

February 10, 2012

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Florida Power & Light Company	)	Docket Nos. 52-040-COL
	)	52-041-COL
(Turkey Point Units 6 and 7)	)	
	)	ASLBP No. 10-903-02-COL
(Combined License)	)	

**FLORIDA POWER & LIGHT COMPANY’S RESPONSE TO JOINT INTERVENORS’  
MOTION TO AMEND CONTENTION 2.1**

As provided for in the Atomic Safety and Licensing Board’s (“ASLB”) Memorandum and Order (Granting FPL’s Motions to Dismiss Joint Intervenors’ Contention 2.1 and CASE’s Contention 6 as Moot) (January 26, 2012) (“Memorandum and Order”), Applicant Florida Power & Light Company (“FPL”) hereby responds to and opposes the motion by intervenors Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association (“Joint Intervenors”) to “amend” Contention 2.1 in this proceeding.<sup>1</sup>

The Motion to Amend accompanies and is based on Joint Intervenors’ answer to FPL’s motion to dismiss Contention 2.1 as moot.<sup>2</sup> The Board has agreed with FPL’s position that Contention 2.1 is one of omission and has been rendered moot by the incorporation of the certain

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<sup>1</sup> 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) (“Motion to Amend”).

<sup>2</sup> Florida Power & Light Company’s Motion to Dismiss Joint Intervenors’ Contention 2.1 as Moot (Jan. 3, 2012) (“FPL’s Motion to Dismiss”).

missing information in Revision 3 to the Application,<sup>3</sup> submitted by FPL on December 16, 2011. The Board has thus dismissed Contention 2.1 as moot. Memorandum and Order at 5. However, the Board has deemed the filing of the Motion to Amend to constitute the submittal of a new contention and has provided the opportunity for FPL and the NRC Staff to respond to it. *Id.* at 7.

The Motion to Amend would modify dismissed Contention 2.1 to read:

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.

Motion to Amend at 12, emphasis in original (signifying the proposed modifications to the text of dismissed Contention 2.1.)

The new contention propounded by Joint Intervenors should be rejected because (1) many of the claims upon which the proposed contention is based are untimely; (2) there is no support for the assertion that expanded Table 3.6-2 of the Application's Environmental Report ("ER") (as modified in Revision 3 of the Application) does "not accurately" list the quantities of six wastewater constituent chemicals released to the aquifer via underground injection wells; and (3) Joint Intervenors provide no basis for asserting that the ER "fails to adequately analyze and discuss" the potential impacts on groundwater quality of the injection of these chemicals into the Boulder Zone of the aquifer.<sup>4</sup>

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<sup>3</sup> In June 2009, FPL submitted an application (the "Application") for a combined license for two AP1000 pressurized water nuclear reactors to be located adjacent to the existing Turkey Point power plants, Units 1 through 5, at the Turkey Point site near Homestead, Florida, to be known as Turkey Point Units 6 & 7. *See* 74 Fed. Reg. 51,621 (Oct. 7, 2009).

<sup>4</sup> The Boulder Zone of the Lower Floridan Aquifer will be used for deep well injection of industrial wastewater consisting mostly of treated municipal wastewater. Injection would occur at depths of approximately 2800 feet or greater below ground beneath the Turkey Point Units 6 & 7 site. *See* ER at Section 2.3.2.2.

## BACKGROUND

As admitted by the Board, Contention 2.1 asserted:

[T]he ER [Environmental Report] 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 tetrachloroethylene, which have been found in injection wells in Florida but are not listed in FPL's ER as wastewater constituent chemicals.

Memorandum and Order (Ruling on Petitions to Intervene), LBP-11-06, 73 NRC \_\_\_, slip op. at 36 (Feb. 28, 2011) ("LBP-11-06").

FPL moved to dismiss Contention 2.1 because it had amended the ER to include in Table 3.6-2 the chemical release information whose omission was the basis for the Contention, and determined that the potential environmental impact of the injection of the chemicals into the Boulder Zone was negligible. FPL pointed out that the released concentrations of two of the chemicals, "selenium" and "thallium," were always included in Table 3.6.2 of the ER, hence the assertion that they were not listed in the ER as wastewater constituents was in error. FPL's Motion to Dismiss at 4-5. Also, in Revision 3 to the Application, FPL modified Table 3.6.2 of the ER to add the estimated concentrations of the releases of four other chemicals: heptachlor, ethylbenzene, toluene, and tetrachloroethylene that were not originally included in the Table. Revision 3 to the Application also made a change to the text of ER Section 5.2.3.2.4 to explicitly reference Table 3.6.2 "as amended in ER Revision 3," but did not change the conclusion that the impact on the underground source of drinking water ("USDW") from the use of deep injection wells would be SMALL. *Id.* at 5.

