

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-08-2

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ATOMIC SAFETY AND LICENSING BOARD PANEL

SERVED 01/15/08

Before the Licensing Board:

G. Paul Bollwerk, III, Chairman
Nicholas G. Trikouros
Dr. James F. 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 15, 2008

MEMORANDUM AND ORDER

(Ruling on Dispositive Motion and Associated Motions to Strike
Regarding Environmental Contention 1.2)

Before the Licensing Board in this 10 C.F.R. Part 52 proceeding regarding the application of Southern Nuclear Operating Company (SNC) for an early site permit (ESP) for two new units at the site of its existing two-unit Vogtle Electric Generating Plant (VEGP) is an SNC motion requesting summary disposition be entered in its favor relative to Joint Intervenors environmental contention (EC) 1.2.¹ This issue statement concerns the identification and consideration of direct, indirect, and cumulative impacts of the proposed cooling system intake and discharge structures on aquatic resources. The NRC staff supports the SNC dispositive motion, while Joint Intervenors oppose the request. Additionally, both the staff and SNC have filed motions to strike portions of the Joint Intervenors response to the SNC motion or, in SNC's

¹ 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.

case, alternatively to file a reply to the Joint Intervenors response, which Joint Intervenors oppose.

For the reasons set forth below, we deny the SNC motion for summary disposition on EC 1.2, as well as the associated SNC and staff motions to strike portions of the Joint Intervenors response to the SNC dispositive motion.

I. BACKGROUND

As part of its August 2006 ESP application, SNC was required to include a “complete environmental report,” or ER, addressing various issues pertaining to the National Environmental Policy Act of 1969 (NEPA).² In challenging the SNC ESP application, Joint Intervenors posited seven contentions raising concerns about various aspects of the SNC ER, including EC 1.2, ER Fails to Identify and Consider Cooling System Impacts on Aquatic Resources.

In pertinent part, EC 1.2 alleged that the ER had failed to “identify and consider direct, indirect, and cumulative impacts of the proposed cooling system intake and discharge structures on aquatic resources.” Petition for Intervention (Dec. 11, 2007) at 10 [hereinafter

² See 10 C.F.R. § 52.17(a)(2) (“A complete environmental report as required by 10 CFR 51.45 and 51.50 must be included in the application, 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 site proposed.”). Although a recent change in the agency’s rules governing ESPs has moved the substance of section 52.17(a)(2) to section 51.50(b), see 72 Fed. Reg. 49,351, 49,512, 49,523 (Aug. 28, 2007), because the SNC ESP application was docketed well before the September 27, 2007 effective date of this revision, see 71 *id.* 60,195, 60,195 (Oct. 16, 2006), in the absence of a request by SNC to apply the new rule’s provisions governing application content, see 72 *id.* at 49,522 (revised 10 C.F.R. § 52.17(a)), section 52.17(a)(2) as quoted above is applicable in this proceeding.

Intervention Petition]. The Board found that the Joint Intervenors submission, particularly the supporting affidavit of then-Clemson University Adjunct Faculty Member Dr. Shawn Paul Young, “provides sufficient factual support for the admission of this contention.” LBP-07-3, 65 NRC 237, 258 (2007). The Board thus admitted the contention as follows:

[EC] 1.2 – ER FAILS TO IDENTIFY AND CONSIDER COOLING SYSTEM IMPACTS ON AQUATIC RESOURCES

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

Id. at 280.

Following the admission of this contention (as well as issue statement EC 1.3, which is the subject of another SNC dispositive motion that we likewise address today, see LBP-08-3, 67 NRC __ (Jan. 15, 2008)), the staff provided and has periodically supplemented the hearing file for this proceeding established in accord with 10 C.F.R. § 2.1203, and the parties have made the mandatory disclosures required by section 2.336 relative to this contention.³ See Tr. at 199-207, 256-58. In establishing an initial schedule for this proceeding based on the planned staff issuance of both the draft and final environmental impact statements (DEIS and FEIS) and its safety evaluation report (SER), the Board provided an opportunity for the filing of new or amended contentions relating to either of these documents, as well as for filing for summary

³ In accordance with an April 3, 2007 Board memorandum and order issued in response to a March 23, 2007 joint motion from the parties, the parties have agreed, among other things, (1) that they need not identify draft versions of any document, data compilation, correspondence, or other tangible thing that must be disclosed; and (2) to waive the obligation to provide a privilege log required by 10 C.F.R. § 2.336(a)(3), (b)(5). See Licensing Board Memorandum and Order (Ruling Regarding Joint Motion on Mandatory Disclosures and Scheduling Prehearing Conference) (Apr. 3, 2007) at 2-4 (unpublished); see also Licensing Board Memorandum and Order (Prehearing Conference and Initial Scheduling Order) (May 7, 2007) at 2 (discussing privilege log production waiver and disclosure of electronically stored information (ESI)) (unpublished).

disposition regarding any admitted contention or new/amended contention. See Licensing Board Memorandum and Order (Prehearing Conference and Initial Scheduling Order) (May 7, 2007) at 3-5 & app. A (unpublished) [hereinafter Initial Scheduling Order].

Subsequently, the staff issued its SER (albeit with open items) and its DEIS on August 30 and September 10, respectively. See Office of New Reactors (NRO), U.S. Nuclear Regulatory Commission (NRC), Safety Evaluation of the [ESP] Application in the Matter of [SNC], for the Vogtle [ESP] Site (Aug. 2007); 1 NRO, NRC, [DEIS] for an [ESP] at the [VEGP] Site, NUREG-1872 (Sept. 2007) [hereinafter DEIS]. Although the Board had established a time frame within which to do so, see Initial Scheduling Order app. A, at 1, Joint Intervenors did not submit any new or amended contentions relative to either of these documents. Thereafter, in accordance with the terms of the Board's initial schedule, id., on October 17, 2007, SNC filed a motion, accompanied by a statement of material facts purportedly not at issue, requesting that summary disposition be entered in its favor in connection with EC 1.2. See [SNC] Motion for Summary Disposition on Intervenors' [EC] 1.2 (Cooling System Impacts on Aquatic Resources) (Oct. 17, 2007) [hereinafter SNC 1.2 Dispositive Motion]; [SNC] Statement of Undisputed Facts in Support of Applicant's Motion for Summary Disposition of Intervenors' [EC] 1.2 (Cooling System Impacts on Aquatic Resources) (Oct. 17, 2007) [hereinafter SNC 1.2 Statement of Undisputed Facts]. Thereafter, on October 30, the staff filed a response, with a supporting affidavit, endorsing the SNC summary disposition motion.⁴ See NRC Staff Answer to [SNC] Motion for Summary Disposition of [EC] 1.2 (Oct. 30, 2007) [hereinafter Staff 1.2 Answer]. This was followed on November 13 by the Joint Intervenors answer to the SNC dispositive motion,

⁴ The staff's answer was filed a day late; however, following the staff's submission of an unopposed motion to belatedly file its answer, the Board accepted the staff's answer. See NRC Staff's Unopposed Motion to File Answer to Southern's Motion for Summary Disposition of EC 1.2 Out of Time (Nov. 1, 2007); Licensing Board Order (Granting NRC Staff Unopposed Motion to Accept Answer Out of Time) (Nov. 2, 2007) (unpublished).

which included a statement of purported material facts at issue and supporting affidavits, asserting that summary disposition was inappropriate in this instance. See Joint Intervenors Answer Opposing [SNC's] Motion for Summary Disposition of [EC 1.2] (Nov. 13, 2007) [hereinafter Joint Intervenors 1.2 Answer].

