

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Dr. William M. Murphy

In the Matter of

PROGRESS ENERGY FLORIDA, INC.

(Combined License Application for Levy County
Nuclear Power Plant, Units 1 and 2)

Docket Nos. 52-029-COL, 52-030-COL

ASLBP No. 09-879-04-COL-BD01

February 2, 2011

MEMORANDUM AND ORDER

(Denying Motion for Summary Disposition of Aspects of Contention 4)

Before the Board is a motion by Progress Energy Florida, Inc. (PEF) for summary disposition of certain aspects of Contention 4 (C-4) related to the adequacy of the Environmental Report's discussion of environmental impacts upon wetlands and other aquatic resources, which are alleged to result from salt drift and passive dewatering that would be generated by the construction and operation of two proposed nuclear power reactors at the Levy Nuclear Plant (LNP) site in Levy County, Florida.¹ PEF asserts that there is no genuine issue of material fact with respect to these aspects of C-4 because the scope and magnitude of impacts from salt drift and passive dewatering are known and cannot noticeably destabilize the affected aquatic resources. Id. at 7. The Ecology Party of Florida, the Green Party of Florida,

¹ Progress Energy's Motion for Summary Disposition of Contention 4 (Environmental Impacts of Dewatering and Salt Drift) with Regard to Salt Drift and Passive Dewatering (Oct. 4, 2010) (Motion).

and the Nuclear Information and Resource Service (collectively, Intervenor) oppose the motion.² The NRC Staff supports the motion for summary disposition.³

For the reasons stated below, we conclude that genuine issues of material fact exist concerning the nature, extent, and impact of passive dewatering and salt drift, and thus that the motion fails to satisfy 10 C.F.R. § 2.1205(c). We therefore deny PEF's motion.⁴

I. BACKGROUND

On December 8, 2008, the NRC published a notice of hearing and opportunity to petition for leave to intervene in the PEF combined license application (COLA) proceeding. 73 Fed. Reg. 74,532 (Dec. 8, 2008). This Board was established on February 23, 2009. 74 Fed. Reg. 9,113 (Mar. 2, 2009). On July 8, 2009, we ruled that the Intervenor had demonstrated standing and had submitted three admissible contentions. LBP-09-10, 70 NRC 51, 147 (2009). We therefore granted their petition to intervene. Id.

One of the three admitted contentions, Contention 4 (C-4), addressed various issues relating to the potential environmental impacts upon surface and groundwater resources resulting from construction and operation of the LNP. C-4 included a challenge to PEF's

² Intervenor's [sic] Response to Progress Energy's Motion for Summary Disposition of Contention 4 (Environmental Impacts of Dewatering and Salt Drift) with Regard to Salt Drift and Passive Dewatering (Nov. 15, 2010) at 1 (Intervenor Answer).

³ NRC Staff Answer to Progress Energy Florida's Motion for Summary Disposition of Contention 4 Concerning the Environmental Impacts of Salt Drift and Passive Dewatering (Oct. 25, 2010) at 1 (Staff Answer).

⁴ In addition to the instant motion, two other motions concerning the subject matter of C-4 are currently pending before this Board. On September 30, 2010, PEF filed a motion to dismiss as moot certain aspects of C-4 (relating to active dewatering). See Motion to Dismiss as Moot the Aspects of Contention 4 Related to Active Dewatering During Levy Nuclear Plant Operations (Sept. 30, 2010). On November 15, 2010, the Intervenor filed a motion for the admission of a new contention, C-4A, alleging that the NRC's recently issued draft environmental impact statement (DEIS), suffers from many of the same deficiencies as alleged in C-4 concerning PEF's Environmental Report (ER). See Ecology Party of Florida, Green Party of Florida, Nuclear Information and Resource Service Motion for Leave to Amend Contention 4 (Nov. 15, 2010); An Amended Contention 4 (Nov. 15, 2010). These three pending motions relate to similar issues. Thus, we are issuing our rulings on these motions simultaneously.

impacts analysis as it relates to salt drift and passive dewatering activities during LNP construction and operation. See id. at 104. C-4 states, in pertinent part, as follows:

Progress Energy Florida's (PEF's) Environmental Report fails to comply with 10 C.F.R. Part 51 because it fails to adequately address, and inappropriately characterizes as SMALL, certain direct, indirect, and cumulative impacts, onsite and offsite, of constructing and operating the proposed LNP facility:

- A. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with dewatering, specifically:
 - 1. Impacts resulting from active and passive dewatering; . . .
- B. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with salt drift and salt deposition resulting from cooling towers (that use salt water) being situated in an inland, freshwater wetland area of the LNP site.