FPL's Motion to Dismiss characterized Contention 2.1 as a contention of omission and argued that, in accordance with well established precedent, where a contention alleges the omission of particular information from an application and the information is later supplied by

the applicant, the contention becomes moot. In the Memorandum and Order, the Board agreed with FPL's argument that Contention 2.1 was one of omission and dismissed it as moot.

## **ARGUMENT**

I.     **THERE IS NO BASIS FOR ASSERTING THAT TABLE 3.6.2 OF THE ER (AS EXPANDED) DOES "NOT ACCURATELY" LIST THE QUANTITIES OF SIX WASTEWATER CONSTITUENT CHEMICALS INJECTED INTO THE BOULDER ZONE VIA UNDERGROUND INJECTION WELLS**

Joint Intervenors assert that a genuine dispute exists as to "whether the wastewater used by FPL will contain heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene in the concentrations reflected on Table 3.6-2 of the ER." Motion to Amend at 14. No such genuine dispute exists, hence the amended contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi).

A.     As to the two chemicals whose released concentrations were always included in Table 3.6.2 of the ER, the Motion to Amend must be denied as untimely

Dismissed Contention 2.1 erroneously asserted that the version of ER Table 3.6.2 that was part of the original Application failed to include the concentrations of selenium and thallium in the wastewater discharged to the Boulder Zone via injection wells at Turkey Point Units 6 & 7. In reality, those values (0.0359 mg/L for selenium, 0.00620 mg/L for thallium) were included in that Table. FPL's Motion to Dismiss at 4-5. Because the estimated released concentrations of selenium and thallium were in Table 3.6.2 at the time the Application was filed in June 2009, any claims that the values were incorrect, improperly estimated, or questionable in any other respect should have been raised (but were not) when the Joint Petitioners filed their Petition for

Intervention (“Petition”) in August 2010. The current challenge to the accuracy of those values is untimely and must be rejected.<sup>5</sup>

B. **Joint Intervenors provide no basis for challenging the release concentrations of heptachlor, ethylbenzene, toluene, and tetrachloroethylene discharged to the Boulder Zone via injection wells set forth in Table 3.6.2**

Joint Intervenors claim that the concentrations of the six chemicals at issue are not “*accurately* listed in FPL’s ER.” Motion to Amend at 12 (emphasis in original). That claim is founded in two arguments: (1) “FPL fails to identify and describe the source(s) of the data, or the method(s) of data collection, used to generate its revised list of constituent concentrations in Table 3.6-2.” *Id.* at 4. (2) FPL provides no information on “the date of sample(s), which plant(s) were used to develop the list of constituents, whether the concentrations were based on a single sampling event, when the sample(s) were collected, if the values represent the arithmetic or geometric means, or the maximum and minimum concentrations of the constituents,” so that “[a]s a result, there is no way to verify or assess FPL’s findings.” *Id.* at 4-5.

The challenge based on the lack of supporting information for the values in Table 3.6-2 is untimely. Table 3.6-2 has existed, unchanged (except for the addition in Revision 3 of the estimated concentrations of heptachlor, ethylbenzene, toluene, and tetrachloroethylene) since the Application was filed. Joint Intervenors could have raised in their Petition any perceived deficiencies in how the values in the Table were obtained. They failed to do so (other than

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<sup>5</sup> Also, as discussed below, Joint Intervenors provide no evidence that the estimated release concentrations of the six chemicals at issue, including selenium and thallium, are incorrect.

claiming that the estimated values of six chemicals were not included in the Table). *See* Petition at 28. The objections they now raise are untimely and must be rejected.<sup>6</sup>