Thereafter, on November 21 and 23, respectively, the staff and SNC submitted motions requesting that portions of the Joint Intervenors November 13, 2007 answer to the SNC October 17, 2007 motion requesting summary disposition of EC 1.2 be stricken as outside the scope of the admitted contention. See NRC Staff's Motion to Strike Portions of Joint Intervenors' Answer Opposing Summary Disposition of EC 1.2 (Nov. 21, 2007) [hereinafter Staff 1.2 Motion to Strike]; [SNC's] Motion to Strike Portions of, or in the Alternative for Leave to Reply to, Intervenors' Answer to Motion for Summary Disposition of EC 1.2 (Nov. 23, 2007) [hereinafter SNC 1.2 Motion to Strike]. Alternatively, pursuant to 10 C.F.R. § 2.323(c), SNC requested that it be given the opportunity to file a reply to the Joint Intervenors answer. See SNC 1.2 Motion to Strike at 1, 5. In a responsive filing dated November 30, 2007, the staff indicated that it supported the SNC motion to strike. See NRC Staff's Answer to Southern's Motion to Strike or in the Alternative to Reply to Joint Intervenors' Answer to Motion for Summary Disposition of EC 1.2 (Nov. 30, 2007). Joint Intervenors filed a response opposing both motions to strike on December 6, 2007.⁵ See Intervenors' Answer in Response to SNC and NRC Staff Motions to Strike Portions of Intervenors' Answer to Motion For Summary

⁵ After missing the December 3, 2007 deadline to answer the SNC and staff motions to strike, see 10 C.F.R. § 2.323(c), Joint Intervenors petitioned the Board for a three-day extension of time in which to respond, which the Board granted. See Joint Intervenors' Unopposed Motion for Extension of Time to File Answers to NRC Staff's Motion to Strike and SNC Motions to Strike and to Supplement Record (Dec. 4, 2007); Licensing Board Order (Granting Extension of Time) (Dec. 5, 2007) at 2 (unpublished).

Disposition of EC 1.2 (Dec. 6, 2007) [hereinafter Joint Intervenors Response to 1.2 Motions to Strike].

II. ANALYSIS

A. Summary Disposition Standards

For proceedings such as this one that are being conducted pursuant to the “informal” hearing procedures of 10 C.F.R. Part 2, Subpart L, see LBP-07-3, 65 NRC at 274, summary disposition motions are to be resolved in accord with the standards for dispositive motions for “formal” hearings, as set forth in Part 2, Subpart G, see 10 C.F.R. § 2.1205(c). In that regard, 10 C.F.R. § 2.710(d)(2) provides that summary disposition may be entered with respect to any matter (or all matters) in a proceeding if the motion, along with any appropriate supporting materials (including affidavits, discovery responses, and documents), shows that there is “no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.”

The party proffering the motion bears the burden of making the requisite showing by providing “a separate, short, and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard.” Id. § 2.710(a). On the other hand, a party opposing the motion must counter any adequately supported material facts provided by the movant with its own “separate, short, and concise statement of the material facts as to which it is contended there exists a genuine issue to be heard,” with the recognition that, to the degree the responsive statement fails to contravene the material facts proffered by the movant, the movant’s facts “will be considered to be admitted.” Id.

Before applying these standards, however, in light of (1) Commission precedent recognizing that for contentions (or portions of contentions) challenging an application as having

omitted a required item (or items), post-contention admission events, such as issuance of a staff DEIS, can render the contention subject to dismissal as moot, see Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002); and (2) SNC and staff insistence that this contention should be resolved consistent with this precedent, see SNC 1.2 Dispositive Motion at 17-18; Staff 1.2 Answer at 12, we consider whether EC 1.2 (or any portion of that issue statement) properly is subject to disposition on this basis.

B. Environmental Contention 1.2 – Contention of Omission or Contention of Inadequacy

While the Joint Intervenors admitted contention and its associated bases quite properly addressed the SNC ER, rather than the then still-being-developed staff DEIS, see 10 C.F.R. § 2.309(f)(2) (contentions must be based on documents/information available when hearing petition to be filed), as SNC notes, “the Board may consider environmental contentions made against an applicant’s ER as challenges to an agency’s subsequent DEIS.” SNC 1.2 Dispositive Motion at 4 (citing Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998) (approving a Board decision to treat an intervenor’s contentions addressing the ER as challenges to the FEIS)); see also Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-23, 54 NRC 163, 172 n.3 (2001) (discussing such a substitution with the superseding DEIS), petition for review denied, CLI-04-4, 59 NRC 31, 40-41 (2004). This is appropriate, however, only so long as the DEIS analysis or discussion at issue is essentially in para materia with the ER analysis or discussion that is the focus of the contention. If it is not, an intervenor attempting to litigate an issue based on expressed concerns about the DEIS may need to amend the admitted contention or, if the information in the DEIS is sufficiently different from that in the ER that supported the

contention's admission, submit a new contention.⁶ See 10 C.F.R. § 2.309(f)(2); see also Duke Energy, CLI-02-28, 56 NRC at 383.

In the context of a summary disposition motion, this question about the need to amend or file a new contention becomes relevant when there is a dispute, as there is here, see infra page 9, about whether an admitted issue statement (or a relevant portion of such an issue statement) is a contention of omission -- i.e., a contention challenging a portion of the application, such as the ER, because it fails in toto to address a required subject matter -- rather than a contention of inadequacy -- i.e., one that asserts the pertinent portion of the application contains a discussion or analysis of a relevant subject that is inadequate in some material respect. See Private Fuel Storage, LBP-01-23, 54 NRC at 171-72 (dividing all contentions into "a challenge to the application's adequacy based on the validity of the information that is in the application; a challenge to the application's adequacy based on its alleged omission of relevant information; or some combination of these two challenges."); see also Amergen Energy Company, LLC (Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 742 & n.7 (2006). In Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-04-9, 59 NRC 286 (2004), in connection with intervenor contentions of omission charging that an application was missing certain design information, the Licensing Board rejected as improper an intervenor attempt to use those same contentions, once the information had been provided in a subsequent applicant filing, to then challenge the quality of the additional applicant information, and thereby interpose disputed material factual issues. Rather, according to the MOX Licensing Board, the contentions should have been amended. See id.

⁶ In establishing the schedule for possible summary disposition motions regarding the Joint Intervenor's admitted contentions following the release of the staff DEIS (as well as the FEIS), the Board recognized the potential need to amend or file new contentions prior to the submission of dispositive motions. See Initial Scheduling Order app. A, at 1-2.

at 292-93. Since they were not, the MOX Board concluded that a dispositive motion seeking dismissal of the contentions as moot was appropriate. See id. at 293.

In this instance, because Joint Intervenors have not sought to amend EC 1.2 as admitted, to the degree the contention is one of omission, it is subject to dismissal in connection with those aspects for which it is appropriately established the staff DEIS provides any purported missing analysis or discussion. Here, an evaluation of EC 1.2 in this regard is made somewhat more complicated by the fact that the Board did not, in admitting the contention, explicitly state whether EC 1.2, or any portion of EC 1.2, was a “contention of omission.” Nonetheless, in asserting summary disposition is appropriate, SNC and the staff contend EC 1.2 is a contention of omission, while Joint Intervenors argue that, with the exception of chemical analysis issues, it is not. See SNC 1.2 Dispositive Motion at 17-18; Staff 1.2 Answer at 12; Joint Intervenors 1.2 Answer at 19-20.

In reaching a determination about whether this contention is properly classified as one of omission or inadequacy, we note initially that the text of EC 1.2, both as originally proposed by Joint Intervenors (i.e., the SNC ER “fails to identify and consider direct, indirect, and cumulative impacts of the proposed cooling system intake and discharge structures on aquatic resources”) and as subsequently admitted by the Board (i.e., the SNC ER “fails to identify and consider direct, indirect, and cumulative impingement/entrainment and chemical and thermal effluent discharge impacts”), does not denominate it definitively as either. Therefore, it is necessary to examine the arguments and bases put forward by Joint Intervenors for each of the contention’s four aspects: baseline information, impingement/entrainment, thermal impacts, and chemical impacts.

