

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 CO.

(Early Site Permit for Vogtle ESP Site)

Docket No. 52-011-ESP

ASLBP No. 07-850-01-ESP-BD01

January 21, 2009

**JOINT INTERVENOR'S RESPONSE TO MOTIONS *IN LIMINE* TO EXCLUDE
PORTIONS OF TESTIMONY AND EXHIBITS**

Pursuant to 10 C.F.R. 2.323 and the Atomic Safety and Licensing Board's ("Board") November 13, 2008 Memorandum and Order providing a Revised General Schedule, Joint Intervenors¹ submit this response to the NRC Staff ("Staff") and Southern Nuclear Operating Company ("SNC") motions *in limine* to exclude portions of testimony and exhibits concerning Environmental Contentions 1.2 ("E.C. 1.2"). As to the evidence sought to be excluded in E.C. 1.2, Joint Intervenors submit that the portions of the testimony of Barry W. Sulkin in question are within the scope of this proceeding and therefore admissible.

Contrary to the SNC and Staff assertions, cumulative impacts, including impacts from other water withdrawals besides Vogtle Units 1 through 4, have been part of EC 1.2 from the outset of this proceeding. The Board should reject the overly myopic view of the scope of EC

¹ The Joint Intervenors include the Center for a Sustainable Coast, Savannah Riverkeeper, Southern Alliance for Clean Energy, Atlanta Women's Action for New Directions, and Blue Ridge Environmental Defense League

1.2 posited by the Staff and SNC. Furthermore, the Board's Order of January 15, 2008 should not be construed to preclude any portion of the testimony of Mr. Barry W. Sulkin.²

Background

On August 14, 2006, SNC submitted an ESP application to the NRC, including an Environmental Report ("ER"). See Environmental Report for Southern Nuclear Operating Company's Vogtle Early Site Permit Application, SNC000001. The ER contained a discussion of surface water use within the Savannah River Basin. *Id.* at 2.3.2-1 – 3. Table 2.3.2-2 of the ER lists all surface water users in the Savannah River Basin within Georgia. *Id.* at 2.3.3-9. Table 2.3.2-3 of the ER lists surface water withdrawals in South Carolina. *Id.* at 2.3.2-12. Table 2.3.2-4 lists annual surface water use within six miles of Plant Vogtle. *Id.* at 2.3.2-13. The ER chapter on station operational impacts of the proposed new Units included a section on "Future Water Use." *Id.* at 5.2-9 – 11. The "Cumulative Impacts" section of the ER addresses the combined withdrawal of four units at Plant Vogtle, but does not discuss other water users in the Savannah Basin. *Id.* at 10.5-2.

Joint Intervenors (then Joint Petitioners) filed a challenge to the ESP application on December 11, 2006, seeking to admit seven contentions related to the ER, designated as EC 1.1, 1.2, 1.3, 2, 3, 4, and 5. On March 12, 2007, the Board admitted two contentions, EC 1.2 and 1.3. *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), 65 NRC 237, 259, 261 (Mar. 12, 2007).

Among the submitted contentions were three water-related contentions: 1.1, 1.2, and 1.3. The first water-related contention, EC 1.1, challenged the ER's failure to use qualitative analysis and field surveys to assess baseline conditions and species diversity in the project area.

² As indicated in both the Staff and SNC motions, Joint Intervenors do not oppose the motions as they relate to contentions EC 1.3 and EC 6.0.

Intervention Petition at 7. The second water-related contention, EC 1.2, challenged the ER's failure to identify and consider direct, indirect, and cumulative impacts of the proposed cooling system intake and discharge structures on aquatic resources. Intervention Petition at 10. The third water-related contention, EC 1.3, challenged the ER's failure to satisfy 10 C.F.R. § 51.45(b)(3) because it fails to address impacts to aquatic species in its discussion of alternatives. Intervention Petition at 14.

The Board admitted EC 1.2 which specifically includes direct, indirect and cumulative impacts. As admitted (and subsequently revised), EC 1.2 reads:

The ER fails to identify and adequately consider direct, indirect, and cumulative impingement/entrainment and thermal effluent discharge impacts of the proposed cooling system intake and discharge structures on aquatic resources.

Southern Nuclear Operating Company (Early Site Permit for the Vogtle ESP Site) LBP-08-2, 67 NRC 54, 83-84 (2008).

While the Board rejected EC 1.1, the Board found "baseline" issues to be part of the admitted contentions. LBP-07-3, 65 NRC 237. The Board found, in admitting EC1.2, "litigation regarding [EC 1.2's] merits may involve the question of the adequacy of the baseline information provided by SNC relative to the portion of the Savannah River that encompasses the project area associated with the intake/discharge structures for both the existing and proposed Vogtle facilities." LBP-07-3, 65 NRC 237, 259. Thus, while the Board rejected Joint Intervenors' attempt to assert "baseline" issues as an independent contention, it recognized that that such issues are included in Contention EC 1.2, as admitted.