In addition to being untimely, Joint Intervenors' objections do not directly challenge the information presented in Table 3.6-2 with respect to the concentrations of heptachlor, ethylbenzene, toluene, and tetrachloroethylene (or, for that matter, selenium and thallium). Joint Intervenors claim that "there is no way to verify or assess FPL's findings" but do not assert that the values presented in the Table are incorrect. Joint Intervenors also fail to offer any evidence as to what the correct values should be. Thus, Joint Intervenors fail to show that a genuine dispute exists with the applicant on a material issue of law or fact, hence the amended contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi). It is well established that a contention that does not directly controvert a position in the license application is subject to dismissal. *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992); *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Unit Nos. 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990) (an allegation that some aspect of a license application is inadequate does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect); *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993) ("A contention that simply alleges that some matter ought to be considered does not provide the basis for an admissible contention") (footnote

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<sup>6</sup> The Board's decision in LBP-11-06 reflects the absence of a challenge by Joint Intervenors to the information presented in Table 3.6.2. The Board wrote: "Joint Petitioners claim that FPL's ER fails to address certain chemicals typically found in treated wastewater, such as 'arsenic, cadmium, copper, lead, manganese, mercury, nickel, silver, and zinc.' Joint Pet. at 28. Joint Petitioners again are incorrect. The ER contains a list of chemicals and their respective concentrations that FPL anticipates will be in the wastewater (*see* ER at tbl. 3.6-2), and that list includes each of the above chemicals (although it omits some other constituents that we discuss below). This aspect of Contention NEPA 2.1 is thus not admissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi) for failing to raise a genuine dispute of material fact or law with the ER." LBP-11-06 at 35.

omitted); *see also* LBP-11-06 at 59-60 (by failing to identify any reasonable alternative routes, Joint Petitioners failed to raise a genuine dispute of material fact or law regarding the transmission line corridors and associated access roads considered in FPL's ER).

C. The claims that the released quantities of heptachlor epoxide, trichloroethene and vinyl chloride should have been included in Revised Table 3.6.2 are untimely

Joint Intervenors assert that "the revised ER ... fails to consider heptachlor epoxide altogether." Motion to Amend at 5. They further claim that "the revised ER ... fails to mention trichloroethene and vinyl chloride altogether." *Id.* at 6. Contention 2.1, as tendered by Joint Intervenors and admitted by the Board, made no mention of either of these chemicals as needing to be included in Table 3.6.2.<sup>7</sup> Therefore, any claims regarding these chemicals are outside the scope of the admitted contention, are by definition untimely, and provide no support for the Motion to Amend.

D. The claims that the concentrations of thallium and tetrachloroethylene exceed EPA's maximum contaminant levels are untimely (as to thallium), erroneous (as to tetrachloroethylene), and immaterial

Joint Intervenors allege that the concentrations of thallium and tetrachloroethylene reported in Table 3.6.2 exceed the maximum contaminant levels ("MCL") listed in an EPA Relative Risk Assessment of the threat from deep injection wells in Florida (Exhibit 14 to Petition). As discussed above, the release concentration of thallium reported in Table 3.6-2 has been in the ER since the Application was filed. Therefore, if thallium's release concentration exceeding the EPA MCL is at all relevant, this fact should have been asserted in the Petition. Raising it now is untimely and provides no support for the Motion to Amend.

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<sup>7</sup> These chemicals are degradation products of heptachlor and tetrachloroethylene. Motion to Amend at 5, 6. As such, Joint Petitioners could, and should, have included them in Contention 2.1, as originally submitted.

With respect to tetrachloroethylene, the release concentration of this chemical reported in expanded Table 3.6-2 is 0.00359 mg/L, or 3.59 µg/L. On the other hand, the MCL for tetrachloroethylene is 5 µg/L. *See* Exhibit 14 to Petition, Appendix, Table 1-1 at A1-18. Thus, the releases of tetrachloroethylene injected into the Boulder Zone via underground injection wells are within the MCL for that chemical.

The Motion to Amend does not explain how having the releases of these chemicals into the Boulder Zone exceed the MCL relates to the accuracy of the values in Table 3.6-2.<sup>8</sup> Therefore, the claim is immaterial to the findings the NRC must make in this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iv). *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333-34 (1999); *Nuclear Management Co., LLC* (Monticello Nuclear Generating Plant), LBP-05-31, 62 NRC 735, 748-49 (2005) (“‘Materiality’ requires that the petitioner show why the alleged error or omission is of possible significance to the result of the proceeding.”)

