LBP-12-09

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Chairman
Dr. Michael F. Kennedy
Dr. William C. Burnett

In the Matter of FLORIDA POWER & LIGHT COMPANY (Turkey Point Units 6 and 7)	Docket Nos. 52-040-COL and 52-041-COL ASLBP No. 10-903-02-COL-BD01 May 2, 2012

MEMORANDUM AND ORDER
(Granting, In Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1)

Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association (hereinafter referred to collectively as Joint Intervenors) have moved to admit an amended version of their previously admitted, but recently dismissed-as-moot, Contention NEPA [National Environmental Policy Act] 2.1.[1] For the reasons discussed below, we grant Joint Intervenors' motion in part.

I. BACKGROUND

This proceeding concerns challenges to Florida Power & Light Company's (FPL's) combined license (COL) application for two new nuclear power reactors, Turkey Point Units 6 and 7, at its facility near Homestead, Florida.[2] On February 28, 2011, this Board granted Joint

[1] See Joint Intervenors' Answer to FPL's Motion to Dismiss Joint Intervenors' Contention 2.1 as Moot, and Alternatively, Joint Intervenors' Motion to Amend Contention NEPA 2.1 (Jan. 23, 2012) [hereinafter Joint Intervenors Motion].

[2] See [FPL, COL] Application for the Turkey Point Units 6 & 7, Notice of Hearing, Opportunity To Petition for Leave To Intervene and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation, 75 Fed. Reg. 34,777 (June 18, 2010).

Intervenors' hearing request and admitted, in part, one contention they advanced -- Contention NEPA 2.1. See LBP-11-06, 73 NRC __, __-__ (slip op. at 33-40) (Feb. 28, 2011).[3]

Contention NEPA 2.1 was an environmental "contention of omission" that challenged an allegedly omitted analytical aspect of FPL's proposed reclaimed wastewater system.[4] As admitted, the contention stated:

> [T]he [Environmental Report (ER)] fails to analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetracholoroethylene, which have been found in injection wells in Florida but are not listed in FPL's ER as wastewater constituent chemicals.

LBP-11-06, 73 NRC at __ (slip op. at 36). In admitting this contention, we stated that Joint Intervenors had asserted, with adequate supporting information, that these "specified chemicals might be in the wastewater discharged via deep injection wells into the Boulder Zone of the

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[3] We also granted a hearing request filed by Citizens Allied for Safe Energy, Inc. (CASE), and we granted a request from the Village of Pinecrest to participate as an interested local governmental body. See LBP-11-06, 73 NRC at __ (slip op. at 119). On March 29, 2012, we issued a decision (LBP-12-07, 75 NRC __, __ (slip op. at 22) (Mar. 29, 2012)) dismissing CASE from this proceeding on the ground that it no longer had any contention or unresolved pleading pending before this Board.

[4] LBP-11-06 contains a description of the reclaimed wastewater system that FPL plans to construct and operate at proposed Turkey Point Units 6 and 7. See LBP-11-06, 73 NRC at __-__ (slip op. at 31-33). Briefly, FPL plans to use reclaimed wastewater from the Miami-Dade Water and Sewer Department (MDWASD) as the principal source of makeup cooling water for mechanical draft towers that would dissipate waste heat generated by proposed Units 6 and 7. See id. at __ (slip op. at 31). Using underground injection wells, FPL would ultimately discharge some of the reclaimed water into a region of the Lower Floridan Aquifer called the Boulder Zone, which is about 2,800 feet below ground. See id. FPL's Environmental Report (ER) describes the Boulder Zone as "a highly transmissive zone of cavernous limestones and dolomites" (Turkey Point Units 6 & 7 COL Application, Part 3 -- [ER], Rev. 3 at 2.3-33 [hereinafter ER Rev. 3]) that is capped by "thick confining units." Id. at 2.3-19. The Floridan Aquifer -- which is divided into three levels known as the Upper Floridan Aquifer, the middle confining unit, and the Lower Floridan Aquifer (see LBP-11-06, 73 NRC at __-__ (slip op. at 31-32)) -- is "'a vertically continuous sequence of interbedded carbonate rocks of Tertiary age that are hydraulically interconnected by varying degrees and with permeabilities several orders of magnitude greater than the hydrogeologic systems above and below.'" See id. at __ (slip op. at 32) (quoting Turkey Point Units 6 & 7 COL Application, Part 3 -- [ER], Rev. 0 at 2.3-15 [hereinafter ER Rev. 0]).

Lower Floridan Aquifer, and that the wastewater could possibly migrate into the Upper Floridan Aquifer, contaminating the groundwater (including potential drinking water) with these chemicals." Id. at __ (slip op. at 37).