LBP-09-10, 70 NRC at 149. The Commission affirmed the admission of C-4. CLI-10-02, 71 NRC __, __ (slip op. at 3-18) (Jan. 7, 2010).

On August 5, 2010, the NRC Staff issued its draft environmental impact statement (DEIS) regarding PEF's COLA for LNP Units 1 and 2.⁵ On October 4, 2010, PEF filed the instant motion.

II. APPLICABLE LEGAL STANDARDS

When ruling on a motion for summary disposition in a Subpart L proceeding, the Board must apply the summary disposition standard set forth in Subpart G. See 10 C.F.R. § 2.1205(c). Under the Subpart G standard, summary disposition is proper "if the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show 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." 10 C.F.R. § 2.710(d)(2). The moving party bears the burden of

⁵ See Status Report (Aug. 5, 2010) at 2; Nuclear Regulatory Commission; Notice of Availability of the Draft Environmental Impact Statement for the Combined Licenses for Levy Nuclear Plant Units 1 and 2, 75 Fed. Reg. 49,539 (Aug. 13, 2010).

demonstrating that there is no genuine issue as to any material fact.⁶ Any doubt as to the existence of a genuine issue of material fact must be resolved against the moving party.⁷

When conflicting expert opinions are involved, summary disposition is rarely appropriate.⁸ “[D]ifferences among experts may occur at different factual levels: either about disputed baseline observations, or about the ultimate facts or inferences to be drawn even where baseline facts may be uncontested.”⁹ Regardless of the level of the dispute, at the summary disposition stage, it is not proper for a Board “to untangle the expert affidavits and decide ‘which experts are more correct.’” Id. at 510 (citation omitted). Factual disputes of this nature are to be resolved at an evidentiary hearing, where the Board has the opportunity to examine witnesses, probe the documents, and weigh the evidence.

III. POSITIONS OF THE PARTIES

With regard to salt drift, PEF asserts that salt drift and salt deposition from the Levy cooling towers will not exceed the NRC guidance threshold for impacts to vegetation off-site and will not pose a credible threat to vegetation on-site, and thus that “[a]bsent adverse impacts on vegetation, there can be no credible impacts to water resources and water quality.” Motion at 7-8. PEF asserts that its calculations as to the amount of salt drift and deposition that will occur are correct and conservative. Id. at 9. It states that the salt drift meets the legal limits imposed by the State of Florida. Id. PEF argues that, given that the expected amount of salt drift and deposition are below the levels specified by the NRC Staff guidance, the salt drift and deposition

⁶ See 10 C.F.R. § 2.325; Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1998).

⁷ See Advanced Medical Systems, Inc., CLI-93-22, 38 NRC at 102; see also LBP-10-20, 72 NRC __ (slip op. at 6-7) (Nov. 18, 2010).

⁸ See, e.g., Phillips v. Cohen, 400 F.3d 388, 399 (6th Cir. 2005) (“[C]ompeting expert opinions present the ‘classic battle of the experts’ and it [is] up to [the finder of fact] to evaluate what weight and credibility each expert opinion deserves.”).

⁹ Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Facility), LBP-01-39, 54 NRC 497, 509 (2001).

“cannot noticeably alter, let alone destabilize, any aspects of the freshwater aquatic environment. Id. (emphasis added). PEF supports its positions with regard to salt drift and salt deposition with the affidavit of Dr. George C. Howroyd, a Vice President and Technology Fellow with CH2M Hill.¹⁰ These arguments are very similar to PEF’s arguments at the contention admissibility stage. See LBP-09-10, 70 NRC at 96.

