

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before the Licensing Board:

G. Paul Bollwerk, III, Chairman  
Nicholas G. Trikouros  
Dr. James Jackson

In the Matter of )  
Southern Nuclear Operating Company, Inc. ) Docket Nos. 52-025 and 52-026 COL  
Vogtle Electric Generating Plant, ) ASLBP No. 09-873-01-COL-BD01  
Units 3 and 4 ) August 12, 2010  
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**PROPOSED NEW CONTENTION BY JOINT INTERVENORS  
REGARDING THE INADEQUACY OF APPLICANT'S  
CONTAINMENT/COATING INSPECTION PROGRAM  
[CORRECTED AUGUST 13, 2010]**

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Pursuant to 10 C.F.R. § 2.309(f)(2), Joint Intervenors Blue Ridge Environmental Defense League, Center for a Sustainable Coast, Georgia Women's Action for New Directions for Clean Energy, hereby submit a new contention challenging the adequacy of the combined operating license application ("COLA") submitted by Southern Nuclear Operating Company ("SNC"). Specifically, Intervenors contend that the proposed containment inspection will fail to determine whether corrosion or degraded coatings create an undue risk that holes, cracks or other through-wall penetrations of the

containments at the two reactors (“VEGP Units 3 and 4”) could foreseeably lead to outside leakage of radioactive material in the event of an accident.

As demonstrated below, this amended contention should be admitted because it is based on information not previously available to Joint Intervenors, the information now available is materially different than information previously available, and this motion is being submitted in a timely fashion.

## **I. BACKGROUND**

On March 28, 2008, SNC submitted a COLA to construct and operate Units 3 and 4 at the VEGP site. In response to this application, Joint Intervenors filed a petition for intervention on November 17, 2008, seeking to admit three contentions. By order dated March 5, 2009, the Atomic Safety and Licensing Board (the “Board”) admitted contention SAFETY-1; the Nuclear Regulatory Commission (the “NRC”) affirmed admission of SAFETY-1 on July 31, 2009.

On May 19, 2010, the Board granted SNC’s motion for summary disposition of SAFETY-1, thus leaving no admitted contentions. LBP-10-08.

In April of this year, a report was submitted to the Advisory Committee on Reactor Safeguards (“ACRS”) by Arnold Gundersen, a nuclear engineer in the employ of the AP1000 Oversight Group.<sup>1</sup> In his report Mr. Gundersen set forth his concerns regarding an unreviewed safety question regarding the ACRS’ pending review of the design of the AP1000 reactor. Specifically, Mr. Gundersen explained that the AP1000, because of its (1) lack of a secondary containment system and (2) unusually high vulnerability to chronic containment corrosion and containment-coating degradation, presents an unusually high risk, in the event of a reactor accident, of leakage to the

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<sup>1</sup> . Mr. Gundersen has been retained, separately, by the Joint Intervenors in the instant proceeding.

environment of radioactive materials. Two months later, Mr. Gundersen presented his concerns to the ACRS in person. There Mr. Gundersen explained that the corrosion problems require that the operator of any AP1000 reactor conduct an intensive inspection program to verify frequently that the integrity of the containment and any associated coatings have not been compromised.

In a transcript of that meeting released exactly 30 days ago, Harold B. Ray, Chairman of the ACRS, made a statement to the effect that issues relating to the need for inspections of the containment and containment coatings associated with the "AP1000" reactor design should be addressed not in the pending generic review of the AP1000 design by the ACRS, but within individual COL proceedings. Specifically, Chairman Ray stated:

CHAIRMAN RAY: Well the coating certainly is an important element of this whole system. And the points that you're making about accessibility for inspection are ones that we have yet to look at. And your input to us is helpful in focusing our attention on that.

I just made the point earlier, Mr. Runkle, that that will be taken up as part of the COL. So if you don't see it being discussed in the context of the DCD, it's because its there and not any other place.

Other things that you've raised about the offsite dose assumption and so on and so forth, those are more likely part of the DCD scope and have been there in that location.

I guess during the course of your presentation I've asked all the questions I have following reading your letter. You can tell that personally I'm more focused on this issue that you mentioned about the coating inspectability and the integrity of the coating, which is obviously

important.

Transcript at pp. 58-59.

This announcement by the ACRS Chairman amounts to a determination that questions regarding inspection of the containment and its coatings fall outside the purview of the ACRS's pending proceeding. Accordingly, Intervenors submit the following proposed contention for consideration in this proceeding.