Most of the claims in the Joint Intervenors original petition addressing baseline issues allege that necessary information has been omitted, though Joint Intervenors also posited

arguments that the missing information should be of a certain quality (for instance, based on site-specific information) and criticized the data presented. See Declaration of Shawn Paul Young, Ph.D. (Dec. 7, 2006) at 7 [hereinafter 2006 Young Declaration]. While the Board ultimately rejected the Joint Intervenors baseline assertions associated with EC 1.1, it allowed some discussion of baseline information to be included within EC 1.2 and, in doing so, outlined the parameters of the baseline EC 1.2 discussion as “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 at 259. Thus the baseline information portion of EC 1.2 will be treated as an inadequacy contention.

For the entrainment/impingement and thermal impacts portions of the issue statement, in their initial petition Joint Intervenors asserted that the calculations regarding impacts made by SNC were inaccurate and used incorrect assumptions. See, e.g., Intervention Petition at 10, 12; 2006 Young Declaration at 6, 8. These portions of the contention thus are inadequacy arguments as well.

Finally, the Joint Intervenors argument concerning chemical impacts was that certain information, particularly the quantity and toxicity of all chemical discharges, should have been included in the ER. See Intervention Petition at 12. As Joint Intervenors acknowledge, this is a contention of omission. See Joint Intervenors 1.2 Answer at 19.

We thus conclude that, with the exception of the portion of the contention relating to chemical discharges, EC 1.2 is a contention of inadequacy rather than one of omission.

C. SNC and Staff Motions to Strike

In addition to resolving the question of the status of EC 1.2 as a contention of omission or inadequacy, prior to assessing the merits of the SNC motion relative to the summary

disposition standards in section II.A above, we also find it appropriate to address the procedural validity of the SNC and staff motions to strike portions of the Joint Intervenors summary disposition answer. A major premise of both those motions is that, in filing their response, Joint Intervenors sought improperly to expand the scope of the admitted contention without amending their issue statement.⁷ See Staff 1.2 Motion to Strike at 1; SNC 1.2 Motion to Strike at 1.

To be sure, the argument that information provided in support of an intervenor's response to a dispositive motion should not be considered because the information is outside the scope of the intervenor's admitted contention, if true, can be a meritorious assertion. Whether a motion to strike is the appropriate procedural vehicle for raising such a claim relative to a dispositive motion response is, however, a different question.

Rule 12(f) of the Federal Rules of Civil Procedure does provide for the submission of a motion to strike, upon which the court can act to order "stricken from any pleading any insufficient defense or any redundant, immaterial, impertinent, or scandalous matter." There is no explicit mention of such a motion in the agency's rules of practice, but assuming there need not be, see 10 C.F.R. § 2.323(b), in the context of a summary disposition motion we do not consider a "motion to strike" to be the appropriate vehicle for raising the argument posited by both SNC and the staff here. As Joint Intervenors correctly recognized in a related filing in this proceeding, see Intervenors' Answer Opposing NRC Staff and SNC Motions to Strike Portions

⁷ SNC asks that the following five areas of discussion be stricken from the Joint Intervenors responsive brief and supporting affidavits: (1) the use and the contents of cited Academy of Natural Sciences reports; (2) a DEIS-referenced site visit by the staff regarding screen basket cleaning; (3) larval fish mobility; (4) methodologies for estimating the Savannah River's minimum flow rate; and (5) the cumulative impacts of withdrawals associated with facilities other than Vogtle's existing units. See SNC 1.2 Motion to Strike at 2-3. In a request similar to that associated with SNC area 4, the staff asks that we strike the portions of the Joint Intervenors answer discussing Savannah River Drought Level 4 flow conditions and which gauge along the river should be used for measuring river flow. See Staff 1.2 Motion to Strike at 4.

of Intervenors' Answer to Motion Opposing Summary Disposition of [EC] 1.3 (Dec. 6, 2007) at 2-3 [hereafter Joint Intervenors Response to 1.3 Motions to Strike], the issue of the scope of EC 1.2 is a matter that the Board can consider and resolve without such a motion and without "striking" anything. Consequently, the staff and SNC arguments made in their motions to strike should have been framed in reply pleadings, for which permission to file should have been sought from the Board three business days before the replies were due.⁸ See Licensing Board Memorandum and Order (Initial Prehearing Order) (Dec. 18, 2006) at 5 (unpublished); see also Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 78 (2004) (request to file reply to summary disposition answer granted).

Both the staff and SNC motions to strike (and the associated SNC request for leave to file a reply) are thus denied. Nonetheless, without regard to the staff and SNC motions to strike (and as it would have done even if the motions had not been filed), in reviewing the SNC

⁸ Of course, in accord with the procedures we have established in this case, a reply would have been due within seven days after the submission of the Joint Intervenors summary disposition motion response rather than the ten days generally provided for a motion. Compare Licensing Board Memorandum and Order (Initial Prehearing Order) (Dec. 18, 2006) at 5 n.4 (unpublished) with 10 C.F.R. § 2.323(a). If SNC and the staff needed additional time for their replies, however, the appropriate mechanism for obtaining that relief would have been a time extension motion, perhaps filed in conjunction with their request for leave to file a reply.

We also think it worth observing that while the current procedural rule governing summary disposition in formal agency adjudications under Part 2, Subpart G (as did its pre-2004 predecessor) clearly discourages the filing of replies to summary disposition responses, see 10 C.F.R. § 2.710(a) (2007) (following response by opposing party, no further supporting statements or responses will be entertained); id. § 2.749(a) (2003) (same); but see id. § 2.1205(b) (2007) (making no mention of replies relative to summary disposition in Part 2, Subpart L proceedings), given the ability of responding parties to interpose additional "factual" information by way of affidavits and other submissions, as well as the potential that exists under such a motion for a merits disposition of a contention (or portion of a contention), a properly supported request to reply to a summary disposition response would seem to be a reasonable candidate for a favorable Board discretionary decision permitting the filing. Compare 10 C.F.R. § 2.309(h)(2) (petitioner given opportunity to file reply to applicant/staff answers to hearing requests); id. § 2.323(c) (permission to file reply to response to motion may be granted in compelling circumstances, such as when moving party could not reasonably anticipate response arguments).

dispositive motion the Board will consider whether the information the parties provided as a basis for granting or denying the SNC summary disposition request is within the scope of EC 1.2 as admitted and is adequate to support their position regarding resolution of the motion.⁹

D. Analysis of Summary Disposition Request

With these precepts in mind, we turn to the substance of the SNC motion, considering whether SNC has shown that there exists no genuine issue as to any material fact in connection with each of the four subject areas specified above, as well as the arguments proffered both in support of, and in opposition to, the SNC dispositive motion relative to the proper scope of the admitted contention. In doing so, in each instance we look first at the initial intervention request submitted by Joint Intervenors and the Board's contention admission decision, followed by the parties' arguments regarding summary disposition for that portion of the contention.

