional ... analysis, Joint Petitioners have not met the requirements of 10 C.F.R. § 2.309(f)(1)(v).").

[31] *In re Duke Energy Carolinas, LLC* ([COL] for William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 2008 NRC LEXIS 107, *13-14 (Sept. 22, 2008) ("[A]ny contention that fails to controvert the application directly … is defective. A petitioner cannot demonstrate the existence of a genuine issue of material fact by simply restating information provided in the application and asserting that further analysis is required.").

JIs cite only one ASLB opinion other than the Orders in this docket.[32] "[A] mere reference to a regulation, without explaining its significance or establishing any connection to the proffered contention, does not serve as a basis for the admissibility of any contention."[33] JIs have not met the mandate in section 2.309(f)(1)(v) to provide supporting information for the amended contention because they have not shown any regulatory basis for their bare assertion that additional detail is necessary.

III. CONCLUSION

For the foregoing reasons, SNC respectfully requests that the Board deny the Motion.

Respectfully submitted,

Signed (electronically) by M. Stanford Blanton

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COUNSEL FOR
SOUTHERN NUCLEAR OPERATING COMPANY

Dated this 6th day of November, 2009.

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[32] *In re Nuclear Management Co.* (Palisades Nuclear Plant), 63 NRC 314, 341 (2006) (citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990)) ("An allegation that some aspect of a license application is "inadequate" … does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement..."). The one Board opinion cited has been distinguished from the question at issue here. *See supra* note 15.

[33] *In re USEC* (Am. Centrifuge Plant), LBP-05-28, 62 NRC 585, 599 n.39 (2005), *aff'd by* CLI-06-10, 63 NRC 451 (2006). The *USEC* ASLB explained "PRESS presents, as one of its bases … direct excerpts from [the regulations]. In no instance does PRESS provide any discussion related to its reference to the regulations." JIs have taken a similar approach here, only making bare citations to 10 C.F.R. Part 20, without any explanation as to how that regulation controls what level of detail is required for a contingency plan in an FSAR.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	**Docket Nos. 52-025-COL and 52-026-COL**
Southern Nuclear Operating Company	)	
	)	
(COL Application for Vogtle Electric Generating Plant, Units 3 and 4)	)	**November 6, 2009**

CERTIFICATE OF SERVICE

I hereby certify that copies of SOUTHERN NUCLEAR OPERATING COMPANY'S ANSWER OPPOSING MOTION TO AMEND CONTENTION in the above-captioned proceeding have been served by electronic mail as shown below, this 6th day of November, 2009, and/or by e-submittal.

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*And upon any other persons designated on the official service list compiled by the Nuclear Regulatory Commission in this proceeding.

(Original signed by M. Stanford Blanton)

M. Stanford Blanton
Counsel for Southern Nuclear Operating Company

Dated this 6th day of November, 2009.

EXHIBIT A

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SEP 23 2009

SOUTHERN COMPANY
Energy to Serve Your World℠

Docket Nos.: 52-025
52-026

ND-09-1540

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application
Response to Request for Additional Information Letter No. 039

Ladies and Gentlemen:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application for combined licenses (COLs) for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to the U.S. Nuclear Regulatory Commission (NRC) for two Westinghouse AP1000 reactor plants, in accordance with 10 CFR Part 52. During the NRC's detailed review of this application, the NRC identified a need for additional solid waste management system information required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Section 11.4, "Solid Waste Management." By letter received August 24, 2009, the NRC provided SNC with Request for Additional Information (RAI) Letter No. 039 concerning this solid waste management information need. This RAI letter contains two RAI questions numbered 11.04-01 and 11.04-02. The enclosure to this letter provides the SNC response to these RAIs.

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061.

D092
NRO

Mr. Charles R. Pierce states he is the AP1000 Licensing Manager of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

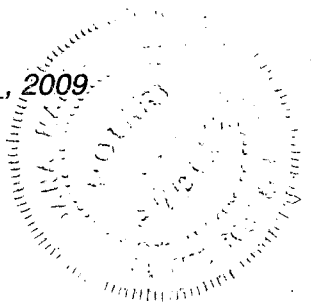
SOUTHERN NUCLEAR OPERATING COMPANY

Charles R. Pierce

Sworn to and subscribed before me this 23rd *day of* September, *2009*

Notary Public: Dana M. Williams

My commission expires: 12/29/2010



CRP/BJS/dmw

Enclosure: Response to NRC RAI Letter No. 039 on the VEGP Units 3 & 4 COL Application Involving the Solid Waste Management System

cc: Southern Nuclear Operating Company
Mr. J. H. Miller, III, President and CEO (w/o enclosure)
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Southern Nuclear Operating Company

ND-09-1540

Enclosure

Response to NRC RAI Letter No. 039

on the

VEGP Units 3 & 4 COL Application

Involving the

Solid Waste Management System

FSAR Section 11.4, Solid Waste Management System

eRAI Tracking No. 3463

NRC RAI Number 11.04-01:

In Standard COL 11.4-1, the applicant states that "no additional onsite radwaste storage is required beyond that described in the DCD." Please explain why this statement is included or remove it.

