

**UNITED STATES OF AMERICA  
U.S. NUCLEAR REGULATORY COMMISSION**

In the Matter of:  
SOUTHERN NUCLEAR OPERATING CO.  
License Amendment Application for  
Combined Licenses NPF-91 and NPF-92  
Vogtle Electric Generating Plant Units 3 and 4  
Docket Nos. 52-025-LA-2 and 52-026-LA-2  
NRC-2008-0252-0057

October 11, 2016

**NOTICE OF APPEAL FROM ASLB'S DENIAL OF PETITIONER'S REQUEST  
FOR INTERVENTION AND A BRIEF SUPPORTING NOTICE OF APPEAL**

**I. Notice of Appeal**

Pursuant to 10 C.F.R. § 2.311(c), the Blue Ridge Environmental Defense League with its chapter Concerned Citizens of Shell Bluff (BREDL or Petitioner) hereby files this appeal from the Atomic Safety and Licensing Board's (ASLB) order issued September 15, 2016, erroneously denying Petitioner's hearing request and petition to intervene. LBP-16-10.

The basis for Petitioner's appeal is the extant violation of federal regulations at 10 CFR § 50.44 which requires technical analysis to support alterations of a combined operating license granted under Part 52, and the ruling in LBP-16-10. We pray the Nuclear Regulatory Commission (Commission) will grant this appeal.

**II. Brief in Support of Appeal**

Background

In accord with 10 C.F.R. § 2.309(f) and a notice published by the Nuclear Regulatory Commission at 81 Fed. Reg. 10920 (March 2, 2016), BREDL filed a petition

for leave to intervene and a request for a hearing in the above captioned matter on May 2, 2016. Petitioner's request for leave to intervene and a hearing were supported by an expert's affidavit. The basis for the Petitioner's request was a License Amendment Request ("LAR") by Southern Nuclear Operating Company, Inc. ("Southern Nuclear"). On September 15, 2016, the ASLB issued an order granting the Petitioner standing but denying the petition to intervene and request for a hearing, stating, "[W]e also conclude that its two proffered contentions are inadmissible, primarily because they amount to challenges to a certified reactor design, the Nuclear Regulatory Commission (NRC) licenses for Vogtle Units 3 and 4, and NRC regulations." LBP-16-10 at 1, 2. Petitioner's appeal is timely filed.

#### Rule Violated

10 CFR § 50.44(c)(5): Southern Nuclear failed to perform the obligatory analysis in support of its license amendment request. The violation of the law is clear: the licensee substituted its "engineering judgement" for an "analysis that demonstrates containment structural integrity," as required by Nuclear Regulatory Commission law and regulation. The federal rule states that an applicant *must* perform such an analysis.

#### Argument

The safety problem which prompted Blue Ridge Environmental Defense League's petition to intervene is an unaddressed risk of hydrogen explosion and damage to the Vogtle reactors now under construction. The license amendment request submitted by Southern Nuclear states: "Design reviews in 2011 identified a credible scenario in which the applicable plant damage state meets the core damage frequency cutoff to be considered as part of the severe accident analysis." LAR at Enclosure 1 at 4 of 19.

In their denial of BREDL's petition, the ASLB stated, "The concern with maintaining containment integrity led Southern Nuclear to propose adding the two new igniters to the IRWST roof vents." LBP-16-10 at 10. **Observe: Southern Nuclear did not seek a rule change, a change in the certified reactor design or an alteration of any generic safety factor; they chose instead a license amendment to the Plant Vogtle Units 3 and 4 combined operating license.** Consequently, Southern Nuclear's license amendment applies only to Plant Vogtle Units 3 and 4; likewise, BREDL's petition to intervene, and this appeal, apply only to the LAR at Vogtle Units 3 and 4.

The choice of requesting a design change to correct a safety flaw in the reactor was open to Southern Nuclear, but they have not availed themselves of that option. Nor have they sought a rule change to remove the obligation to do an analysis which demonstrates structural integrity of the nuclear reactors' containment buildings in the event of an accident releasing flammable hydrogen. In fact, had the licensee sought a generic change in the AP1000 design control document, Petitioner's brief would have had to be written from a wholly different perspective.