In short, Joint Intervenors have provided no support for amending Contention 2.1 to assert that FPL’s ER, as amended, does not “accurately” present the concentrations of heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene in the wastewater that will be injected into the Boulder Zone at Turkey Point Units 6 & 7.

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<sup>8</sup> The alleged relevance of the MCL information to the adequacy of the ER’s environmental impact conclusions is discussed in Section II below.



II. THERE IS NO BASIS FOR ASSERTING THAT FPL’S ER DOES “NOT ADEQUATELY” ANALYZE WHETHER THE WASTEWATER DISCHARGED VIA DEEPWELL INJECTION COULD MIGRATE TO THE UPPER FLORIDAN AQUIFER, CONTAMINATING THE GROUNDWATER, AND THE IMPACTS OF SUCH ALLEGED CONTAMINATION

Joint Intervenors challenge the adequacy of FPL’s assessment of the environmental impact of the injection of wastewater into the Boulder Zone because “FPL’s revised ER fails to describe the reasonably foreseeable environmental impacts of the six constituents on the groundwater, which must be discussed in proportion to their significance.” Motion to Amend at 13. This challenge rests on two assertions: (1) that there is an inadequate analysis in the ER of the potential migration of contaminants released to the Boulder Zone to the Upper Floridan Aquifer (“UFA”) (Motion to Amend at 8); and (2) that FPL has failed to properly assess the impact of having those contaminants reach the USDW (the UFA) (*id.* at 14). However, as discussed below, the ER’s finding that the reasonably foreseeable environmental impact of the wastewater releases to the Boulder Zone was, and remains, adequate and Joint Intervenors have provided no evidence that such impacts will be other than SMALL.

A. **There is no basis for the claim that there is an inadequate analysis in the ER of the potential migration of contaminants to the Upper Floridan Aquifer**

Joint Intervenors allege that FPL’s conclusion that the environmental impacts of the wastewater releases to the Boulder Zone will be SMALL is counter to three studies that purportedly conclude that deep well wastewater injection operations can contaminate aquifers and negatively impact the environment. Motion to Amend at 8-9. However, none of the references on which the Joint Intervenors and their consultant<sup>9</sup> rely support the proposition that

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<sup>9</sup> Joint Intervenors’ Motion to Amend is accompanied by the affidavit of their consultant Mark A. Quarles (“Quarles Affidavit”). Motion to Amend at 1.

wastewater injected into the Boulder Zone will find its way into the UFA, which is a *potential* source of drinking water for the area surrounding Turkey Point Units 6 & 7.<sup>10</sup>

The Walsh and Price study,<sup>11</sup> which found evidence that some injectate may have migrated vertically from the Boulder Zone to the Middle Confining Unit (“MCU”), concluded that while there was horizontal flow within the MCU, the vertical expansion pathway “did not appear to extend up to the UFA.” Walsh and Price at (unnumbered) pp. 12, 15. Mr. Quarles’ assertion that “deepwell injection operations into the Boulder Zone had contaminated upper portions of the Floridan Aquifer” (Quarles Affidavit at ¶ 12) is not supported by the Walsh and Price study.<sup>12</sup>

The INEEL Report<sup>13</sup> concluded that “[t]he vertical and spatial distribution of contamination in the Upper Floridan and Lower Floridan aquifers shows a pattern more consistent with point source contamination, such as leaking wells, than from a widespread upward migration through a leaking confining layer.” INEEL Report at 36. Mr. Quarles quotes from the INEEL Report to the effect that “[b]ased on the hydrogeologic data reviewed, widespread contamination of the Upper Floridan Aquifer would be expected.” Quarles Affidavit at ¶ 15. Mr. Quarles, however, fails to quote the sentence immediately following, which states:

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<sup>10</sup> According to the ER: “Injection occurs below the middle confining layer at depths of approximately 2700 feet or greater, approximately 900 feet below the base of the lowest underground source of drinking water. The Boulder Zone is currently not a source for potable water and there is no viable pathway for the injection well releases to reach potable water.” ER Section 5.4.1.1 at 5.4-2.

<sup>11</sup> Virginia Walsh & René M. Price, *Determination of vertical and horizontal pathways of injected fresh wastewater into a deep saline aquifer (Florida, USA) using natural chemical tracers*, HYDROLOGY JOURNAL, published online Feb. 10, 2010 (“Walsh and Price”).