In September 2007, the Staff published NUREG-1872, the Draft Environmental Impact Statement for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant Site ("DEIS").

The cumulative impacts section of the DEIS addressed the impacts of operating four Plant Vogtle Units, as well as a handful of others:

[N]earby water users to the proposed VEGP Units 3 and 4 include the existing VEGP Units 1 and 2, the South Carolina Electric and Gas (SCE&G) D-Area Powerhouse, and the SCE&G Urquhart Station. Of these, the D-Area Powerhouse consumptive use (1.89 m³/s [68.4 cfs]) and the Urquhart Station consumptive use (3.52 m³/s [127.5 cfs]) were the largest water users outside the VEGP site. Assuming maximum consumption from both the proposed VEGP Units 3 and 4, the maximum water withdrawal would be 4.77 m³/s (173 cfs), making the VEGP site the largest water consumer in the region. However, as stated above, during times of average or above-average discharge in the Savannah River, the VEGP site water use would be 1.5 percent or less of the total river discharge.

Because... (3) other nearby surface-water users consume less water than the VEGP site would with the proposed two new units... the staff concluded that the combined surface-water-use impacts resulting from the operation of the proposed VEGP Units 3 and 4 would be minor. Although the effects may be detectable, they would not destabilize the resource; therefore, the staff concludes that the impacts would-be SMALL.”

DEIS Volume I at 7-5.

On October 17, 2007, SNC filed a motion seeking summary disposition of EC1.2 on the grounds that publication of the DEIS rendered the Contention moot. In ruling on the motion for summary adjudication, the Board held that EC 1.2 is a contention challenging the adequacy of the ER/DEIS—not a contention of omission. LBP-08-2, 67 NRC at 65.

The staff also received public comments on the DEIS concerning plant water use, including impacts on other water users in the Savannah River Basin. For example:

“Comment: [C]umulative impacts, particularly the impacts of water withdrawal from this plant combined with all of the other withdrawals in the Savannah River Basin. 16 (V-ESP-SC-22-8).

FEIS Volume II at D-76, NRC000001. The Staff responded that “the cumulative impact associated with the construction and operation of the proposed nuclear power plants, including interactions with the Savannah River Site, will be evaluated in Chapter 7 of the

EIS.” *Id.* at D-78.

The Staff published its FEIS in August 2008. NRC000001. The section of the EIS discussing the cumulative impacts of the cooling water withdrawals, like the DEIS, addresses (a) combined operation of the existing and proposed Vogtle Units and (b) withdrawals from Urquhart Station and the D-Area Powerhouse. FEIS at 7-5. Joint Intervenors continue to challenge the adequacy of the analysis of baseline conditions in the Savannah River near Plant Vogtle and cumulative impacts on aquatic species.

Discussion

A. Legal Standard

In an NRC proceeding, “relevant, material, and reliable evidence which is not unduly repetitious will be admitted.” 10 C.F.R. § 2.337. To determine admissibility, “in proceedings under this part, *strict rules of evidence do not apply to written submissions.*” 10 C.F.R. § 2.319 (emphasis added). The remedy for “[i]mmaterial or irrelevant parts of an admissible document” is segregation and exclusion “so far as practicable.” 10 C.F.R. § 2.711. Although the Commission has consulted the Federal Rules of Evidence for guidance in appropriate circumstance, the Commission believes “greater informality and flexibility in the presentation of evidence in hearings, *rather than the inflexible use of the formal rules of evidence* imposed in the Federal courts, can result in more effective and efficient issue resolution.” 69 F.R. § 2.182, 2187 (emphasis added).

An expert’s opinion is admissible if it would assist the trier of fact in understanding the evidence or determining a fact at issue and the opinion is based on sound methods and reliable principles rather than subjective belief or unsupported speculation. *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility). LBP-05-04, 61 NRC 71, 80-

81 (2005). According to the Federal Rules of Evidence, “if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case” it is admissible. USCS Fed Rules Evid R 702. Specifically, “If scientific, technical, or other specialized knowledge will assist the trier of fact *to understand the evidence or to determine a fact in issue*, a witness qualified as an expert by knowledge, skill, experience, training, or education, *may testify thereto* in the form of an opinion or otherwise.” USCS Fed Rules Evid R 702 (emphasis added).