With regard to the C-4 allegations regarding passive dewatering, PEF asserts that “no passive dewatering is included in the Levy Project. Levy has been designed to specifically exclude passive dewatering features.” Id. at 12. PEF claims that the LNP is instead designed to effect a net recharge of three to seven inches at the pond sites.¹¹ PEF argues that there are “no credible passive dewatering mechanisms,” and accordingly, there cannot logically be any remaining issue of fact related to passive dewatering at the LNP. Id. at 13. In support of these propositions, PEF cites to the affidavit of Dr. Michael L Griffin, Principal Technologist in Water Resources with CH2M Hill, Inc.¹² These arguments are similar to the arguments PEF made when it opposed the admission of this portion of C-4.¹³

In response, the Intervenor continue to stand by their original C-4 assertions and argue that PEF’s motion for summary disposition should be denied because there are genuine issues of material fact that are disputed and that deserve to be heard. Intervenor Answer at 12. With regard to salt drift and salt deposition, Intervenor assert that salt drift and salt deposition from

¹⁰ Id. at 8; see id., Attachment B, Affidavit of George Clarion Howroyd in Support of Progress Energy’s Motion for Summary Disposition of Joint Intervenor [sic] Contention 4 (Aug. 17, 2010).

¹¹ Id. at 13 (“Direct precipitation on the ponds will offset evaporation over a long term average by 3 to 7 inches.”).

¹² Motion at 11; see id., Attachment C, Affidavit of Mitchell L. Griffin in Support of Progress’s Motion for Summary Disposition of Joint Intervenor Contention 4 (Aug. 17, 2010).

¹³ See Progress Energy’s Answer Opposing Petition for Intervention and Request for Hearing by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service (Mar. 3, 2009); LBP-09-10; 70 NRC at 93-98.

the Levy cooling towers will surpass the level (specified in the NRC guidance document) necessary to noticeably alter and adversely impact vegetation, both on- and off-site, which will, in turn, impact water resources.¹⁴ Intervenors challenge the reliability of the rainfall calculations that PEF used to predict salt drift and salt deposition. Specifically, they challenge PEF's use of meteorological data from Tampa, Florida, as opposed to that gathered from the vicinity of the LNP site in Levy County. Id. at 6. Intervenors further note the acknowledgement in the DEIS that climate change might significantly alter precipitation data in the 60-year duration period for the LNP project. Id. (citing DEIS at 7-9). In addition, Intervenors challenge PEF's calculation of the maximum predicted off-site deposition rate of 6.81 kilograms/hectare/month (kg/ha/mo) west of the planned location of the LNP cooling towers, arguing that PEF models used wind information that differs significantly from that recorded at the LNP site. Id. Still further, Intervenors disagree with the proposition that impacts of salt deposition off-site would decrease significantly as distance increases. They argue that the impact of salt drift on freshwater plants and associated animals present at further distances is more severe than on species that are more salt-tolerant closer to the coastal region. Id. at 6-7. In support of these assertions, Intervenors cite to the affidavit of Dr. Sidney T. Bacchus, with a "multidisciplinary doctoral degree in the fields of Hydrology, Ecology, and Plant Pathology and Physiology." Id. (citing Bacchus Affidavit ¶ A-3).

With regard to passive dewatering, Intervenors assert, with Dr. Bacchus' support, that the LNP project will cause passive dewatering. Id. at 8. The Intervenors state:

The nuclear islands at the Levy site will be build [sic] above ground level, but their construction entails deep excavations that will both dewater in their own right and affect the natural flow of groundwater; another form of passive dewatering Bacchus ¶ D-2. The drainage facilities are designed to detain stormwater, but will intersect with the surficial aquifer, resulting in dewatering during dry periods Bacchus ¶ D-6. Stacking water in the ponds restrains historic

¹⁴ Id. at 5 (citing id., Attachment 3, Affidavit of Sydney T. Bacchus in Support of Joint Intervenors' [sic] Responses to Environmental Impacts of Proposed Levy Nuclear Plant Units 1 and 2 (Nov. 15, 2010) ¶¶ E-14 to E-16) (Bacchus Affidavit).