<sup>12</sup> Walsh and Price state: “Once introduced, the injectate moved slowly horizontally through the aquifer and mixed with ambient water.” Walsh and Price at 1. This motion and mixing occurred in the Middle Confining Unit, not the UFA. *Id.* at 15.

<sup>13</sup> Idaho National Engineering and Environmental Laboratory, *Evaluation of Confining Layer Integrity Beneath the South District Wastewater Treatment Plant, Miami-Dade Water and Sewer Department, Dade County, Florida*, INEEL Report INEEL/EXT-01-00046 (Feb. 2001) (“INEEL Report”).

*“This was not observed, and therefore the degree that the hydrogeologic data reviewed are representative of conditions at the SDWTP must be questioned.”* INEEL Report at 38 (emphasis added). In short, there was no finding in the INEEL Report that wastewater injected into the Boulder Zone had migrated across the Middle Confining Unit into the UFA.

Mr. Quarles also makes reference to, but does not enclose as an attachment, portions of an EPA risk assessment report, the same document cited by Joint Intervenors in their Petition in support of admission of Contention 2.1 (see Petition at 28).<sup>14</sup> Section 4 of the EPA Risk Assessment, the section cited by Mr. Quarles (but not included with his Affidavit) is enclosed as Attachment A to this Response.<sup>15</sup> A review of Section 4 shows that EPA did not specifically find any instances of migration of wastewater injected into the Boulder Zone through the confining zone to the UFA. Indeed, the references in Mr. Quarles’ Affidavit to “18 deep well injection sites” resulting “in unintended contamination of aquifers” (Quarles Affidavit at ¶¶ 16, 17, 18) are for “sites in Florida,” but not necessarily instances occurring at the MDSDWTP.<sup>16</sup>

Thus, Joint Intervenors provide no evidence that would refute the conclusion in the ER that migration of injectate containing contaminants from the Boulder Zone to the Upper Floridan Aquifer is extremely unlikely for the following reasons: (1) the Boulder Zone, at the point of wastewater injection, is separated from the USDW by the Middle Confining Unit, a low vertical hydraulic conductivity layer at least 1000 feet thick (*see* ER, Section 5.2.1.1.9); (2) the Units 6 &

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<sup>14</sup> U.S. Environmental Protection Agency, *Relative Risk Assessment of Management Options for Treated Wastewater in South Florida*, Report EPA 816-R-03-010 (April 2003) (“EPA Risk Assessment”). The entire EPA Risk Assessment is available online at <http://www.epa.gov/region4/water/uic/ra.html>.

<sup>15</sup> As Joint Intervenors have put this report before the Board, the entire report is subject to scrutiny, both as to those portions that allegedly support Joint Intervenors’ assertions and those that do not. *See, e.g., Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 254 (2007).

<sup>16</sup> The instances of contamination at the MDSDWTP reported in the EPA Risk Assessment appear to be due, at least in part, to well failures. EPA Risk Assessment, Section 4 at 4-14 to 4-15.

7 deep injection wells would be installed in accordance with Florida Department of Environmental Protection (“FDEP”) requirements which include the installation and grouting to surface of a series of well casings designed to prevent the flow of water between the various aquifer units (*see* ER Section 5.2.3.2.4); (3) the overlying USDW would be monitored periodically for hydrologic impacts and water quality, as required by the Underground Injection Control (“UIC”) permit and other State and local permits (*id.*);<sup>17</sup> (4) FDEP has issued an exploratory well permit and FPL is currently drilling such a well. *See* Proposed Turkey Point Units 6 & 7, Submittal of Underground Injection Control Exploratory Well Weekly Construction Summaries - #31, #32, and #33 (Jan. 9, 2012) (ADAMS Accession No. ML12011A025). From this well, FPL will be able to determine the confining characteristics of the intervals overlying the Boulder Zone. Revised Hydrology Response at 4. *See also* Fla. Admin. Code R. 62-528.355 (requiring testing to confirm the presence of at least one confining zone above the injection zone that is sufficient to prevent the fluid migration to a USDW). Once confinement is confirmed, FPL will be allowed to construct injection wells, which will be accompanied by dual-zone monitoring wells that would be constructed and operated to monitor the injection process and to ensure that no adverse effects occur to the overlying aquifer units. ER Section 6.3.2 at 6.3-3; Revised Hydrology Response at 3, 10. *See also* Fla. Admin. Code R. 62-528.425 (providing monitoring requirements for Class I injection wells).<sup>18</sup>