On December 16, 2011, FPL submitted to the NRC Revision 3 to its COL application for Turkey Point Units 6 and 7.[5]

On January 3, 2012, FPL moved to dismiss Contention NEPA 2.1 in light of Revision 3 to its COL application.[6] FPL argued that the contention was moot because: (1) contrary to the allegation in Contention NEPA 2.1, the chemicals "selenium" and "thallium" were included in Table 3.6-2 of the original version of the ER, and the environmental impacts from their release into the aquifer via the deep injection wells were assessed as "small" (see FPL Motion to Dismiss Contention 2.1 at 4); and (2) Revision 3 cured the omission identified in Contention NEPA 2.1 insofar as it modified Table 3.6-2 of the ER to add the estimated concentrations of the four missing chemicals (ethylbenzene, heptachlor, tetrachloroethylene, and toluene) and it assessed that the environmental impacts from their release into the aquifer via the deep injection wells would be small. See id. at 5.

On January 23, 2012, Joint Intervenors filed an answer opposing FPL's motion to dismiss Contention NEPA 2.1 as moot. See Joint Intervenors Motion at 4-11. Alternatively, Joint Intervenors moved this Board to admit the following amended version of Contention NEPA 2.1:

> The ER fails to adequately analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene, which have been found in injection wells in Florida but

[5] See Letter from Mano K. Nazar, Executive Vice President and Chief Nuclear Officer, FPL, to U.S. Nuclear Regulatory Commission (Dec. 16, 2011) (ADAMS Accession No. ML11361A102).

[6] See [FPL's] Motion to Dismiss Joint Intervenors' Contention 2.1 as Moot (Jan. 3, 2012) [hereinafter FPL Motion to Dismiss Contention 2.1].

are not accurately listed in FPL's ER as wastewater constituent chemicals.

Id. at 12 (emphasis in original).

On January 26, 2012, we granted FPL's motion to dismiss Contention NEPA 2.1, ruling that it was a contention of omission that FPL's Revision 3 had rendered moot. See Licensing Board Memorandum and Order (Granting FPL's Motions to Dismiss Joint Intervenors' Contention 2.1 and CASE's Contention 6 as Moot) (Jan. 26, 2012) at 4-5 (unpublished). We refrained, however, from ruling on Joint Intervenors' motion to amend Contention NEPA 2.1 pending receipt of responsive and reply pleadings. See id. at 7.

On February 10, 2012, FPL filed an answer opposing admission of amended Contention NEPA 2.1, and the NRC Staff filed an answer supporting, in part, admission of the amended contention.[7]

On February 17, 2012, Joint Intervenors filed a reply to these answers.[8]

II. APPLICABLE LEGAL STANDARDS

A. Contention Admissibility

To be admissible, an amended contention must satisfy: (1) either the timeliness standards in 10 C.F.R. § 2.309(f)(2), or the balancing test in 10 C.F.R. § 2.309(c) for nontimely contentions; *and* (2) the general contention admissibility criteria in 10 C.F.R. § 2.309(f)(1). We discuss those standards in turn.

1. Standards In 10 C.F.R. § 2.309(f)(2) For Timely Amended Contentions

Amended contentions filed after the initial filing period has expired may be admitted only with leave of the Licensing Board on a showing that:

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[7] See [FPL's] Response to Joint Intervenors' Motion to Amend Contention 2.1 (Feb. 10, 2012) [hereinafter FPL Answer]; NRC Staff's Answer to Joint Intervenors' Motion to Amend Contention NEPA 2.1 (Feb. 10, 2012) [hereinafter NRC Staff Answer].

[8] See Joint Intervenors' Reply to [FPL's] and [NRC] Staff's Responses to Joint Intervenors' Motion to Amend Contention 2.1 (Feb. 17, 2012) [hereinafter Joint Intervenors Reply].

> (i) The information upon which the amended . . . contention is based was not previously available;
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> (ii) The information upon which the amended . . . contention is based is materially different than information previously available; and
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> (iii) The amended . . . contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). In our Initial Scheduling Order and Administrative Directives, we advised that we would regard as being "submitted in a timely fashion" pursuant to 10 C.F.R. § 2.309(f)(2)(iii) any contention "filed within thirty (30) days of the date when the new and material information on which it is based first becomes available."[9]

2. Balancing Test In 10 C.F.R. § 2.309(c) For Nontimely Contentions

A contention that fails to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the following factors set forth in section 2.309(c)(1):

> (i) Good cause, if any, for the failure to file on time;
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> (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
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> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
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> (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
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> (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
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> (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
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> (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

[9] Licensing Board Initial Scheduling Order and Administrative Directives (Prehearing Conference Call Summary, Grant of Joint Motion Regarding Mandatory Disclosures, Initial Scheduling Order, and Administrative Directives) (Mar. 30, 2011) at 8 (unpublished) [hereinafter Initial Scheduling Order].