In sum, Southern Nuclear elected to seek a license amendment for Vogtle Units 3 and 4; Blue Ridge Environmental Defense League petitioned to intervene in the LAR for Vogtle Units 3 and 4 and no other. Therefore, the ASLB's order dismissing contentions 1 and 2 without a hearing is incorrect and has no basis in fact.

Further, the dismissal of Petitioner's proffered contentions by the ASLB without an evidentiary hearing denies the Commission the benefit of developing a full record on safety issues raised by both the licensee and the Petitioner. A thorough consideration of the facts and expertise placed before the ASLB by Petitioner in this matter would have

led to a safer and therefore preferable result; i.e., security in the knowledge that the supplementary hydrogen igniters are properly located. In making this appeal, the Petitioner submits that the record will sustain a result which is preferable to the one selected by the Atomic Safety and Licensing Board. In such cases, the Commission may substitute its judgment for that of the ASLB. *See Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B, & 2B), ALAB-367, 5 NRC 92 (1977); Duke Power Co. (Catawba Nuclear Station, Units 1 & 2), ALAB-355, 4 NRC 397, 402-405 (1976).*

BREDL's petition of May 2<sup>nd</sup> was carefully drawn to address the immediate problems raised by Southern Nuclear's request; i.e., the February 6, 2015 request for a license amendment and exemption regarding the installation of two additional hydrogen igniters each at Plant Vogtle Units 3 and 4. Petitioner's contentions did not challenge the location of the original 64 hydrogen igniters in the AP1000 certified design. The contentions are based solely on the proposed addition of two hydrogen igniters directly outside the In-containment Refueling Water Storage Tank and Southern Nuclear's reliance on engineering judgement in lieu of a thoroughgoing analysis. Under 10 CFR 50.44(c)(5), *Combustible gas control for nuclear power reactors*, such an analysis is required.<sup>1</sup> None has been done in this case. Engineering judgement is not analysis. Rather than performing a rigorous gaseous diffusion and flame propagation analysis, the licensee chose to place two hydrogen igniters in a "likely area" by relying upon the personal "engineering judgment" of its engineers. Reliance on engineering judgement

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<sup>1</sup> 10 CFR §50.44(c)(5) *Structural analysis*. An applicant must perform an analysis that demonstrates containment structural integrity. This demonstration must use an analytical technique that is accepted by the NRC and include sufficient supporting justification to show that the technique describes the containment response to the structural loads involved. The analysis must address an accident that releases hydrogen generated from 100 percent fuel clad-coolant reaction accompanied by hydrogen burning. Systems necessary to ensure containment integrity must also be demonstrated to perform their function under these conditions.

instead of rigorous testing and analysis results in an unanalyzed condition that significantly compromises plant safety. The ASLB has misjudged the matter.

### **III. Conclusion**

The Atomic Safety and Licensing Board's denial of BREDL's petition to intervene is in error and should be overturned by the Commission. The effect of the ruling in LBP-16-10 is to allow an ongoing violation. The Petitioner seeks intervention in the extant matter to ensure functional reliability of the proposed additions to the hydrogen igniter system at Plant Vogtle Units 3 and 4, and enforcement of critical federal regulations governing combustible gas control for the power plants. Rather than challenging existing rules, Petitioner seeks strict implementation of and adherence to specific federal regulations.

Blue Ridge Environmental Defense League brings this appeal from the decision of the Atomic Safety and Licensing Board to the Commission because the granting of the license amendment as requested by Southern Nuclear presents a tangible and particular risk of harm to the health and well-being of its members, the NRC has initiated proceedings for the license amendment, and the Commission is the sole agency with the power to approve or deny the modification of a license to construct and operate a commercial nuclear power plant. The Petitioner's members merely seek to protect the health and lives of themselves, their families and their neighbors.

Respectfully submitted

A handwritten signature in black ink, appearing to read "Louis A. Zeller", followed by a horizontal line.

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**CERTIFICATE OF SERVICE**

I hereby certify that the  
**NOTICE OF APPEAL FROM ASLB'S DENIAL OF PETITIONER'S REQUEST  
FOR INTERVENTION AND A BRIEF SUPPORTING NOTICE OF APPEAL**  
has been filed through the Electronic Information Exchange system  
this 11<sup>th</sup> day of October, 2016.



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