1. Baseline Aquatic Data for Vogtle Site

a. Joint Intervenors Intervention Petition. In support of issue statement EC 1.1, which also concerned proposed facility impacts on Savannah River fishery resources, in their intervention request Joint Intervenors alleged that to evaluate the impacts of the cooling system for the proposed facilities, the baseline information in the ER should have included more data

⁹ In this regard, Joint Intervenors argue that if an issue was first raised by the movant in a summary disposition motion, discussion of that issue in a response should not be stricken. See Joint Intervenors Response to 1.2 Motion to Strike at 3. While a movant's discussion of a matter in its summary disposition motion does aid the Board in understanding whether the issue is within the scope of the contention, at least to the degree it suggests the parties had notice of the matter, such a discussion does not necessarily establish that the matter is within the scope of a contention given that the movant's discussion may also be outside the scope of the contention. Nonetheless, if a movant discusses a matter in its statement of undisputed facts, it would not be untoward for the Board to view with skepticism any later argument by that movant that a response regarding that issue is outside the scope of the contention, particularly given the onus that is placed upon an opposing party to respond to such a statement. See 10 C.F.R. § 2.710(a) ("All material facts set forth in the statement required to be served by the moving party will be considered to be admitted unless controverted by the statement required to be served by the opposing party.").

regarding the habitats and life histories of particular species and that, without such information, the ER was deficient. See Intervention Petition at 9. Joint Intervenors argued the ER does not “identify the current aquatic species assemblage or the presence or absence of threatened, endangered, or rare species in the project area,” and “contains no data concerning upstream and downstream migration of anadromous [(i.e., moving from the sea to rivers to breed)] and diadromous [(i.e., migrating between salt and freshwater)] species in this section of the Savannah River or their habitat utilization within the project area.” Id. at 8. Their expert, Dr. Shawn Young, alleged in support of the petition that the ER analysis lacked “a comprehensive discussion of all of the species likely to inhabit this reach of the Savannah River at different times of the year.” 2006 Young Declaration at 7. To cure these defects, Joint Intervenors argued that “field studies or data that assesses site-specific and species-specific factors” are needed. Intervention Petition at 9.

b. Board Contention Admissibility Discussion. The Board rejected the Joint Intervenors related issue statement EC1.1 that alleged the aquatic baseline for the Vogtle ESP ER was wholly insufficient, finding that Joint Intervenors did not provide information to support such an allegation. See LBP-07-3, 65 NRC at 256. Noting that the Joint Petitioners counsel had told the Board “there is sufficient information about the river in general” in the ER and thus had asserted only that otherwise-required site-specific information was missing, id. at 257 (quoting Tr. at 18), the Board concluded that “it appears uncontested that the Applicant has adequately described the general aquatic resources of the Savannah River, including the river’s important species and their habitats,” id. at 256 (emphasis added). Additionally, rejecting the Joint Intervenors assertion that specific studies of the Vogtle site and rivershed were needed, the Board provided the following observation regarding the nature of the required baseline data:

Joint Petitioners have not demonstrated with any references -- nor are we aware of any -- that suggest site-specific studies are

generally required. Rather, the appropriate scope of the baseline for a project is a functional concept: an applicant must provide enough information and in sufficient detail to allow for an evaluation of important impacts.

Id. at 257.

The Board, however, then went on to conclude that the EC 1.2 allegations of baseline deficiencies concerning the ER discussion assessing impingement, entrainment, and thermal impacts, as supported by the 2006 Young Declaration, could be litigated as part of issue statement EC 1.2. See id. at 258. In doing so, the Board indicated that adjudication regarding the merits of EC 1.2 thus could “include 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.” Id. at 259.

c. SNC Summary Disposition Motion. In its motion, which is supported by a statement that sets forth twenty-four purported undisputed material factual statements, SNC argues that all the data needed to create a baseline is included in the DEIS and that Joint Intervenors are requesting “additional, original studies” not required by NEPA. See SNC 1.2 Dispositive Motion at 8. SNC declares that “a fundamental principle of NEPA is that an agency is not required to generate new data in order to satisfy its obligation to take a ‘hard look’ at the environmental consequences of a proposed action.” Id. at 10. For all other information Joint Intervenors claim the ER lacks, SNC asserts that “the DEIS addresses the very information alleged to be lacking.” Id. at 17. SNC further characterizes the whole of EC 1.2 as a contention of omission for which the information has now been supplied, so that the data provided in the DEIS makes the contention moot. Id. at 18.

d. Staff Answer. Supported by the joint affidavit of NRC Senior Hydrologist Dr. Christopher B. Cook and Battelle Pacific Northwest National Laboratory Senior Research

Scientist Rebekah H. Krieg, in its response to the SNC dispositive motion the staff argues that the DEIS now includes, as requested by Joint Intervenors, “a comprehensive discussion of all the aquatic species likely to occur in the Savannah River at different times of the year,” thereby rendering moot the portion of the contention addressing the adequacy of the aquatic baseline information provided. Staff 1.2 Answer at 4. In support of this assertion, the staff references the environmental standard review plan (ESRP), which formalizes the staff’s review criteria used to establish what would constitute an adequate NEPA analysis.¹⁰ Noting that the ESRP calls for an identification of “important” species in the area of the proposed facilities,¹¹ the staff points to specific parts of the DEIS that it asserts do this, declaring that “Table 2-7 of the DEIS lists, by phylogenetic order, all known native, resident, diadromous, marine and upland species of fish of the Middle Savannah River. Using the methodology given in the [ESRP] Section 2.4.2, the NRC Staff determined which species listed in DEIS Table 2-7 are ‘important’” Staff 1.2 Answer at 5-6 (citations omitted). The staff concludes that this table and the accompanying discussion constitute a comprehensive discussion of all of the Savannah River’s fish species. See id. at 6.

e. Joint Intervenors Answer. Joint Intervenors, who provide a statement of genuine material facts in dispute supported by the affidavits of Dr. Young, now a Purdue University

¹⁰ Office of Nuclear Reactor Regulation, NRC, Standard Review Plans for Environmental Reviews for Nuclear Power Plants, NUREG-1555 (Oct. 1999) [hereinafter ESRP]. Although a standard review plan sets forth the criteria that the staff uses to evaluate whether an application conforms to the agency’s regulations, it nonetheless is considered non-binding on the staff, see, e.g., 10 C.F.R. § 50.34(h)(3), and on a Licensing Board.

¹¹ See, e.g., ESRP at 4.3.2-1. The staff’s ESRP defines “important species” as endangered or threatened species (as defined either federally or by the state where the proposed facility is located) or proposed for such a listing in the Federal Register, commercially or recreationally valuable species, “[s]pecies that are essential to the maintenance and survival of species that are rare and commercially or recreationally valuable,” “[s]pecies that are critical to the structure and function of the local terrestrial ecosystem,” or “[s]pecies that may serve as biological indicators to monitor the effects of the facilities on the terrestrial environment.” Id. at 2.4.2-7 (Table 2.4.2-1).

Visiting Assistant Professor of Fisheries Biology, and environmental consultant Barry W. Sulkin, argue relative to the baseline aquatic information matter that the DEIS has only a “general list of fish species” and is missing information key to assessing adequately the new units’ impacts upon the fish in the vicinity of the VEGP. Joint Intervenors Answer at 11. In his affidavit supporting the Joint Intervenors response, Dr. Young states that Table 2-7 of the DEIS, rather than being a comprehensive discussion of the Savannah River’s aquatic environment, “omits detailed fish species’ life history stage information” and that such information “is of paramount importance in determining current and future impacts.” Affidavit of Shawn Paul Young, Ph.D. (Nov. 13, 2007) at 3, 4 [hereinafter 2007 Young Affidavit].

Dr. Young also argues that Academy of Natural Sciences, Philadelphia (ANSP) studies used in the DEIS should not be relied upon to assess impacts because the studies (1) did not include some necessary information such as fish early life history stages, migration timing, distribution patterns, or population numbers; (2) utilized a “sampling protocol [that] is grossly insufficient to supply information needed to draw appropriate conclusions regarding the impact of the proposed Units 3 and 4 on fish species”; and (3) “were not intended or designed to be a systematic evaluation of the impacts of Plant Vogtle [Units 1 and 2] , as they are being used in the DEIS.” Id. at 5-7.

f. Board Ruling. Given our determination in section II.B above that this portion of EC 1.2 is not a contention of omission, the issue before us now is whether there is a dispute as to any material fact relative to this item as it challenges the adequacy of the ER/DEIS baseline information for cooling system impacts. See 10 C.F.R. § 2.710(d)(2). We conclude that, through Dr. Young’s affidavit submitted in support of their motion,¹² Joint Intervenors have

¹² Bearing in mind that summary disposition is not the vehicle for untangling expert disputes so long as the experts are competent and the information they provide is adequately
(continued...)

shown there is a dispute regarding genuine issues of material fact relating to baseline information for cooling system impacts. Thus, summary disposition is not appropriate.