> (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1)(i)-(viii). The "good cause" factor is the "most important" and is entitled to receive the most weight. AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-07, 69 NRC 235, 261 (2009); see Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 469 (1982) (describing good cause). Where a petitioner fails to show good cause, "petitioner's demonstration on the other factors must be particularly strong." Texas Utils. Elec. Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992) (internal quotations omitted). A petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected. See Oyster Creek, CLI-09-07, 69 NRC at 260-61.

3. Admissibility Criteria In 10 C.F.R. § 2.309(f)(1)

In addition to satisfying the timeliness standards in 10 C.F.R. § 2.309(f)(2) or the balancing test in 10 C.F.R. § 2.309(c), an amended contention must satisfy the admissibility criteria in 10 C.F.R. § 2.309(f)(1), which require that a contention:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
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> (ii) Provide a brief explanation of the basis for the contention;
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> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
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> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
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> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
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> (vi) [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must

> include references to specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief . . . .

10 C.F.R. § 2.309(f)(1). Failure to comply with any of these admissibility criteria is grounds for rejection of a contention. USEC, Inc. (American Centrifuge Plant), CLI-06-09, 63 NRC 433, 437 (2006).

B. NEPA And The NRC's NEPA-Implementing Regulations

The regulations in 10 C.F.R. Part 51 implement the NRC's obligations arising from section 102(2) of NEPA, 42 U.S.C. § 4332(2). See 10 C.F.R. § 51.10(a). Pursuant to Part 51 (id. § 51.50(c)), every COL application must be accompanied by an ER,[10] the purpose of which is to aid the Commission in its preparation of an Environmental Impact Statement (EIS). See id. § 51.14(a). The EIS must "disclose the significant health, socioeconomic and cumulative consequences of the environmental impact of a proposed action." Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 106-07 (1983).

Regarding the level of detail in an ER, the governing regulations require it to discuss environmental impacts "in proportion to their significance" (10 C.F.R. § 51.45(b)(1)), and it "should contain sufficient data to aid the Commission in its development of an independent analysis." Id. § 51.45(c). NEPA documents need consider only those environmental impacts

[10] An ER must discuss: (1) the impacts of the proposed action on the environment; (2) adverse environmental effects of the proposed action that cannot be avoided; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources associated with the proposed action. See 10 C.F.R. § 51.45(b). Additionally, the ER shall "include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects." Id. § 51.45(c). The ER "must also contain an analysis of the cumulative impacts of the activities to be authorized by the [COL] in light of . . . preconstruction impacts described in the [ER]." Id.

that are "reasonably foreseeable" (Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002)), not those that are "'remote and speculative possibilities.'" Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 551 (1978) (quoting NRDC v. Morton, 458 F.2d 827, 837-38 (D.C. Cir. 1972)); see also Louisiana Energy Servs., L.P. (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) ("NEPA . . . does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts." (emphasis in original)).

III. ANALYSIS

> Joint Intervenors seek to admit the following amended Contention NEPA 2.1:
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> The ER fails to adequately analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene, which have been found in injection wells in Florida but are not accurately listed in FPL's ER as wastewater constituent chemicals.

Joint Intervenors Motion at 12. In support of this contention, Joint Intervenors advance three arguments. First, they argue that FPL fails to identify the source of the data used to generate the revised list of constituent chemical concentrations in ER Table 3.6-2, rendering the accuracy and reliability of those concentrations suspect. See id. at 4-5, 7, 13-14. Second, they argue that the concentrations of thallium and tetrachloroethylene, as listed in ER Table 3.6-2, exceed the Environmental Protection Agency (EPA) maximum contaminant level (MCL) in drinking water for these chemicals, and that the concentration of selenium nearly exceeds the EPA MCL. See id. at 6, 13-14. Third, they argue that, in light of the potential inaccuracy and unreliability of the chemical concentration levels in the wastewater that FPL will discharge into the Boulder Zone, a concern exists regarding the impact these chemicals will have on groundwater if the wastewater migrates from the Boulder Zone to the Upper Floridan Aquifer. See id. at 8-9, 13-14.

We address these arguments in turn, and we conclude that amended Contention NEPA 2.1 is admissible in part as supported by the first and third arguments.