The determination of whether evidence is admissible needs to view the record as a whole as opposed to the contested evidence in isolation. The NRC Atomic Safety and Licensing Board denied an *in limine* motion to exclude evidence which by itself appear to be irrelevant was relevant when considered in combination with other evidence. *See Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, ___ NRC ___, 2008 NRC LEXIS 69 (Mar. 24, 2008) (Finding evidence relevant to the issue of detecting leaks when considered in combination with other evidence).

B. The Contested Testimony is Within the Scope of EC 1.2

The Staff and SNC object to aspects of Mr. Sulkin’s answers to Question 24, 25, 27 and 28 because he refers to “other withdrawals nearby” and “increasing municipal withdrawals.” *See* Staff Motion at 3-5; SNC Motion at 2. These objections are not valid because Mr. Sulkin’s testimony is within the scope of EC1.2 and fully supported by the facts in the record.

Joint Intervenors challenge has consistently been to the adequacy of the discussion and analysis of cumulative impacts of water withdrawals in the ER, DEIS, and now FEIS. The terms, “direct,” “indirect,” and “cumulative” impacts used by the Joint Intervenors in pleading

EC1.2 are derived from the statutory language of the National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321 *et. seq.* and the Council on Environmental Quality (“CEQ”) regulations implementing NEPA, 40 C.F.R. §§ 1500-1508. Specifically, the CEQ regulations define a “cumulative impact” as:

[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.11.

In this case, EC 1.2 addresses the “incremental impact” on aquatic resources from the proposed new Units’ surface water withdrawals. By definition, a challenge to the adequacy of the cumulative impacts analysis of the proposed Units must consider “other past, present, and reasonably foreseeable future actions.” Yet, SNC and the Staff contend that Intervenor’s Testimony and Exhibits may not reference any withdrawals but those of the four Vogtle Units.

1. Cumulative Water Use Impacts

The Staff and SNC contend that Mr. Sulkin’s answers to Question 27 and 28 are inadmissible because they allude to cumulative water use by users other than the four Vogtle Units and are therefore beyond the scope of Contention EC 1.2. However, SNC and the Staff fail to appreciate that EC 1.2 is a challenge to the conclusion that cumulative impacts of two additional Units will be small, and that conclusion is based, at least in part, on the Staff’s analysis of “other nearby surface-water users.” FEIS at 7-5. EC 1.2 is a challenge to the adequacy of the of cumulative impacts analysis in the EIS, which includes a brief discussion of other nearby water users. Mr. Sulkin’s answers to Question 27 and 28 are bounded by the Staff’s

discussion in the cumulative impacts analysis and are therefore within the scope of the Contention.

The overall point of Mr. Sulkin's testimony, and his answers to Question 27 and 28 in particular, is that the Staff's methodology in assessing cumulative impacts is unreliable and subject to manipulation. In doing so, Mr. Sulkin contrasts the FEIS analysis of cumulative impacts with that of the recent FEIS for the license renewal of Vogtle Units 1 and 2. Mr. Sulkin does not contend that the FEIS fails because it does not discuss other withdrawals; instead, he uses the treatment of other withdrawals in the two contemporaneous analyses to demonstrate the inherent weakness of the methodology employed by the Staff to assess cumulative impacts of the proposed Units. Thus, Mr. Sulkin's testimony refers to the same "nearby surface-water users" that the Staff discusses in the FEIS.

The Staff and SNC also take issue with the opinion expressed by Mr. Sulkin in Answer 28 that a proper cumulative impacts analysis must necessarily include a discussion of other impacts affecting the resource in question. This proposition is both correct and unremarkable. As previously discussed, the definition of cumulative impacts specifically includes "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.11. Mr. Sulkin opines that the discussion of other nearby water users in the FEIS does not support the conclusion that potential impacts of the new Units are small. Intervenors fail to see how Mr. Sulkin can give his expert opinion on the adequacy of the cumulative impacts analysis in the FEIS if he is not permitted to discuss that very analysis.

2. Municipal Withdrawals

The Staff and SNC also take issue with the references to "increasing municipal withdrawals" in Question and Answer 24 and 25. As indicated in the motions *in limine*,

Intervenors do not consider these references to municipal withdrawals to be necessary to the Sulkin Testimony and therefore do not oppose the motions on these grounds. The point of Mr. Sulkin's answers to Question 24 and 25 is that the Staff's analysis of flows less than 3,800 cfs is weak and unreliable, regardless of whether the low flows are the result of increasing municipal withdrawals or some other cause. While Intervenors do not agree that any portion of Mr. Sulkin's testimony is outside the scope of EC 1.2 or unsupported by the record, they do not oppose exclusion of the references to municipal withdrawals in Question and Answer 24 and 25.