One example of such disputed facts is the adequacy of the species' descriptions in the DEIS. While the staff and SNC contend that the species information provided in the DEIS contains enough information and in sufficient detail to allow for an evaluation of cooling system impacts, see Staff 1.2 Answer at 6, SNC 1.2 Dispositive Motion at 7-8, the Joint Intervenors expert makes specific allegations about information missing from the descriptions, see 2007 Young Affidavit at 3. We find these assertions sufficient to establish there is a genuine factual dispute about the material issue of the kind and detail of species information that should be in the ER/EIS such that the matter cannot be resolved on summary disposition.

Other genuine disputes as to material facts also are extant, including the adequacy of previous monitoring and studies as they relate to the current impacts of Plant Vogtle Units 1 and 2. As was noted in section II.D.1.e above, Joint Intervenors make supported allegations regarding the adequacy of the ANSP studies in the DEIS, which are used extensively to assess the current aquatic population near the site and the impacts that Plant Vogtle Units 1 and 2 have had on that population. See 2007 Young Affidavit at 5-8.

Nor are we dissuaded from concluding these ANSP reports properly establish such disputes by the fact the reports were neither referenced in the admitted contention nor the information supplied to provide a basis supporting of the contention. To be sure, their status of newly introduced materials raises the question whether they can be relied upon as support for the Joint Intervenors challenge to the SNC summary disposition request absent an amended or

¹²(...continued)

stated and explained, see MOX, LBP-05-4, 61 NRC at 80-81, in this instance we find that the parties' affidants and the information they provide are sufficient to establish disputed material facts as to this and two of the other three subject areas encompassed by EC 1.2, as we outline in more detail below.

new contention.¹³ In our estimation, however, the Joint Intervenors current assertions regarding the ANSP reports are part of the larger argument, made in Dr. Young's 2006 affidavit provided as part of the basis for EC 1.2, that the information utilized in the ER regarding Units 1 and 2 impacts, as outlined in the 1985 VEGP operating license-related FEIS, is inadequate and that new, properly conducted studies are needed. In Dr. Young's original affidavit, he argued the SNC ER lacked appropriate data to support its conclusion that Units 1 and 2 have had insignificant impacts upon aquatic species. See 2006 Young Declaration at 4. Based upon this alleged deficiency, Dr. Young asserted that "a study of entrainment and impingement associated with the existing intake structure is necessary to determine the cumulative withdrawal effects." Id. The Joint Intervenors criticisms of the ANSP reports are a relatively straightforward elaboration of this argument, as Joint Intervenors continue to assert that insufficient information has been provided with which accurately to assess the impacts of the existing or new units.

In accord with 10 C.F.R. § 2.309(f)(1), the support for a contention, as reflected in its stated bases and any accompanying affidavits or documentary information, should be set forth

¹³ In general, in the face of a staff DEIS or FEIS that includes additional probative information the staff believes is relevant to the subject matter of an admitted contention initially footed in an applicant's ER, an intervenor would be wise to amend its contention (or submit a new contention) to reflect any relevant changes or additions, thereby avoiding any question about whether this additional information falls outside the scope of the admitted contention so as to preclude it from consideration as support for the contention. See 10 C.F.R. § 2.309(f)(2). By doing so, they avoid the fate of the intervenors in the Seabrook proceeding who asserted that a contention concerning "the prevention of the accumulation of mollusks, other aquatic organisms, and debris in cooling systems" allowed them to make arguments regarding "microbiologically-induced corrosion." Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 95 (1988). In that instance, the Appeal Board concluded they could not, noting that while the language of the contention mentioned neither blockage nor corrosion of the cooling system, the contention's heading ("Blockage of Coolant Flow to Safety-Related Systems and Components by Buildup of Biological Organisms") and its assigned basis, which relied solely on a May 1982 Federal Register notice about cooling system blockages, clearly showed that the contention "was intended to embrace only cooling system blockage." Id. at 97.

with reasonable specificity so as “to put the other parties on notice as to what issues they will have to defend against or oppose.” Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 26 NRC 93, 97 (1988). Certainly, Dr. Young’s affidavit put SNC and the staff on notice that Joint Intervenors found such “baseline” data insufficient. Moreover, the Board specifically noted that litigation regarding the merits of EC 1.2 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 at 257. We thus find the Joint Intervenors reliance on the ANSP reports as a basis for establishing the existence of material factual disputes is not violative of the scope of EC 1.2.

Having concluded the SNC attempt to establish there is no genuine material factual dispute regarding the adequacy of the baseline aquatic information to support the conclusions in the ER/DEIS has been forestalled by the information presented by Joint Intervenors, we deny the SNC summary disposition request relative to this item.

2. Impingement and Entrainment

a. Joint Intervenors Initial Petition. As set forth in the Joint Petitioners initial petition, EC 1.2 also alleged that the SNC ER did not adequately consider the direct, indirect, and cumulative impacts upon aquatic organisms of entrainment (i.e., when aquatic organisms are carried into the cooling system) and impingement (i.e., when aquatic organisms collide with cooling system components). See Intervention Petition at 10. Although SNC in its ER concluded that such impacts will be minor, see [SNC] [ESP] Application for the [VEGP], Part 3, [ER] at 5.3-3, 5.3-4 (rev. 1 Nov. 13, 2006) (ADAMS Accession No. ML063210565) [hereinafter ER], Joint Intervenors challenged this assertion, claiming that (1) not enough information was

provided to come to any conclusion regarding impacts; and (2) the assumptions used in the applicant analysis were faulty.

More specifically with regard to the first concern, Joint Intervenors argued that the ER lacked enough information about the site's current species, particularly those with a high probability of entrainment, to assess whether entrainment and impingement present a danger to these species. See 2006 Young Declaration at 3. Joint Intervenors also asserted that the current units have never been properly monitored, with SNC instead choosing to rely upon a 1985 study to support the conclusion that the impacts of the new units will be minor, which Dr. Young called "unwarranted," and "improper and misleading." Id. at 4. To make up for these informational deficits, Dr. Young called for "a study of entrainment and impingement associated with the existing intake structure . . . to determine the cumulative withdrawal effects." Id.

As to the latter claim, Joint Intervenors found fault with a number of assumptions used in the ER analysis. For instance, Dr. Young argued "[t]he assumption of a uniformly distributed drift community is invalid." Id. at 4. Dr. Young was particularly critical of the assumptions about water levels made in the ER's analysis, arguing the analyses should have used a lower minimum guaranteed river flow level and a higher maximum percentage for how much of the river is withdrawn by Units 1 and 2. See id. at 6.

b. Board Contention Admissibility Discussion. The Board admitted the entrainment/impingement aspects of the contention, along with those relating to thermal and chemical impacts. In doing so, the Board concluding that "[f]or each of the asserted deficiencies concerning the ER impact discussion regarding the intake/discharge structure for the two new proposed facilities -- impingement/entrainment, chemical discharges, and thermal discharges, including cumulative impacts from these items associated with the existing Vogtle facilities --" Dr. Young's affidavit provided sufficient support. LBP-07-3, 65 NRC at 258.