overland flow and thus passively dewater Bacchus ¶¶ D-6, D-7. The average predicted annual lake evaporation near the Levy site of 46 to 50 inches is disputed by US Geological Service [sic] data Bacchus ¶ D-8 while the expected annual precipitation of 53 inches is irrelevant if dealing with dewatering during dry or drought periods and possible changes to climate Bacchus ¶ D-8. The three stormwater ponds and associated collection swales are expected to result in a net dewatering of the aquifer Bacchus ¶ D-4. By interfacing with the surficial aquifer, during dry periods, when dewatering will result in the most harm to local wetlands, the wet ponds will be drawing water upwards, denying the normal flow below ground Bacchus ¶¶ D-2, D-6. Likewise, the swales will dewater immediately after heavy rain, resulting in a loss of percolation Bacchus ¶ D-4.

Id. at 8-9. Intervenors also reject any suggestion that the concept of “passive dewatering” is limited to nonmechanical dewatering related to surface impoundments. Id. at 2.

Next, the Intervenors emphasize that the ER and the DEIS are deficient because they fail to consider the cumulative effects of each individual environmental stressor. Intervenors argue that the environmental impacts analysis relating to salt drift and passive dewatering should consider those phenomena “synergistically” or cumulatively, rather than individually (in the disjunctive – salt drift or passive dewatering).¹⁵ Intervenors state that C-4 is “largely based on cumulative impacts” and that PEF’s approach, whereby “each stressor is considered as if it were occurring in a vacuum . . . does not make sense.” Id. at 4. Finally, the Intervenors argue that due to the inadequacy of the impacts analysis related to salt drift and passive dewatering, the impacts analysis of consequential aspects of C-4 (C-4 section C-4C) is also inadequate. Id. at 9.

The NRC Staff supports the motion for summary disposition of these aspects of C-4, making essentially the same arguments as PEF. Staff argues that, because PEF’s calculations show that the amount of off-site and on-site salt drift and deposition are in line with the NRC Staff guidance in NUREG-1555 and NUREG-1437, these impacts are necessarily small and, therefore, that no material issue of fact can remain on this issue. Staff Answer at 6. In support, the Staff cites to the affidavit of Dr. Daniel W. Baber, Larry K. Berg, Joseph Peyton Doub, and

¹⁵ Id. at 4, 10-12 (citing 40 C.F.R. §§ 1508.7, 1508.27(b), regarding the need to evaluate impacts on a cumulative basis, and to avoid segmentation in the impacts analysis).

Dr. Rajiv Prasad.¹⁶ Likewise, with regard to passive dewatering, the Staff represents that due to the design of the LNP, no passive dewatering will occur in relation to the LNP site. Id. at 11-13. The Staff cites to the affidavit of Lance W. Vail on the issue of passive dewatering.¹⁷

IV. ANALYSIS AND RULING

In ruling on the instant motion this Board is mindful that, at the summary disposition stage, “the judge’s function is not . . . to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue” of fact more appropriately determined in an evidentiary hearing.¹⁸ Further, we keep in mind that “[t]he evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor,” and that summary disposition is not appropriate “if reasonable minds could differ as to the import of the evidence.” Id. Accordingly, when ruling on PEF’s summary disposition motion, our inquiry is limited to a determination of whether Intervenors dispute issues of material fact related to the salt drift and passive dewatering issues in C-4, and whether they have cited sufficient support for their arguments.

Using the foregoing criteria, we deny PEF’s motion for summary disposition. We find that, based on the pleadings and affidavits proffered by PEF, the NRC Staff and the Intervenors, issues of material fact remain in dispute regarding salt drift and passive dewatering on the LNP site. For example, the parties dispute the nature and amount of salt drift and salt deposition that are likely to occur and the environmental impacts they are likely to cause. Likewise, the parties dispute whether the construction and operation of two new nuclear power reactors on this site

¹⁶ Id. at 6-11; see id., Attachment 2, Affidavit of Daniel W. Baber, Larry K. Berg, Joseph Peyton Doub, and Rajiv Prasad Concerning the Staff’s Analysis of the Environmental Impacts Due to Salt Drift and Salt Deposition.