## **II. PROPOSED CONTENTION SAFETY-2**

Joint Intervenors propose to litigate the following contention, suggested to be denominated "SAFETY-2":

SNC's COLA fails to demonstrate that VEGP Units 3 and 4 can be operated safely because the containment and containment-coating inspection regime proposed in the FSAR, *see* COLA at pp. 6.1-1 – 6.1-4, fails to provide assurance against corrosion-caused penetrations of the containment that would lead, in the event of an accident, to leakage to the environment of radioactive materials in excess of regulatory requirements.

## **III. COMPLIANCE WITH 10 C.F.R. § 2.309**

New contentions must satisfy the requirements of both 10 C.F.R. § 2.309(f)(1), concerning contentions in general, and 10 C.F.R. § 2.309(f)(2), concerning amended or new contentions. The proposed SAFETY-2 satisfies these requirements.

### **Compliance with 10 C.F.R. § 2.309(f)(1)**

SAFETY-2 complies with the provisions of 10 C.F.R. § 2.309(f)(1).

10 C.F.R. §§ 2.309(f)(1)(i) and (iii) –

The proposed contention comprises a challenge to the technical sufficiency of the FSAR (and the COLA), and it is properly within the scope of this proceeding. The attached declaration of Mr. Gundersen, attached as Exhibit 1, in conjunction with his

report to the ACRS (Exhibit 3), the associated Powerpoint presentation (Exhibit 4) and the excerpted transcript of the ACRS meeting demonstrate that the design of the AP1000 presents special risks of containment corrosion and coating failure, thus requiring that each plant receive special, intensive inspections that address the special circumstance faced by every plant. Mr. Gundersen has established that SNC's proposed visual inspections via access ports will be insufficient to protect the public health and safety; rather each AP1000 reactor requires visual, perhaps robotic inspections of the interior of the containments, too. Gundersen declaration at par. 41; Report to the ACRS, exh. 3, at 17.

10 C.F.R. § 2.309(f)(1)(ii) – The new contention is based on the FSAR's failure to satisfy the requirement in 10 C.F.R. 52.157 that an applicant demonstrate that, in the event of an accident, "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 entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE." Mr. Gundersen's declaration demonstrates that inadequacies in SNC's proposed inspection regime pose a high likelihood of causing a release well in excess of the regulatory threshold.

Similarly, Mr. Gundersen's declaration and supporting materials show that the COLA does not satisfy the requirements of General Design Criterion 53:

Criterion 53--Provisions for containment testing and inspection. The reactor containment shall be designed to permit (1) appropriate periodic inspection of all important areas, such as penetrations, (2) an appropriate surveillance program, and (3)

periodic testing at containment design pressure of the leaktightness of penetrations which have resilient seals and expansion bellows.

10 C.F.R. § 2.309(f)(1)(iv) – Joint Intervenors have shown, in Mr. Gundersen’s declaration and the supporting materials, that SNC’s proposed containment and coating inspection plan will not assure that the proposed reactors can be operated in a manner that is sufficiently protective of the public health and safety, or that complies with the regulatory provision set forth above. Thus, the contention is material to findings the NRC must make to support licensing.

10 C.F.R. § 2.309(f)(1)(v) – The explanation required by this provision is provided above and in the attached materials, such satisfying the requirements of this provision.

10 C.F.R. § 2.309(f)(1)(vi) – A genuine dispute exists as to whether SNC has provided sufficient evidence of the adequacy of its proposed containment and containment-coating inspection system.

**Compliance with 10 C.F.R. § 2.309(f)(2)**

Proposed contention SAFETY-2 complies with the provisions of 10 C.F.R. 2.309(f)(2).

10 C.F.R. § 2.309(f)(2)(i) – The proposed new contention is based on information that was released by the ACRS on July 13, 2010. Prior to this date, Petitioners had reasonably assumed that matters related to containment corrosion and containment-coating degradation would be addressed by the ACRS in its generic review of the AP1000. It was not until that date that there was any public record of ACRC Chairman Ray’s announcement that questions as to inspections should be raised and resolved in the

context of individual COL proceedings. *See generally Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999), *quoting Potomac Elec. Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974). “licensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.”

10 C.F.R. § 2.309(f)(2)(ii) – Research reveals no other source of information indicating that flaws in the design of the AP1000 call for unusually intensive inspections of the containment and its coatings. This information was delivered to the ACRS only four months ago. The recently published remarks by the ACRS members demonstrated, for the first time, that NRC personnel see the possible need for enhanced inspection regimes, tailored to the site-specific environmental conditions of every plant site.

10 C.F.R. § 2.309(f)(2)(iii) – The ACRS transcript was published only 30 days ago.

## **CONCLUSION**

For the foregoing reasons, Joint Intervenors respectfully request that the Board admit new contention SAFETY-2 for consideration in this proceeding.





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Dated: August 12, 2010  
[corrected copy filed August 13, 2010]

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