c. SNC Motion for Summary Disposition. In support of its request for summary disposition of EC 1.2, SNC argues that the DEIS identifies and considers direct, indirect, and cumulative impingement/entrainment impacts. See SNC 1.2 Dispositive Motion at 13. In this regard, SNC specifically points to the staff's analysis of the proposed facilities' intake structure design and scrutiny of the existing facilities' intake screens, the staff's discussion of SNC's ongoing obligation to report any unusual environmental events, and the staff's examination of "the percentage of water withdrawn, the planned low through-screen intake velocity, the design of the closed-cycle cooling system, the typically high fecundity of most species inhabiting rivers, the existence of multiple spawning sites within the river basin and the high natural mortality rates of eggs and larvae." Id. at 14-15. SNC argues that the many existing studies, including many field studies, used to prepare the DEIS in conjunction with the analysis of those studies done by the staff constitute the "hard look" required in an EIS. Id. at 13-16.

d. Staff Answer. In its response to the SNC motion, the staff also argues that the Joint Intervenors concerns have all been addressed in the DEIS in that "the DEIS analyzes the potential impacts of impingement/entrainment on the above-cited species (including, for all of the species, any life history phases of particular susceptibility to impingement/entrainment impacts, such as egg and larval)." Staff 1.2 Answer at 6. The staff further asserts that the Joint Intervenors concerns regarding a uniformly distributed drift community assumption have been addressed and any alleged deficiency cured because "the DEIS considers the appropriateness of the assumption of a uniformly distributed drift community," and found that it was a conservative assumption. Id. at 7. As to water levels, the staff notes that the DEIS includes a full analysis of impingement and entrainment at the minimally measurable river level. Id. at 13.

e. Joint Intervenors Answer. Joint Intervenors declare there are still a number of material facts as to which there is a genuine issue. These include whether the DEIS was

incorrect in assuming the distribution of fish eggs and larval fish is uniform, or “mistakenly assumes greater mobility of fish eggs and larval fish,” either of which would mean the DEIS underestimated the impacts from entrainment. Joint Intervenors 1.2 Answer at 11, 13. In his supporting affidavit, Dr. Young dismisses the SNC entrainment/impingement assessment efforts and the staff’s site visit to assess those efforts that are discussed in the DEIS as insufficient. According to Dr. Young, the evidence gained from screened baskets several times a year “is a grossly inadequate method for analyzing impingement/entrainment from water withdrawal” while the staff’s single site observation was “insufficient to make a definitive conclusion regarding impacts from entrainment.” 2007 Young Affidavit at 6.

Joint Intervenors also argue that a number of material facts remain in dispute regarding the Savannah River’s water level, including whether the staff used the correct minimum low flow in the DEIS, id. at 15-16, and whether the cumulative impacts water withdrawal analysis in the DEIS should have included, in addition to the existing Vogtle units, withdrawals by nearby sites and by current and known future sites upstream, see Joint Intervenors 1.2 Answer at 15-16, 18; see also Affidavit of Barry W. Sulkin at 4-6, 10-11 (Nov. 9, 2007).

f. Board Ruling. This portion of EC 1.2 having likewise been found not to be a contention of omission, see supra section II.B, it is apparent that material factual disputes still exist regarding the adequacy of the ER/DEIS assessment of aquatic organism impingement and entrainment, making a grant of summary disposition improper at this time. See 10 C.F.R. § 2.710(d)(2). For instance, while the staff and SNC argue that the assumption of a uniformly distributed drift community is a conservatism, the Joint Intervenors expert Young declares there exists a potential for larger impacts than those shown by a model using a uniformly distributed drift assumption. Compare SNC 1.2 Dispositive Motion at 16 n.2 and Staff 1.2 Answer at 7 with 2007 Young Affidavit at 9. Additionally, we find the Joint Intervenors discussions regarding

larval fish mobility and screen basket cleanings and the NRC staff's visit regarding those cleanings information that reflects existing material factual disputes. While this is post-ER information, we do not think it falls outside the ambit of this portion of EC 1.2 given Joint Intervenors devoted a considerable portion in their original, ER-related pleadings discussing larval fish mobility. See 2006 Young Declaration at 5. That discussion, which certainly provided SNC and the staff with sufficient notice of this argument, marks these matters both as within the boundaries of the original contention and bases and relevant to the Board's ongoing consideration of these issues.

For the entrainment (as well as the thermal impacts) portion of the contention, there also exists a clear dispute between the parties about whether the existing impact analyses were based upon the correct minimum river levels so as to estimate properly the maximum percentage of the river withdrawn by the proposed units. Based on the information provided in Mr. Sulkin's supporting affidavit, Joint Intervenors argue the minimum low flow used in the DEIS, Drought Level 3 or 3800 cubic feet per second (cfs), is not the true minimum flow and that the thermal impacts and entrainment analyses should be redone utilizing the Thurmond Dam's Drought Level 4 conditions and the minimum flow Jackson, South Carolina gauge, which is lower than the Thurmond Dam's Drought Level 3.¹⁴ See Joint Intervenors 1.2 Answer at 15-16. Moreover, the fact that this analysis was not part of the information provided by Dr. Young in support of the original contention does not necessarily make it irrelevant. In his 2006 affidavit, Dr. Young calculated a maximum percentage of the river withdrawn by the proposed units using an assumption of 3828 cfs, based on the worst seven-day flow over a ten-year period (the 7Q10

¹⁴ The Board notes that as of Tuesday, October 23, 2007, the minimum daily discharge from Lake Thurmond was reduced from 3800 cfs to 3600 cfs. See Army Corps of Engineers (<http://water.sas.usace.army.mil/cf/KavaPlot/KPlot.cfm?project=Thurmond>) (last visited on Jan. 14, 2008).

flow identified in the ER),¹⁵ rather than the ER's assumption of 5800 cfs. See 2006 Young Declaration at 6. This calculation was provided, however, in the context of Dr. Young's larger argument that low water levels increase species' vulnerability to entrainment and "[t]he ER does not calculate normal and worst case scenarios based upon species composition in the river channel at different flows." Id. Accordingly, with SNC and the staff having had notice that arguments regarding the Savannah River's minimum water levels and the maximum percentage withdrawn from the river would be raised, we consider this argument regarding Drought Level 4 to be within the ambit of the 2006 concern proffered in support of EC 1.2 that water level "worst case scenarios" have not been calculated properly.¹⁶

Another portion of the Joint Intervenors 2007 argument regarding water levels will not be considered further by the Board, however. In their answer opposing summary disposition, Joint Intervenors claim:

[The DEIS] does not take into account significant withdrawals in the immediate vicinity of Plant Vogtle, such as the D-Area Powerhouse and the Savannah River Site. It also does not take into account any withdrawals upstream of Plant Vogtle, such as the Urganhart Station, the Augusta Canal, the International Paper Mill at Augusta, or the City of Augusta. The DEIS does not take into account known future increases of withdrawals upstream from

¹⁵ In light of the region's current drought, if the FEIS were issued today, the 7Q10 would be significantly lower. See id.

¹⁶ In this regard, we note it is clear from the 2006 Young Declaration that issues around minimum flows and the maximum percentage withdrawn would be some of the Joint Intervenors primary arguments. SNC and the staff should not have been surprised by their inclusion in the Joint Intervenors answer, even if Joint Intervenors have updated the exact reasons why they believe that minimum flows have been miscalculated. We also note that in its statement of material facts not at issue, SNC uses the staff's Drought Level 3 calculations as support for its summary disposition motion, referring to Drought Level 3 as utilized in the DEIS as "the maximum measurable drought." See SNC 1.2 Statement of Undisputed Facts at 3. This raises the concern whether, if Joint Intervenors are barred from questioning whether Drought Level 3 is indeed the "maximum measurable drought," would they also be barred from disputing a statement that, if undisputed, will be admitted as fact. See supra note 9.

the Stevens Creek reservoir, which has recently applied to quadruple it[s] withdrawal.