SNC Response:

The referenced statement is provided to address the portion of the COL information item in DCD Subsection 11.4.6 that states "In the event additional onsite storage facilities are a part of Combined License plans, this program will include a discussion of conformance to Generic Letter GL-81-038," and the statement in Regulatory Guide 1.206 (page C.1II. 1-137), "In the event that additional onsite storage facilities are a part of COL plans, include a discussion of conformance to GL-81-038. Supplemental guidance is provided in SECY-94-198." The statement is intended to confirm that additional onsite storage facilities are *not* a part of the COLA plans and is consistent with the discussion in DCD Subsection 11.4.2.1, which provides that "the AP1000 has sufficient radwaste storage capacity to accommodate the maximum generation rate" and that the "spent resin storage tanks . . . and one high integrity container . . . provide more than a year of spent resin storage at the expected rate [of generation]." Accordingly, the statement establishes that no discussion of additional onsite storage facilities is necessary. However, because plant-specific issues have been raised in the VEGP COLA proceeding concerning long-term storage arrangements for LLRW, a plant-specific contingency plan for expansion of on-site LLRW storage capacity is described in the response to RAI 11.4-2.

While the applicant does not currently have agreements for acceptance of Class B and C low-level waste at an offsite disposal facility, Congress enacted the Low-Level Radioactive Waste Policy Amendments Act (LLRWPAA) of 1985 to ensure that disposal capacity would be available for all types of LLRW generated by Atomic Energy Act (AEA) licensees. Although no facility licensed for the disposal of all classes of LLRW is currently available to the applicant, plant-specific offsite long term storage options are in the process of being developed, as described below.

As indicated in NUREG-0800, Appendix 11.4-A, waste should not be placed in contingency storage if it can be disposed of at a licensed disposal site. Currently the Clive, Utah facility accepts Class A LLRW. Licensees may enter into agreements with licensed waste processors to take possession and/or title to material, process and transfer it to the Waste Control Specialists (WCS) Texas Site, or similar sites that might become available in the future where it would be stored until a disposal site is available. This option was demonstrated in June 2009 with utility waste storage at the WCS Texas Site.

The first unit is not scheduled to load fuel and begin operation for several years and will not be generating Class B and C waste until after initial operation. By that time, it is expected that a disposal facility will be available that would accept the Class B and C waste generated by this plant.

Shipping waste at the earliest practicable time minimizes the need for waste reprocessing caused by potential changes in a disposal facility's requirements, reduces occupational and non-occupational exposures from handling and maximizes the amount of onsite storage space available for use. The commercial option to store Class B and C waste at the WCS Texas Site is expected to be available if needed.

This response is PLANT-SPECIFIC for VEGP.

Associated VEGP COL Application Revisions:

COLA Part 2, FSAR Chapter 11, Subsection 11.4.2.4 will be revised to add a new Subsection with the LMA of VEGP COL 11.4-2 to read:

Add the following after DCD Subsection 11.4.2.4.2:

11.4.2.4.3 Alternatives for B and C Wastes

It is expected that Class B and C wastes will constitute approximately 5 percent by volume of the low level radioactive waste (LLRW) that will be generated by the plant with the balance being Class A waste. The volume of wet Class B and C waste is approximately 100 percent of the total Class B and C Waste. As of July 1, 2008, the LLRW disposal facility in Barnwell, South Carolina is no longer accepting Class B and C waste from sources in states that are outside of the Atlantic Compact. However, the disposal facility in Clive, Utah is still accepting Class A waste from out of state. Should there be no disposal facilities that will accept the Class B and C wastes after the plant begins operation, there are several options available for storage of such waste:

- As provided in referenced DCD Subsection 11.4.2., the Auxiliary Building is designed to have more than a year of spent resin storage capacity at the expected rate and the spent resin tanks may be mixed to limit the radioactivity concentrations thereby limiting the volume of Class B and C wet waste requiring storage.
- Vendor services are available to process Class A, B, and C waste and transfer for storage of that material until a disposal site is available. Currently, Waste Control Specialists (WCS) of Texas is available to store Class A, B, and C material pending the availability of a licensed disposal site.
- If additional storage capacity were eventually needed, the plant could construct or expand storage facilities onsite or gain access to a storage facility at another licensed nuclear plant.

eRAI Tracking No. 3464

NRC RAI Number 11.04-02:

In Section 11.4 of NUREG-1793, the staff states that if a need for onsite storage of low-level waste has been identified beyond that provided in AP1000 Standard Design because of unavailability of offsite storage, the applicant should submit the details of any proposed onsite storage facility to the NRC. Please provide any arrangements for offsite storage for low-level waste or submit plans for onsite storage.

SNC Response:

As described in the response to RAI 11.04-01, the need for onsite storage of low-level waste in addition to that described in the AP1000 DCD is not expected, however as part of contingency planning SNC is currently in plant-specific discussions with a vendor of LLRW treatment and storage services regarding the provision of such services for VEGP 3 and 4 LLRW which would include off-site storage of LLRW pending the availability of a licensed disposal facility for such material.

In addition, SNC is providing a plant-specific contingency plan for expansion of on-site LLRW storage capacity. The guidance in NUREG-0800, Appendix 11.4-A, "Design Guidance for Temporary Storage of Low-Level Radioactive Waste" is followed. SNC will operate the onsite storage facility consistent with the guidance in Regulatory Issue Summary (RIS) 2008-32, 'Interim Low Level Radioactive Waste Storage at Reactor Sites' and EPRI TR 1018644, 'Guidelines for Operating an Interim On Site Low Level Radioactive Waste Storage Facility-Revision 1,' Final Report, February 2009. The RIS consolidates relevant information and clarifies previous NRC regulatory positions on low-level radioactive waste storage. The NRC, as described in RIS 2008-32, finds the EPRI technical report guidelines to be consistent with NRC information contained in Generic Letter (GL) 81-38, "Storage of Low-Level Radioactive Wastes at Power Reactor Sites," GL 85-14, "Commercial Storage at Power Reactor Sites of Low-Level Radioactive Waste Not Generated by the Utility," Information Notice (IN) 89-13, "Alternate Waste Management Procedures in Case of Denial of Access to Low-Level Waste Disposal Sites," and SECY 94-198, "Review of Existing Guidance Concerning the Extended Storage of Low-Level Radioactive Waste" and other guidance such as NUREG-0800, which includes Appendix 11.4-A. The EPRI Guidelines Report was found to provide an 'acceptable method for recordkeeping, determining waste forms and waste containers and monitoring and inspecting the interim long-term storage of' Class A, B, and C LLRW.

The EPRI Guidelines Report includes a start-up evaluation of key design and program features of a storage facility that should be performed prior to storing low-level waste. The SNC key design considerations and program elements for an outside storage facility are based on the EPRI Guidelines Report and NRC guidance documents. By identifying the key elements of design, operation features, and the bases for those items, the FSAR revision includes sufficient detail for a potential onsite storage facility.

This response is PLANT-SPECIFIC for VEGP.

Associated VEGP COL Application Revisions:

COLA FSAR Subsection 11.4.6.3 Long Term On-Site Storage Facility will be revised from:

VEGP SUP 11.4-1 Storage space for six-month's volume of packaged waste is provided in the radwaste building. Radioactive waste generated by VEGP Units 3 and 4 will normally be shipped to a licensed disposal facility. However, should disposal facilities not be available, the planned VEGP Units 1 and 2 Low Level Radwaste Storage Facility will be available to provide storage for VEGP Units 3 and 4.

To read:

VEGP SUP 11.4-1 11.4.6.3 Long Term On-Site Storage Facility

Storage space for six-month's volume of packaged waste is provided in the radwaste building. Radioactive waste generated by VEGP Units 3 and 4 will normally be shipped to a licensed disposal or off-site storage facility. However, should disposal facilities or off-site storage facilities not be available, storage capacity will be expanded as described below to provide additional on-site storage for VEGP Units 3 and 4.