Preliminarily, however, we acknowledge that FPL is correct in stating (FPL Motion to Dismiss Contention 2.1 at 4-5) that Contention NEPA 2.1, as initially admitted in LBP-11-06, erred in alleging that (1) selenium and thallium were missing from Table 3.6-2 of the ER, and (2) the environmental impacts of their release into the aquifer via the deep injection wells were not assessed. Although Table 3.6-2 of the original ER omitted from the list of wastewater chemical constituents the other four chemicals identified in the original contention (i.e., ethylbenzene, heptachlor, tetrachloroethylene, and toluene), it did, in fact, include selenium and thallium, and it assessed their environmental impacts as "small." See id. at 4-5 (citing ER Rev. 0 at tbl. 3.6-2, 5.2-23). As Joint Intervenors effectively concede (see Joint Intervenors Reply at 4 n.2), because Revision 3 to the ER provided no new information regarding selenium and thallium or their environmental impacts, it cannot form the basis for a timely amended Contention NEPA 2.1 with respect to any allegation concerning these two chemicals. See supra Parts II.A.1 and II.A.2. We therefore exclude those two chemicals from further consideration in our analysis of the amended contention.

We now examine the three arguments advanced by Joint Intervenors underlying amended Contention NEPA 2.1.

A. Source Of Chemical Concentration Levels

In their first argument, Joint Intervenors assert that, with regard to ethylbenzene, heptachlor, tetrachloroethylene, and toluene, the ER improperly fails to identify the source of the data for the chemical concentrations in Table 3.6-2. Joint Intervenors claim that the source of the underlying data can affect the accuracy and reliability of these four chemical concentrations, which, in turn, can affect the determination of their environmental impacts. See Joint Intervenors Motion at 4-5.

FPL opposes admitting this aspect of amended Contention NEPA 2.1. See FPL Answer at 5-6. The NRC Staff does not oppose admitting this aspect of the contention. See NRC Staff Answer at 12.

We agree with Joint Intervenors and the NRC Staff that this aspect of amended Contention NEPA 2.1 is admissible.[11] It satisfies section 2.309(f)(1)(i) through (iv) because: (1) as discussed above, it provides a specific statement of the issue to be raised (see 10 C.F.R. § 2.309(f)(1)(i)); (2) it provides a brief explanation of its underlying basis (see id. § 2.309(f)(1)(ii)); (3) the adequacy vel non of the ER is manifestly within the scope of this proceeding (see id. § 2.309(f)(1)(iii)); and (4) the inclusion of the data sources for the four chemical concentrations is material to the NEPA analysis that the NRC must perform, because the sources might affect the accuracy and reliability of the stated chemical concentrations which, in turn, could affect the stated environmental impact of the chemicals. See id. § 2.309(f)(1)(iv).[12] The contention also satisfies section 10 C.F.R. § 2.309(f)(1)(v), because Joint Intervenors provide alleged facts or expert opinions that support their position on the issue, together with references to supporting sources and documents.[13] Finally, as required by 10 C.F.R. § 2.309(f)(1)(vi), in light of the omission that Joint Intervenors identified, the contention raises a genuine dispute of material fact as to whether the wastewater discharged by FPL to the Boulder Zone of the Lower Floridan Aquifer will contain the chemical concentrations of

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[11] Joint Intervenors correctly state (Joint Intervenors Motion at 15) that this aspect of the amended contention satisfies the timeliness standards in 10 C.F.R. § 2.309(f)(2). FPL's inclusion of these chemical concentrations for the first time in its recent revision to ER Table 3.6-2 constitutes new, materially different, and previously unavailable information. Contrary to FPL (see FPL Answer at 5-6), Joint Intervenors could not previously have advanced this particular challenge.

[12] See Joint Intervenors Motion at 13-14; see also NRC Staff Answer at 12.

[13] See Joint Intervenors Motion at 4-6, 14; id., attach., Affidavit of Mark A. Quarles at 2, 4-6 (Jan. 23, 2012) [hereinafter Quarles Affidavit]; id., attachs. 1-10, 13; see also NRC Staff Answer at 12.

ethylbenzene, heptachlor, tetrachloroethylene, and toluene that are indicated in ER Rev. 3 Table 3.6-2.[14]

We therefore admit amended Contention NEPA 2.1, as supported by Joint Intervenors' first argument, as follows: The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be "small" because the ER fails to identify the source data of the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene.[15]

B. Chemical Concentrations Exceed EPA MCL

In their second argument underlying amended Contention NEPA 2.1, Joint Intervenors assert that the ER is deficient because the concentrations of thallium and tetrachloroethylene exceed the EPA MCL in drinking water for these chemicals, and the concentration of selenium nearly exceeds the EPA MCL. See Joint Intervenors Motion at 6, 13-14.

FPL and the NRC Staff argue that this aspect of the amended contention is not admissible. See FPL Answer at 7-8; NRC Staff Answer at 12-16. We agree.