Joint Intervenors 1.2 Answer at 18-19 (citations omitted). In contrast, in the Joint Intervenors original petition, as well as Dr. Young's supporting materials, the discussion of cumulative withdrawals includes only the existing Vogtle units. See Intervention Petition at 12-13 ("Thus, the ER fails to provide a meaningful basis to evaluate the cumulative impacts of the new and existing intake structures on aquatic species." (emphasis added)); 2006 Young Declaration at 4. Consequently, in their existing issue statement EC 1.2 and its supporting bases (which they choose not to amend), Joint Intervenors have failed to provide the other parties with notice that the issue of the impacts of cumulative withdrawals was intended to include anything other than the existing and proposed Vogtle units.¹⁷ Given, as we have previously recognized, see supra section II.D.1.f, that a purpose of the bases of a contention are "to put the other parties on notice as to what issues they will have to defend against or oppose," Seabrook, ALAB-899, 26 NRC at 97, Joint Intervenors current argument that the DEIS must consider the cumulative impacts of water withdrawals by other facilities on the Savannah River (particularly as reflected in the last paragraph on page 18, continuing onto page 19, of Joint Intervenors answer and paragraphs 23 and 24 of the Sulkin affidavit) is outside the scope of EC 1.2 and will not be considered further by the Board.

¹⁷ The only reference made to other facilities in either the intervention petition or the 2006 Young declaration relates to discharges: "the ER does not evaluate cumulative impacts from the new effluent discharge combined with the existing discharge and other sources of pollution in the area." Intervention Petition at 13. What these other sources might be is never explained, and the sentences that follow only discuss "the existing discharge" and "the existing thermal plume." Id. This is certainly not enough to give SNC and the staff notice that Joint Intervenors meant anything other than the existing Vogtle units when discussing cumulative impacts and water withdrawals.

3. Thermal Pollution

a. Joint Intervenors Petition. In their initial petition, Joint Intervenors argued that the ER lacked adequate information regarding both the probable attributes of the new units' thermal plume and their likely effects upon the site's species. See Intervention Petition at 13.

Regarding analysis of the plant's plume, Dr. Young asserted that the thermal plume for the existing Vogtle facilities had never been measured and that the plumes from the existing plant may combine with the new plume, "resulting in an increased volume of the river affected by the thermal discharge." 2006 Young Declaration at 7. Dr. Young also alleged relative to the effect of the plume upon the site's ecology that there was no analysis of the plume or other thermal effects when water levels are low. See id. at 8. He further claimed that there is no data regarding thermal tolerances and species' varying tolerances by life history stage and maintained that the ER only included discussions of fish that will not be affected much by the plume, rather than those that could be vulnerable, like larval and juvenile American shad. See id. at 7-8. Finally, Joint Intervenors declared that the cumulative thermal effects of all of the Vogtle units were inadequately analyzed. See Intervention Petition at 12-13.

b. Board Contention Admissibility Discussion. Along with the entrainment/impingement and chemical impacts aspects of the contention, the Board admitted the Joint Intervenors thermal impacts concern, concluding that "[f]or each of the asserted deficiencies concerning the ER impact discussion regarding the intake/discharge structure for the two new proposed facilities -- impingement/entrainment, chemical discharges, and thermal discharges, including cumulative impacts from these items associated with the existing Vogtle facilities --" Dr. Young's affidavit provided sufficient support. LBP-07-3, 65 NRC at 258.

c. SNC Motion for Summary Disposition. SNC argues in its dispositive motion that the DEIS includes the analysis of thermal impacts required under NEPA. According to SNC, in

the DEIS the staff assumed conservative river conditions and determined the maximum size of the thermal plume. See SNC 1.2 Dispositive Motion at 19. According to SNC, “these efforts to assess conditions under maximum withdrawals, maximum temperatures and maximum droughts constitute the appropriate ‘worst-case’ analysis alleged to be missing, including analysis of 7Q10 flow conditions.” Id. at 19. In the alternative, SNC argues that “NEPA does not require a strictly worst case analysis.” Id. at 19 n.4. SNC also claims that the staff adequately studied cumulative thermal impacts in the DEIS, asserting:

[T]he DEIS includes a discussion of NRC Staff’s thermal impact assessment using the CORMIX model to estimate the size and temperature of the thermal plume from the existing Units 1 and 2 as well as the proposed Units 3 and 4. The DEIS quantifies the size of the thermal plume, and based on their assessment of the size of the plume, the Staff concludes that “thermal impacts to aquatic ecosystems” would be minor. This includes impacts to American shad, which are specifically addressed as part of the aquatic ecosystem in section 2.7.2.1. The DEIS quantifies the maximum size of a thermal plume under worst case conditions.

Id. at 21-22.

d. Staff Answer. Citing the accompanying joint affidavit of Dr. Christopher King and Rebekah Krieg as support, the staff declares that the DEIS includes an adequate analysis both of the proposed units and of the proposed and existing units cumulatively, making the thermal allegations in EC 1.2 moot. See Staff 1.2 Answer at 11; see also Joint Affidavit of Christopher B. Cook and Rebekah H. Krieg (Oct. 29, 2007) at 17-18. According to the staff, it conducted an overly conservative analysis of cumulative impacts in the DEIS, combining as one the new plume and the thermal plumes from the existing Vogtle units, as well as studying them separately. See Staff 1.2 Answer at 11. The staff also declares that it studied the ability of fish to avoid the plume and the potential population impact, or lack thereof, to those organisms that cannot avoid the plume, like ichthyoplankton. See id.

In sum, the staff claims that the thermal impacts conclusions in the DEIS, based on “calculations of the modeled plume size, duration, temperature and temperature differential (for different river flow levels and temperatures of the river at different times of the year),” are well-founded such that “the DEIS cures the alleged deficiencies in the ER concerning the potential impacts of the thermal plume.” Id.

e. Joint Intervenors Answer. In their answer to the summary disposition motion, Joint Intervenors argue that material factual disputes remain regarding thermal impacts. As with the entrainment and impingement analyses, Joint Intervenors contend the staff should have used lower minimal river flow numbers and higher VEGP maximum withdrawals, and thus a higher percentage of the river withdrawn into the cooling system. See Joint Intervenors Answer at 14-18. They also assert, as was noted above, see supra section II.D.2.e, that a uniformly distributed drift assumption is incorrect so that the impacts may be significantly higher. See Joint Intervenors Answer at 14.

f. Board Ruling. Relative to this portion of EC 1.2 that questions the adequacy of the information provided in the ER/DEIS regarding thermal pollution, see supra section II.B, a number of material factual disputes remain with regard to the potential thermal impacts of the proposed units’ cooling system upon aquatic organisms, making summary disposition inappropriate for this aspect of EC 1.2 as well. As was noted in section II.D.2.f above, these disputes include what water levels should be used in models that estimate the size and impact of the thermal plume and whether the staff is correct in assuming a uniformly distributed drift community in the DEIS analysis, both of which the Board also has found to be within the scope of the contention. This portion of the contention thus will be subject to further merits consideration by the Board.