Additional on-site low-level radioactive waste (LLRW) storage capabilities are available if Class B and C waste cannot be disposed at a licensed disposal facility. An outside storage pad will be utilized to provide this capability. The VEGP Units 3 and 4 LLRW storage facility would be located outside the Protected Area (PA) in the Owner Controlled Area (OCA). The storage facility would be enclosed by an eight-foot high fence with locked gates and would be provided with area lighting. The storage of LLRW would be in high integrity containers (HICs) or other suitable containers that will not decay over time, which would be stored within shielded containers. The design of the storage facility will comply with the guidance of documents as identified in this section which is consistent with NUREG-0800, Appendix 11.4A. The design storage capacity is based on the expected generation in Table 11.4-1, industry experience that indicates approximately 100% of the Class B and C waste is expected to be in the form of wet waste, and volume minimization/reduction programs. The site waste management plan will include radioactive wet waste reduction initiatives for waste Class B and C.

The storage facility will be sited such that it could be sized to accommodate storage of Class B and C waste over the operating life of the plant and designed to accommodate future expansion as needed. Capacity would be added in phases based on the expected availability of off-site treatment and storage, and disposal facilities.

11.4.6.3.1 Outside Storage Pad Design Considerations

The following design considerations would be applied to the on-site LLRW storage facility: (References 202, 203, and 204):

- The location of the storage pad would meet the dose rate criteria of 40 CFR 190 and 10 CFR 20.1302 for both the site boundary and unrestricted area. The onsite storage will be located such that any additional dose contributes less than 1 mrem per year to the 40 CFR Part 190 limits. Onsite dose limits will be

controlled per 10 CFR 20, including the ALARA principle of 10 CFR 20.1101.

- The outside storage pad would be an engineered feature designed to minimize settling and would be constructed of reinforced concrete or engineered gravel.
- The storage pad location would avoid natural or engineered surface drainage and be located at an elevation with regard to the site's design bases flood level.
- The storage pad would have a fence or other suitable security measures consistent with its location on the site.
- The waste containers (typically high integrity containers) would be stored inside of a shielded container, typically consisting of reinforced concrete containers that provide radiation shielding and weather protection.
- The configuration of the storage shields would be arranged to be accessible from the perimeter road or from a center aisle using a mobile crane (if used).
- Personnel passages would be provided between rows of storage shields for access to the container for inspection.
- Adequate electrical power and lighting would be provided at the storage facility to allow power for tools, analytical equipment, sample pumps, radiation instruments, boroscope lights, etc.
- Fire protection, fire hydrants or fire extinguishers, for vehicle fires should be provided.

11.4.6.3.2 Outside Storage Pad Operating Considerations

The following operating considerations for on-site storage pad operations are based on NRC and Industry guidance (References 202, 203 and 204) and would be included in operating procedures:

- Identification of the arrangement of storage shields, waste handling, storage methods, safety analysis limitations, accident conditions, and off site dose calculations.
- The use of hold-down devices to secure the waste container during severe environmental events, such as strong wind would be provided for, unless the waste container and storage shields can be demonstrated to remain in place without restraints during such events.
- The waste container selected for use is compatible with the waste form stored to ensure waste container integrity.
- Shielding requirements would be determined before the waste container is loaded into a storage shield to eliminate the radiation exposure associated with

adding additional shielding.

- If additional shield walls around the perimeter of the storage pad are required, the shield walls would be easily installed and capable of being moved.

- Periodic inspection and testing requirements for outside storage pad operation would include the following:

    - Dose rate and contamination surveys in accordance with health physics procedures.
    - Sampling of storage shields for water and storage shields containing dewatered resin for explosive gas build-up.
    - Visual inspection of selected waste containers in storage to detect unexpected changes / container integrity. (Remote inspection methods and the use of high integrity containers will allow reduced scope for ALARA practices.)
    - Defoliation and general condition of the onsite storage pad.

- Total radioactive material inventory limits would be established to demonstrate compliance with the design limits for the storage area, dose limits for members of the public and safety features or measures provided by the storage module.

- The contents of records for inventory controls, monitoring and inspection and other relevant data are maintained and retrievable.

- Operational safety features for handling waste containers and storage shields would include the training required for personnel operating cranes, forklifts, tie downs and heavy equipment during any waste container/storage shield transfer activity.

- Criteria for the end of storage period that would include waste container inspection and additional reprocessing required prior to shipment offsite.

COLA FSAR Subsection 11.4.7 REFERENCES will be revised by adding the following references:

202. Technical Report 1018644 "Guidelines for Operating an Interim On Site Low Level Radioactive Waste Storage Facility," Revision 1, EPRI, Palo Alto, CA, February 2009.

203. Regulatory Issue Summary 2008-32 "Interim Low Level Radioactive Waste Storage at Reactor Sites," December 2008

204 Generic Letter (GL) 81-38, "Storage of Low-Level Radioactive Wastes at Power Reactor Sites," November 1981.