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[14] See Joint Intervenors Motion at 14; see also NRC Staff Answer at 12.

[15] Any belated challenge by Joint Intervenors to the accuracy and reliability of Table 3.6-2's listed concentrations for chemicals beyond ethylbenzene, heptachlor, tetrachloroethylene, and toluene would be time-barred. See supra Parts II.A.1 and II.A.2. Nevertheless, because the NRC Staff has deemed this information to be material for ensuring the accuracy and reliability of the stated concentrations of these four chemicals, FPL -- to promote consistency, and to ensure the accuracy and reliability of the stated concentrations of the other chemicals listed in Table 3.6-2 -- might elect to include this information in the ER for the other chemicals. Alternatively, the NRC Staff might require FPL to include this information, or the Staff might acquire this information independently for its own analysis in the EIS. Cf. Baltimore Gas & Elec. Co. (Calvert Cliffs Nuclear Power Plant), CLI-98-25, 48 NRC 325, 348-50 (1998) (describing NRC Staff's responsibilities, parallel to the adjudicatory process, to seek additional information from an applicant after docketing of pending license application).

To the extent this argument challenges the ER based on the predicted concentrations of thallium and selenium, Joint Intervenors have abandoned that argument (see Joint Intervenors Reply at 4 n.2), which, as discussed supra page 9, is unjustifiably nontimely in any event.[16]

To the extent Joint Intervenors argue that the concentration of tetrachloroethylene in ER Table 3.6-2 exceeds the EPA MCL, they fail -- for three independent reasons -- to demonstrate the existence of a genuine dispute with FPL's ER on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[17]

First, contrary to Joint Intervenors' assertion (see Joint Intervenors Motion at 6), the chemical concentration for tetrachloroethylene listed in ER Table 3.6-2 that will be discharged via deep injection wells into the Boulder Zone of the Lower Floridan Aquifer (i.e., 0.00359 mg/L) does *not* exceed the EPA MCL (i.e., 0.005 mg/L). See ER Rev. 3 at 3.6-2; FPL Answer at 8; Quarles Affidavit at 7. Joint Intervenors thus fail to raise a genuine dispute with FPL on a material issue of law or fact.

Second, Joint Intervenors' argument that the concentration of discharged tetrachloroethylene will exceed the EPA MCL is based on measurements of chemical concentrations found in wastewater from the Central Dade County Facility (CDCF). See Joint Intervenors Reply at 10-12; Quarles Affidavit at 7. This argument ignores that FPL will *not* be using wastewater from the CDCF; rather, as discussed supra note 4, it will be using reclaimed wastewater from the MDWASD. Joint Intervenors provide no reason to conclude that the

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[16] Although this aspect of the contention is time-barred from resolution through administrative adjudication, NEPA nevertheless obligates the NRC Staff to undertake a full and independent evaluation of the environmental impacts of FPL's proposed action. See 10 C.F.R. § 51.41; see also USEC, Inc. (American Centrifuge Plant), CLI-06-09, 63 NRC 433, 448 (2006) (describing the NRC's NEPA responsibilities of conducting a "rigorous" and "objective" review).

[17] This determination, however, does not foreclose Joint Intervenors from challenging the accuracy and reliability of the stated concentration of tetrachloroethylene in ER Table 3.6-2 based on FPL's failure to identify the source data for that concentration. That challenge is embodied in the portion of amended Contention NEPA 2.1 that we concluded is admissible. See supra Part III.A.

chemical concentration for tetrachloroethylene in reclaimed wastewater from the MDWASD is expected to be the same as that in wastewater from a different facility. Accordingly, their argument neither controverts the data in the ER nor raises a genuine dispute on a material issue of law or fact. See NRC Staff Answer at 14.

Finally, even if Joint Intervenors had shown an equivalency between the chemical concentrations of tetrachloroethylene in reclaimed wastewater from the MDWASD and the CDCF, their argument that the discharged concentration of tetrachloroethylene will exceed the EPA MCL fails to acknowledge that the concentrations listed in ER Table 3.6-2 are not based on chemical concentrations measured at the MDWASD. Rather, they are based on estimated chemical concentrations that will exist when the wastewater is discharged into the Boulder Zone via the deep injection wells, which will not occur until after several cycles in the cooling process, after which the wastewater will be diluted with other onsite water sources. See ER Rev. 3 at 3.4-2, 3.6-1.[18] Thus, Joint Intervenors' contention is based on an argument that, once again, neither controverts the data in the ER nor raises a genuine dispute on a material issue of law or fact. See NRC Staff Answer at 13-14.