4. Chemical Pollution

a. Joint Intervenors Petition. Joint Intervenors declared in their initial petition that in reaching the conclusion that impacts from the plant's chemical discharges would be minor, the ER failed to "disclose whether chemical constituents in the liquid effluent will be discharged at harmful levels." Intervention Petition at 12. Pointing to the chart in the ER that listed the possible water treatment chemicals with the disclaimer that "this list is representative, not definitive," ER at 3.6-5 (Table 3.6-1 & n.1)), Joint Intervenors asserted the chart revealed only some of the constituents and did not provide the amounts of the chemicals involved. See Intervention Petition at 11-12. Joint Intervenors also argued that, as with thermal discharges, cumulative impacts of the new chemical discharges combined with those from existing discharges and other sources of pollution were not adequately considered, stating "[t]he ER does not disclose field monitoring data from the existing discharge structure [and] [t]here is no evaluation of the acute or chronic toxicity of the existing discharge." Id. at 13.

b. Board Contention Admissibility Discussion. Admitting the Joint Intervenors chemical impacts concern along with the entrainment/impingement and thermal impacts aspects of the contention, the Board concluded that "[f]or each of the asserted deficiencies concerning the ER impact discussion regarding the intake/discharge structure for the two new proposed facilities -- impingement/entrainment, chemical discharges, and thermal discharges, including cumulative impacts from these items associated with the existing Vogtle facilities --" Dr. Young's affidavit provided sufficient support. LBP-07-3, 65 NRC at 258.

c. SNC Motion for Summary Disposition. SNC argues in its motion that the Joint Intervenors claims regarding the absence of information about chemical discharges are moot because "Table 5-4 of the DEIS provides a detailed list of the water treatment chemicals, their use, the concentration that is anticipated to be discharged from Units 3 and 4 and the toxicity

data from the Material Safety Data Sheets for each of those chemicals.” SNC 1.2 Dispositive Motion at 23. SNC also maintains that “the DEIS does evaluate the cumulative impacts of acute or chronic toxicity of the existing discharge.” Id.

d. Staff Answer. Like SNC, the staff points to Table 5-4 of the DEIS, arguing that, using the chart’s new information, the staff evaluated the impacts from the discharges and provided an analysis that effectively addresses the Joint Intervenors complaint. The staff concludes that “the Staff’s DEIS has now addressed whether chemical discharge effluents would be discharged at harmful levels,” so that the Joint Intervenors allegation of an omission is now moot. Staff 1.2 Answer at 9-10.

e. Joint Intervenors Answer. Joint Intervenors acknowledge this portion of the contention is now moot, admitting that “[t]he claim that the impact of chemicals on aquatic life was not properly addressed in the ER has subsequently been addressed in the DEIS.” Joint Intervenors 1.2 Answer at 19.

f. Board Ruling. As Joint Intervenors have conceded, relative to the purported omission that is at issue in this portion of EC 1.2, see supra section II.B, the DEIS has addressed the contention’s allegation that “[t]he ER fails to identify and consider direct, indirect, and cumulative . . . chemical . . . effluent discharge impacts of the proposed cooling system intake and discharge structures on aquatic resources.” LBP-07-3, 65 NRC at 280. In contrast to the chemical discharge information provided in the ER, which was a simple and not necessarily comprehensive list of chemicals, the DEIS provides the concentration of each chemical at the discharge point, with a comparison of those concentrations to the concentrations that would be lethal for fifty percent of a sample population. See DEIS at 5-28 (Table 5-4).

The portion of EC 1.2 addressing chemical discharges thus is dismissed as moot.

III. CONCLUSION

Because we have concluded that, in the circumstances here, the November 21, 2007 motion by the staff to strike portions of the Joint Intervenors 1.2 answer and the November 23, 2007 motion by SNC to strike portions of the Joint Intervenors 1.2 answer or, in the alternative, to file a reply were improvidently submitted, we decline to provide further substantive consideration to either.

With regard to the SNC October 17, 2007 summary disposition request, we conclude that, as a contention claiming a material omission in the ER that has now been addressed in the DEIS, the portion of EC 1.2 concerning chemical discharges should be dismissed as moot. Further, with the exception of the matter of the cumulative impacts of water withdrawals by other facilities on the Savannah River that is outside the scope of the admitted contention, we find relative to the other portions of the EC 1.2 regarding baseline information, impingement/entrainment, and thermal impacts that SNC has failed to establish that there are no disputes of material fact relating to genuine issues, and so deny the SNC motion for summary disposition with regard to those aspects of the contention.¹⁸

For the foregoing reasons, it is this fifteenth day of January 2008, ORDERED, that:

1. The October 17, 2007 motion of applicant SNC for summary disposition regarding Joint Intervenors issue statement EC 1.2 is granted as to that portion of the contention

¹⁸ The current general schedule for this proceeding provides another opportunity for the submission of amended or new contentions and summary disposition motions following the issuance of the staff's final EIS, currently scheduled for early July 2008. See Initial Scheduling Order app. A, at 1-2. The Board assumes that any party decisions to amend or file new contentions or to submit another dispositive motion will be informed by this ruling.

regarding chemical discharge impacts, which is dismissed as moot, and is denied as to the other aspects of the contention, consistent with the Board's ruling on the scope of the contention as it relates to the matter of the cumulative impacts of water withdrawals by other facilities on the Savannah River that is outlined in section II.D.2.f of this decision.

2. The November 21, 2007 NRC staff motion to strike portions of the Joint Intervenors EC 1.2 answer to the SNC summary disposition motion and the November 23, 2007 motion by SNC to strike portions of the Joint Intervenors EC 1.2 answer to its dispositive motion or, in the alternative, to file a reply to that answer are denied.

3. Consistent with this opinion, EC 1.2 is revised to read as follows:

EC 1.2 – ER FAILS TO IDENTIFY AND ADEQUATELY CONSIDER
COOLING SYSTEM IMPACTS ON AQUATIC RESOURCES

CONTENTION: 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.

THE ATOMIC SAFETY
AND LICENSING BOARD¹⁹

/RA/

G. Paul Bollwerk, III
CHAIRMAN

/RA/

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

/RA by E. Roy Hawkens for:/

James F. Jackson
ADMINISTRATIVE JUDGE

Rockville, Maryland

January 15, 2008

¹⁹ Copies of this memorandum and order were sent this date by the agency's E-Filing system to counsel for (1) applicant SNC; (2) the Joint Intervenors; and (3) the staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
SOUTHERN NUCLEAR OPERATING) Docket No. 52-011-ESP
COMPANY)
)
(Early Site Permit for the Vogtle ESP Site))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULING ON DISPOSITIVE MOTION AND ASSOCIATED MOTIONS TO STRIKE REGARDING ENVIRONMENTAL CONTENTION 1.2) (LBP-08-2) have been served upon the following persons by Electronic Information Exchange.

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. Trikourous
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

Ann P. Hodgdon, Esq.
Jonathan M. Rund, Esq.,
Robert M. Weisman, Esq.
Kathryn L. Winsberg, Esq.
Brett M. Klukan, Esq.
Office of the General Counsel
Mail Stop - O-15 D21
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: aph@nrc.gov; jmr3@nrc.gov;
rmw@nrc.gov; klw@nrc.gov; bm1@nrc.gov

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

Docket No. 52-011-ESP
LB MEMORANDUM AND ORDER (RULING ON DISPOSITIVE
MOTION AND ASSOCIATED MOTIONS TO STRIKE REGARDING
ENVIRONMENTAL CONTENTION 1.2) (LBP-08-2)

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

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

Kathryn M. Sutton, Esq.
Steven P. Frantz, Esq.
Paul M. Bessette, Esq.
Mary Freeze, Admin. Assist.
Morgan, Lewis & Bockius, LLP
Co-Counsel for Southern Nuclear Operating
Company, Inc.
1111 Pennsylvania Ave., NW
Washington, DC 20004
E-mail: ksutton@morganlewis.com
sfrantz@morganlewis.com
pbessette@morganlewis.com
mfreeze@morganlewis.com

Margaret Parish
Law Clerk
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: map4@nrc.gov

Mary Maclean D. Asbill, Esq.
Lawrence D. Sanders, Esq.
Turner Environmental Law Clinic
Emory University School of Law
1301 Clifton Road
Atlanta, GA 30322
E-mail: masbill@law.emory.edu;
lawrence.sanders@emory.edu

C. Grady Moore, III, Esq.
Balch & Bingham, LLP
1901 6TH Avenue, Suite 2600
Birmingham, AL 35203
E-mail: gmoore@balch.com

Charles R. Pierce
Southern Company Services, Inc.
600 North 18th Street, BIN B056
Birmingham, AL 35291-0300
E-mail: crpierce@southernco.com

[Original signed by R. L. Giitter]

Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 15th day of January 2008