¹⁷ Id. at 12; see id., Attachment 3, Affidavit of Lance W. Vail Concerning the Environmental Impacts Due to Passive Dewatering.

¹⁸ Entergy Nuclear Generating Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC ___, ___ (slip op. at 12) (Mar. 26, 2010) (quoting Anderson v. Liberty Lobby, 477 U.S. 242, 247-48 (1986)) (quotation marks omitted).

will result in passive dewatering (short-term or long-term) and the nature and extent of any resulting environmental impacts.¹⁹ In addition, the Intervenor assert, as a core part of C-4, that the environmental analysis fails to adequately consider and assess the synergistic and cumulative impacts associated with the LNP project.²⁰ These examples illustrate that genuine issues of material fact remain in dispute in this proceeding, and that conflicting statements of fact or conclusions exist among the parties' experts. For this reason, we deny PEF's motion.

¹⁹ We reject the Staff's suggestion that we "defined" passive dewatering as limited to "non-mechanical dewatering related to surface impoundments." See Staff Answer at 3 (emphasis added). As Intervenor note, we did not limit the impacts inquiry solely to those passive dewatering mechanisms that involve "nonmechanical dewatering related to surface impoundments" – a description we stated in parenthetical as an example, not a definition. See Intervenor Answer at 2; LBP-09-10, 70 NRC at 104. Intervenor also point out, and we agree (contrary to PEF's suggestion), that when the Commission affirmed our ruling on C-4, it did not limit C-4 (except with regard to greater than Class C wastes) as we admitted it. See Intervenor Answer at 2 (citing CLI-10-02, 71 NRC at ___ (slip op. at 3-18); LBP-09-10, 70 NRC at 149).

²⁰ The Intervenor assert, and the Board agrees, that an ER or EIS must consider the cumulative impacts of a proposed action. What remains to be seen, however, is whether the construction and operation of the LNP facility at the Levy site will, in fact, cause or contribute to such cumulative impacts and, if so, what they will be. It is not enough to assert that cumulative impacts could occur. This is not the time to weigh the evidence on this issue. However, if the Intervenor expect to pursue this issue at the evidentiary hearing, then they will need to proffer more affirmative and concrete evidentiary support for the proposition that specific cumulative environmental impacts will occur, and that they have not been adequately considered or characterized in the ER or EIS.

V. CONCLUSION

In conclusion, the Board denies the motion of Progress Energy Florida, Inc. for summary disposition of aspects of Contention 4 in this Subpart L proceeding related to salt drift and passive dewatering during operations of the Levy Nuclear Plant in Levy County, Florida. We find that issues of material fact remain in dispute and must be resolved at the Subpart L evidentiary hearing.²¹

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

/RA/

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

/RA/

Dr. William M. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 2, 2011

²¹ As we stated in our Initial Scheduling Order:

[T]he Subpart L proceeding has two key advantages over motions for summary disposition. First, in a Subpart L evidentiary hearing the Board may ask the witnesses to appear in person and answer questions, the answers to which might significantly assist in resolving the matter. This is not possible when ruling on a motion for summary disposition. Second, in an evidentiary hearing the Board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where “there is no genuine issue as to any material fact.” 10 C.F.R. §§ 2.710(d)(2), 2.1205.

Initial Scheduling Order, II.H, LBP-09-22, 70 NRC 640, 651 (2009).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
PROGRESS ENERGY FLORIDA, INC.) Docket Nos. 52-029-COL
) and 52-030-COL
)
(Levy County Nuclear Power Plant)
Units 1 and 2))
)
(Combined License))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (DENYING MOTION FOR SUMMARY DISPOSITION OF ASPECTS OF CONTENTION 4) have been served upon the following persons by Electronic Information Exchange.

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Docket Nos. 52-029-COL and 52-030-COL
 LB MEMORANDUM AND ORDER (DENYING MOTION FOR SUMMARY DISPOSITION OF
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[Original signed by Evangeline S. Ngbea]

Office of the Secretary of the Commission

Dated at Rockville, Maryland
 this 2nd day of February 2011