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[18] As explained in the ER, the values listed in ER Table 3.6-2 reflect chemical concentrations of the wastewater in the blowdown sump (see ER Rev. 3 at 3.6-1), where it has been collected with water from other onsite sources:

> The waste effluent from the station demineralized water system, sanitary waste treatment plant, FPL reclaimed water treatment facility, filter backwash wastewater, and other nonradioactive drains throughout the station would be collected in the blowdown sump along with the blowdown from the circulating water and service water systems. The combined stream would be pumped to the deep injection wells. The combined stream would be controlled through engineering design and operational procedures to meet the requirements established in the underground injection control permits.

Id.

Amended Contention NEPA 2.1, as supported by Joint Intervenors' second argument, is therefore not admitted.[19]

C. Wastewater Migration To Upper Floridan Aquifer

In their third argument underlying amended Contention NEPA 2.1, Joint Intervenors assert that, in light of the potential inaccuracy and unreliability of the concentration levels of ethylbenzene, heptachlor, tetrachloroethylene, and toluene in the wastewater that FPL will discharge into the Boulder Zone, a concern exists regarding the impact these chemicals will have on groundwater if the wastewater migrates from the Boulder Zone to the Upper Floridan Aquifer. See Joint Intervenors Motion at 8-9, 13-14.

The NRC Staff argues that this aspect of the amended contention is nontimely (see NRC Staff Answer at 11-12), and both FPL and the NRC Staff argue that it fails, in any event, to satisfy the admissibility standards in section 2.309(f)(1). See FPL Answer at 9-13; NRC Staff Answer at 17-19. We disagree.

When we originally admitted Contention NEPA 2.1 as a contention of omission, we explained that Joint Intervenors had provided adequate alleged facts "to support the claims that the wastewater contains chemical contaminants that are not discussed in the ER, and that when

[19] In moving to amend Contention NEPA 2.1, Joint Intervenors argue for the first time that the ER improperly omits an analysis of the environmental impacts of degradation products from heptachlor (i.e., heptachlor epoxide) and tetrachloroethylene (i.e., trichloroethene and vinyl chloride). See Joint Intervenors Motion at 5-6. We agree with FPL and the NRC Staff (see FPL Answer at 7; NRC Staff Answer at 10-11) that this argument is inexcusably nontimely. In their reply, Joint Intervenors appear to explain that their purpose in advancing this argument was not to proffer a new contention of omission, but rather "to demonstrate the importance of FPL providing accurate, verifiable data to the NRC to assist the agency in determining the wastewater stream's impact to groundwater resources." Joint Intervenors Reply at 8. This latter concern is embodied in the portion of amended Contention NEPA 2.1 that we concluded is admissible. See supra Part III.A.

FPL discharges the wastewater via the deep injection wells, the chemicals might migrate from the Boulder Zone to the Upper Floridan Aquifer." LBP-11-06, 73 NRC at __ (slip op. at 37).[20]

Although FPL's Revision 3 cured the ER's failure to mention the concentration of particular chemical contaminants that are likely to be contained in the wastewater (i.e., ethylbenzene, heptachlor, tetrachloroethylene, and toluene), it failed to identify the data source of those chemical concentrations -- a new omission identified by Joint Intervenors that, as discussed supra Part III.A, might affect the accuracy and reliability of the chemical concentrations listed in ER Table 3.6-2, which, in turn, can affect the determination of the environmental impacts associated with these chemicals.

In short, because a concern continues to exist regarding the accuracy and reliability of the concentration levels of ethylbenzene, heptachlor, tetrachloroethylene, and toluene that will be discharged into the Boulder Zone, the other concern identified in LBP-11-06 regarding the possibility that contaminated wastewater can migrate to the Upper Floridan Aquifer and

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[20] As relevant here, we concluded in LBP-11-06:

> Joint [Intervenors] have shown that a genuine dispute of fact exists as to (1) whether the wastewater used by FPL will, like other wastewater found in Miami-Dade County, contain heptachlor, ethylbenzene, toluene . . . and tetrachloroethylene, which are not listed in FPL's ER as wastewater constituent chemicals . . . ; and (2) whether the wastewater discharged via deep well injection will, along with these particular chemical contaminants, migrate from the Boulder Zone to the Upper Floridan Aquifer. The ER fails to discuss these chemicals or their impact on the groundwater.