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<sup>17</sup> The FDEP cannot issue a Class I deep injection well construction permit unless the data collected during the construction testing of the exploratory well confirm that the geology and hydrogeology of the site are appropriate for construction and operation of a Class I deep injection well. *See* Proposed Turkey Point Units 6 & 7, Revised Hydrology Response to NRC Information Request in COL Application Acceptance Review Letter (“Revised Hydrology Response”) (Nov. 24, 2009) (ADAMS Accession No. ML093310169). *See also* ER Section 5.2.1.1.9.

<sup>18</sup> FDEP rules also require UIC permittees to provide notice to FDEP within 24 hours of any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water. Fla. Admin. Code R. 62-528.307(1)(x)(1). FDEP will modify or terminate a UIC permit upon a

(Footnote continued on next page)

Joint Intervenors do not address, let alone refute, any of these provisions that effectively preclude the migration of the wastewater injected into the Boulder Zone up to the USDW. Their speculation that deep well wastewater injection operations *could* result in migration of contaminants to the USDW (Motion to Amend at 8) is unsupported by facts or by anything cited in their Motion to Amend and must be rejected.<sup>19</sup>

**B. Joint Intervenors fail to provide any facts or expert opinion controverting the conclusion in the ER that the environmental impacts of the injection of wastewater into the Boulder Zone will be SMALL**

The second part of Joint Intervenors “adequacy” argument alleges that, assuming there is a migration of injected wastewater from the Boulder Zone into the UFA and the six contaminants at issue reach the groundwater, there may be an impact on the groundwater, and that FPL has failed to adequately discuss that impact in the ER.<sup>20</sup> Motion to Amend at 14. The basis for

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determination that the permitted activity endangers human health or the environment. Fla. Admin. Code R. 62-528.355(3)(a)(3).

<sup>19</sup> Joint Intervenors and Mr. Quarles decry the absence of an investigation by FPL of Turkey Point Units 6 & 7 to determine the geological and hydrogeological conditions of the site “at a depth sufficient to determine aquifer conditions.” Quarles Affidavit at ¶19. However, FPL is drilling an exploratory well that will provide the information that Joint Intervenors find lacking. *See* Revised Hydrology Response at 3-10. And, as stated above, the FDEP will not issue a Class I deep injection well construction permit unless the data collected during construction testing of the exploratory well confirm that the geology and hydrogeology of the site are appropriate for construction and operation of a Class I deep injection well. *See* Fla. Admin. Code R. 62-528.355.

<sup>20</sup> Section 5.2.3.2.4 of the ER discusses the impact of the injection of wastewater into the Boulder Zone:

Wastewater generated from the operation of Units 6 & 7, including water from blowdown sump discharge and treated liquid radwaste, would be injected into the Boulder Zone of the lower Floridan aquifer through the use of twelve injection wells. The Boulder Zone is used in south Florida for the disposal of industrial and municipal waste. The Units 6 & 7 deep injection wells would be permitted by FDEP and installed in accordance with FDEP requirements which include the installation and grouting to surface a series of well casings designed to prevent the flow of water between the various aquifer units encountered.

The estimated total injection rate would range from approximately 85 mgd for the 100 percent radial collector well supply to 18 mgd for the 100 percent reclaimed water cooling water makeup supply. Operation of Units 6 & 7 would follow the FDEP permitting process for injection well permits including monitoring requirements for groundwater quality and groundwater elevation data in overlying aquifers. Tables 3.6-2 (as amended in ER Revision 3) and 3.6-3 summarize the expected water quality of the effluent discharged to the deep injection wells based on the reclaimed water and radial collector well cooling water makeup options, respectively.

(Footnote continued on next page)

alleging potential impacts to the groundwater is the assertion that “at least two constituents are potential human carcinogens and exceed the EPA MCL, and all six constituents are harmful to humans in minute concentrations.” *Id.*

The second part of Joint Intervenors’ adequacy argument fails for numerous reasons. *First*, as demonstrated above, there is no credible evidence that there will be an upwards migration of injected wastewater from the Boulder Zone into the UFA.