C. The Order of January 15, 2008 Should Not Limit the Proffered Testimony.

In its January 15, 2008 Order, the Board held that "Joint Intervenors current argument that the DEIS must consider the cumulative impacts of other facilities on the Savannah River . . . is outside the scope of EC 1.2." LBP-08-2, 67 NRC at 77-78. However, the Board's previous Order should not be construed to exclude any of the Sulkin Testimony because it is not being offered to argue that the FEIS must consider other facilities in assessing cumulative impacts. As discussed previously, the testimony at it issue is offered in the context of a critique of the methodology employed by the Staff in reaching its conclusion. Mr. Sulkin does not argue that the cumulative impacts analysis is inadequate because it does not include a discussion of other withdrawals on the Savannah River. Instead, Mr. Sulkin argues that the discussion of cumulative impacts is inadequate because it is based on little more than estimation and guesswork rather than science. Mr. Sulkin uses the discussion of other nearby withdrawals that is *already included in the FEIS* as one example of the FEIS's faulty logic.

To the extent that the Board's January 15, 2008 Order is interpreted to preclude Mr. Sulkin's testimony, Intervenors respectfully suggest that the Board revisit its prior conclusion. As discussed, EC 1.2 challenged the adequacy of "direct, indirect, and cumulative" impacts from

the outset. “Cumulative impacts” is a legal term of art that includes “other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.11. Thus, it is an impossible task for Intervenors to show that the cumulative impacts analysis of the proposed withdrawals is inadequate if Intervenors are proscribed from mentioning other withdrawals. As a result, excluding the references in the Sulkin Testimony to other past, present, and future withdrawals would deprive Intervenors of a fair hearing on EC 1.2.

Conclusion

For the reasons stated herein, the Board should deny the contested portions of the motions *in limine* to exclude portions of testimony and exhibits concerning EC 1.2.

Respectfully submitted this 21st day of January, 2009,

[Original signed by L. Sanders]

Lawrence D. Sanders
Turner Environmental Law Clinic
Emory University School of Law
1301 Clifton Road
Atlanta, GA 30322
(404) 727-3432
Email: lsanders@law.emory.edu

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NUCLEAR REGULATORY COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **JOINT INTERVENOR'S RESPONSE TO MOTIONS *IN LIMINE* TO EXCLUDE PORTIONS OF TESTIMONY AND EXHIBITS** was served upon the following persons by Electronic Information Exchange and/or electronic mail.

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: ocaamail@nrc.gov

Administrative Judge
G. Paul Bollwerk, III, Chair
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: gpb@nrc.gov

Administrative Judge
Nicholas G. Trikouros
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: ngt@nrc.gov

Administrative Judge
James Jackson
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: jackson538@comcast.net

Emily Krauss
Law Clerk
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: emily.krauss@nrc.gov

Office of the Secretary
ATTN: Docketing and Service
Mail Stop 0-16C1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Patrick A. Moulding
Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: patrick.moulding@nrc.gov

Steven P. Frantz, Esq.
Kathryn M. Sutton, Esq.
Paul M. Bessette, Esq.
Mary Freeze
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
E-mail: sfrantz@morganlewis.com;
ksutton@morganlewis.com;
pbessette@morganlewis.com;
mfreeze@morganlewis.com

M. Stanford Blanton, Esq.
Peter D. LeJeune, Esq.
C. Grady Moore, III, Esq.
Kenneth C. Hairston, Esq.
Balch & Bingham LLP
1710 Sixth Avenue North
Birmingham, AL 35203-2014
E-Mail: sblanton@balch.com;
plejeune@balch.com;
kchairston@balch.com;
gmoore@balch.com

Jeffrey Stair, Esq.
Georgia Public Service Commission
244 Washington Street
Atlanta, GA 30334
E-mail: jeffreys@psc.state.ga.us

Diane Curran, Esq.
Harmon, Curran, Spielberg & Eisenberg,
LLP
1726 M Street, NW
Suite 600
Washington, DC 20036
E-mail: dcurran@harmoncurran.com

Moanica Caston, Esq.
Southern Nuclear Operating Co., Inc.
40 Inverness Center Parkway
P.O. Box 1295, Bin B-022
Birmingham, AL 35201-1295
E-mail: mcaston@southernco.com

Jeffrey Stair, Esq.
Georgia Public Service Commission
244 Washington Street
Atlanta, GA 30334
E-mail: jeffreys@psc.state.ga.us
Copy provided by e-mail only

Dated: January 21, 2009

/signed (electronically) by/

Lawrence D. Sanders
Turner Environmental Law Clinic
Emory University School of Law
1301 Clifton Road
Atlanta, GA 30322
(404) 727-3432
Email: lsanders@law.emory.edu