LBP-11-06, 73 NRC at __ (slip op. at 39) (citations omitted); see also id. at __ (slip. op. at 36) ("Contention NEPA 2.1 includes 'a brief explanation of [its] basis' insofar as Joint [Intervenors] assert that there has been migration of fluid between the Boulder Zone and the Upper Floridan Aquifer and FPL's ER improperly fails to discuss the impact to the Upper Floridan Aquifer of the above-specified chemicals[.]" (citation omitted)). Plainly, the migration argument that Joint Intervenors advance now was a supporting component of their original contention of omission. To the extent they now raise an admissible amended contention of omission that challenges the accuracy and reliability of four chemical concentrations listed in ER Table 3.6-2 (see supra Part III.A), the migration argument continues to be a supporting component of the contention. See infra note 23.

adversely impact the groundwater likewise continues to exist. Contrary to the NRC Staff (see NRC Staff Answer at 11-12), the latter concern remains as timely now as when we recognized it in LBP-11-06. See Joint Intervenors Motion at 13-15.[21]

Moreover, for substantially the same reasons that we originally found Contention NEPA 2.1 to be admissible (see LBP-11-06, 73 NRC at __-__ (slip op. at 36-40)), we conclude that the portion of amended Contention NEPA 2.1 that we found admissible in Part III.A supra, as supported by Joint Intervenors' migration argument, satisfies the admissibility requirements of section 2.309(f)(1). The amended contention, as we have revised it to promote clarity and efficiency,[22] is as follows:

> The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be "small" because the ER fails to identify the source data of the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene. Such information is necessary to ensure the accuracy and reliability of those concentrations, so it might reasonably be concluded that those chemicals will not adversely impact the groundwater by migrating from the Boulder Zone to the Upper Floridan Aquifer.

First, we conclude that the above amended contention presents a "specific statement of the issue of law or fact to be raised." 10 C.F.R. § 2.309(f)(1)(i).[23]

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[21] It bears emphasizing that Revision 3 did nothing to address the ER's failure to "exclude the possibility that wastewater can migrate to the Upper Floridan Aquifer." LBP-11-06, 73 NRC at __ (slip op. at 40).

[22] See Crow Butte Res., Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009) ("Our boards may reformulate contentions to 'eliminate extraneous issues or to consolidate issues for a more efficient proceeding.'" (citations omitted)).

[23] Amended Contention NEPA 2.1, as we have framed it above, is a contention of omission which, like the original Contention NEPA 2.1 admitted in LBP-11-06, is *supported by the migration argument*. We express no view on whether the migration component of this amended contention would continue to support a litigable issue if FPL cured the omission and, as a result, was able reasonably to demonstrate that the disputed chemical concentrations listed in ER Table 3.6-2 (1) were accurate and reliable, and (2) resulted in "small" environmental impacts when discharged through the injection wells.

Second, the amended contention, as supported by the migration argument, includes "a brief explanation of [its] basis." 10 C.F.R. § 2.309(f)(1)(ii). Joint Intervenors explain that, given the absence of source data for the four specified chemical concentrations, the accuracy and reliability of those concentrations are suspect, which, in turn, renders suspect any conclusion about the environmental impact on groundwater due to migration. See Joint Intervenors Motion at 5-6, 13-14; see also NRC Staff Answer at 12 ("[T]he accuracy and reliability of [the stated concentration levels in ER Table 3.6-2 for the four chemicals] may depend on their source, and the omission of the source of the data from the ER is material in that it could have an effect on the determination of [environmental] impact levels associated with these chemicals.").

Third, in satisfaction of 10 C.F.R. § 2.309(f)(1)(iii), amended Contention NEPA 2.1 is within the scope of this proceeding, because it raises a challenge to FPL's ER, which is a required portion of FPL's COL application. See 10 C.F.R. § 51.50(c).

Fourth, as supported by the migration argument, amended Contention NEPA 2.1 satisfies the materiality requirement of 10 C.F.R. § 2.309(f)(1)(iv). The ER must, inter alia, discuss reasonably foreseeable environmental impacts of the proposed action in proportion to their significance, as well as adverse environmental effects that cannot be avoided if the proposed plan is implemented. See 10 C.F.R. § 51.45(b)(1)-(2); Private Fuel Storage, CLI-02-25, 56 NRC at 348-49. Here, Joint Intervenors challenge the accuracy and reliability of the concentrations of four chemicals listed in ER Table 3.6-2 that will be in the wastewater that is injected into the Boulder Zone, arguing that it is reasonably foreseeable that the wastewater could migrate into the Upper Floridan Aquifer and contaminate the groundwater with these chemicals. As we stated in LBP-11-06, "[i]t cannot be gainsaid that, to the extent these chemicals are in the wastewater, their impact on groundwater -- if significant -- is material to the findings the NRC must make in deciding whether to grant FPL's COL Application." LBP-11-06, 73 NRC at __ (slip op. at 37).