*Second*, Joint Intervenors provide no evidence as to what fraction of the injected wastewater will actually migrate upwards, or what the composition of the migrating water will be once it arrives at the UFA. Section 8 of the EPA Risk Assessment (again, not cited by Joint Intervenors or their consultant, but included as Attachment B to this Response) provides the relative risk assessment for various wastewater disposal options. It estimates that it would take 30 to 1,100 years for wastewater injected via underground wells to migrate up to current USDWs in Miami-Dade County. EPA Risk Assessment at 8-4. Because of the long migration time, concentrations of all contaminants except nitrate and metals would decrease to lower levels by the time the effluent water reached the drinking-water receptors. *Id.* at 8-10.

*Third*, five of the six chemicals at issue (and all four of the chemicals newly addressed in the recent ER revision) are injected into the Boulder Zone in concentrations that are below the

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As discussed in Subsection 5.2.1.1.9, the impacts from hydrologic alterations in the USDW resulting from the use of the deep injection wells would be SMALL. The potential impacts to water quality of the USDW would also be SMALL if there are no hydrologic impacts to the USDW. Within the Boulder Zone, groundwater quality impact from operations would be SMALL. Deep injection well operation would be in accordance with other deep injection waste disposal operations currently taking place in south Florida and in accordance with rules and regulations developed by the state of Florida as represented by the current deep well injection permitting process. The overlying USDW would be monitored for hydrologic impacts and water quality.

ER, Section 5.2.3.2.4 at 5.2-24 and 5.2-25.

EPA drinking water MCL standards. *See* Section I.D above. Joint Intervenors have not identified any mechanism through which the concentration of these chemicals would increase as the wastewater travels upwards so that they reach the USDW in concentrations that exceed drinking water standards. Again, Joint Intervenors' speculative claim fails to meet the materiality requirements of 10 C.F.R. § 2.309(f)(1)(iv).

*Fourth*, Joint Intervenors fail to provide any evidence of what environmental or health impacts may result from the upward migration of wastewater injected into the Boulder Zone, nor why those effects would be potentially significant so as to warrant further analysis in the ER. NRC regulations indicate that impacts should only be discussed "in proportion to their significance." *See* 10 C.F.R. § 51.45(b)(1). Joint Petitioners provide no support for a claim that the anticipated environmental impacts of the proposed injection of wastewater into the Boulder Zone would be significant enough to warrant additional analysis in the ER.

While the National Environmental Policy Act requires federal agencies to take a "hard look" at the environmental impacts of a proposed action, this requirement is subject to a "rule of reason" such that the consideration of environmental impacts "need not address every impact that could *possibly* result, but rather only those that are reasonably foreseeable or have some likelihood of occurring." *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-07, 69 NRC 613, 631 (2009) (emphasis added) (citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)). If effects are remote or speculative, they need not be considered. *See Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 551 (1978). Thus, to be admissible, a claim that an ER fails to adequately address an environmental issue must allege, and must provide support for the assertion, that the

environmental impact is significant and reasonably foreseeable. Citation of a merely hypothetical impact fails to raise a material issue. 10 C.F.R. § 2.309(f)(1)(iv).

In summary, Joint Intervenors' "adequacy" claim underlying their proposed new contention is invalid and provides no support for the admission of the contention.

### **CONCLUSION**

Joint Intervenors' attempt to breathe new life into dismissed Contention 2.1 by transforming it into a contention of adequacy must fail because there are no valid grounds to challenge either the accuracy of the chemical release estimates presented in Revision 3 of the Application or the adequacy of FPL's assessment that the environmental impacts of releasing those chemicals into the Boulder Zone will be SMALL. Accordingly, the Motion to Amend must be denied and the proposed amended Contention 2.1 must be rejected.

Respectfully submitted,

/Signed electronically by Matias F. Travieso-Diaz/

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February 10, 2012

Counsel for FLORIDA POWER & LIGHT COMPANY

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Florida Power & Light Company	)	Docket Nos. 52-040-COL
	)	52-041-COL
(Turkey Point Units 6 and 7)	)	
	)	ASLBP No. 10-903-02-COL
(Combined License)	)	

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing Florida Power & Light Company's Response to Joint Intervenor's Motion to Amend Contention 2.1 were provided to the Electronic Information Exchange for service to those individuals listed below and others on the service list in this proceeding, this 10<sup>th</sup> day of February, 2012.

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/Signed electronically by Matias F. Travieso-Diaz/

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