Fifth, in satisfaction of 10 C.F.R. § 2.309(f)(1)(v), Joint Intervenors have provided alleged facts and expert opinions to support their position on this issue, principally the affidavit of a licensed professional geologist, Mark Quarles, who has experience evaluating the risks of environmental releases into limestone bedrock and has described in detail the concerns Joint Intervenors have presented regarding the sufficiency of ER Revision 3. See Quarles Affidavit at 1; Joint Intervenors Motion, attach. 1, Mark Quarles [Curriculum Vitae] at 1. In addition to Mr. Quarles's affidavit and his curriculum vitae, Joint Intervenors have appended an article from the Hydrogeology Journal and a report from the Idaho National Laboratory explaining the permeability of the Floridan Aquifer in response to deep injection wells, as well as several reports and manuals from government agencies and laboratories explaining the harmfulness of the chemicals at issue in this contention. See attachments 2-10, 13 appended to Joint Intervenors Motion; see also LBP-11-06, 73 NRC at __-__ (slip op. at 37-38). In our view, the alleged facts and expert opinions provided by Joint Intervenors satisfy section 2.309(f)(1)(v).

Finally, in satisfaction of 10 C.F.R. § 2.309(f)(1)(vi), Joint Intervenors have raised a genuine dispute of material fact or law regarding the adequacy of FPL's ER, pointing to particular portions of the application (namely, ER Rev. 3 Table 3.6-2 and ER Rev. 3 at 5.2-25) that they dispute. Specifically, Joint Intervenors have shown that a genuine dispute of fact exists as to: (1) whether the chemical concentrations listed in ER Table 3.6-2 are accurate for ethylbenzene, heptachlor, tetrachloroethylene, and toluene (see supra Part III.A); and (2) if those chemical concentrations in ER Table 3.6-2 are inaccurate, whether impacts on groundwater would be small in light of the possibility of wastewater migrating from the Boulder Zone to the Upper Floridan Aquifer.

As they did at an earlier stage of this proceeding (see LBP-11-06, 73 NRC at __ (slip op. at 39)), FPL and the NRC Staff argue that migration and any related environmental impacts are unlikely due to the putative effectiveness of the monitoring programs FPL will employ, as well as

the comprehensiveness of the Florida licensing process required to obtain permits for these deep injection wells. See FPL Answer at 11-13; NRC Staff Answer at 17-19. At this juncture and on this record, however, we do not view these monitoring programs as an adequate substitute for (1) the ER's failure to demonstrate the accuracy and reliability of the chemical concentrations in ER Table 3.6-2 of ethylbenzene, heptachlor, tetrachloroethylene, and toluene, and (2) the ER's corollary failure reasonably to support its conclusion that the environmental impact of these chemicals on groundwater would be small if the wastewater were to migrate from the Boulder Zone to the Upper Floridan Aquifer.[24]

We therefore conclude that amended Contention NEPA 2.1 is admissible in part, as revised by this Board supra page 16.

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[24] We stated in LBP-11-06:

> It is to be acknowledged that there is information in the record that tends to weaken a conclusion that wastewater will migrate to the Upper Floridan Aquifer and cause environmental harm. At this juncture, however, Joint [Intervenors] need not *prove* wastewater will migrate to the Upper Floridan Aquifer and adversely impact the environment. They need simply provide sufficient support to raise a genuine issue of disputed fact.

LBP-11-06, 73 NRC at __ n.44 (slip op. at 40 n.44) (citations omitted). We believe that Joint Intervenors have satisfied their burden of providing sufficient information to raise a genuine issue of disputed fact in their amended contention as supported by the migration argument. That the ER determines the impacts on groundwater will be "small" (see ER Rev. 3 at 5.2-10 to 5.2-13) does not alter our conclusion at this juncture, because, as discussed supra Part III.A, the omission from the ER of source data for the specified chemical constituent concentrations renders the stated concentrations questionable, which, in turn, renders the ER's environmental impact determination questionable.

IV. CONCLUSION

For the reasons discussed above, we admit Joint Intervenors' amended Contention NEPA 2.1 in part, as revised supra page 16. We revoke our January 26, 2012 order suspending the mandatory disclosure obligations in 10 C.F.R. § 2.336(a). The parties shall resume their monthly mandatory disclosures pursuant to section 2.336(a) on June 8, 2012, which is the second Friday of that month. See Initial Scheduling Order at 3-6.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

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ADMINISTRATIVE JUDGE

/RA/

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

/RA/

Dr. William C. Burnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 2, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Florida Power & Light Company	)	Docket Nos. 52-040 and 52-041-COL
(Juno Beach, Florida)	)	
	)	
(Turkey Point, Units 6 & 7)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing MEMORANDUM AND ORDER (Granting in Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1) (LBP-12-09) have been served upon the following persons by Electronic Information Exchange.

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Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 2nd day of May 2012