

**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)	
(Combined License Application))	ASLBP No. 10-903-02-COL

JOINT LIST OF UNDISPUTED FACTS

Florida Power & Light Company; the Nuclear Regulatory Commission Staff; and Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association (collectively the “Joint Intervenors”), hereby agree that the following facts are undisputed for purposes of the evidentiary hearing to be held by the Board in the above-captioned proceeding:

Timeline Facts

1. On June 30, 2009, FPL submitted a combined license application (“Application”) for two new nuclear power reactors, Turkey Point Units 6 and 7, of the AP1000 design to be built near Homestead, Florida.
2. On August 3, 2009, the NRC Staff published a notice in the Federal Register of the receipt and availability of the Application. *74 Fed. Reg.* 38,477.
3. On September 4, 2009, the NRC Staff accepted the Application for docketing and published notice of this action on October 7, 2009. *74 Fed. Reg.* 51,621.
4. On June 18, 2010, the NRC issued a Notice of Hearing and Opportunity to Petition for Leave to Intervene. *75 Fed. Reg.* 34,777.
5. On August 17, 2010, Joint Intervenors filed a Petition to Intervene including 9 contentions with a total of 10 subparts. Contention 2.1 was phrased as follows:

“The ER fails to adequately identify, analyze, and discuss the potential impacts on groundwater quality of injecting polluted wastewater into the Floridan Aquifer via underground injection wells.” Aug. 17, 2010 Petition to Intervene at p. 26.
6. On February 28, 2011, the Board admitted the following Joint Intervenors’ Contention 2.1, as revised and narrowed:

“[T]he 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 tetrachloroethylene, which have been found in injection wells in Florida but are not listed in FPL’s ER as wastewater constituent chemicals.” *Florida Power & Light Co.* (Turkey Point Units 6 and 7), LBP-11-06, 73 NRC 149, 190 (2011).

7. On December 16, 2011, FPL submitted COL Application, Revision 3 to the NRC.
8. On January 3, 2012, FPL moved to dismiss Contention 2.1.
9. On January 23, 2012, Joint Intervenors filed an answer to FPL’s motion to dismiss Contention 2.1 and, in the alternative, moved to admit an amended version of Contention 2.1, as follows:

“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.” Jan. 23, 2012 Answer at p. 12.

10. On January 23, 2012, the NRC Staff also answered FPL’s motion to dismiss Contention 2.1. The Staff supported the FPL motion.
11. On January 26, 2012, the Board granted FPL’s motion to dismiss the original Contention 2.1 as moot, without addressing the amended Contention.
12. On February 10, 2012, FPL filed an answer opposing the admission of the amended Contention 2.1.
13. On February 10, 2012, the NRC Staff filed an answer opposing, in part, the Joint Intervenors request for admission of an amended version of Contention 2.1. The NRC Staff did not object to a portion of the proposed amended Contention.
14. On May 2, 2012, the Board admitted amended Contention 2.1 in part, 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.” *Florida Power & Light Co.* (Turkey Point Units 6 and 7), LBP-12-09, 75 NRC 615, 629 (2012).

15. On July 19, 2012, FPL moved for summary disposition of the amended Contention 2.1.
16. On August 6, 2012, the Joint Intervenors answered FPL's motion.
17. On August 8, 2012, the NRC Staff filed an answer in support of FPL's motion.
18. On August 30, 2012, the Board granted FPL's motion in part and partially dismissed the amended Contention 2.1, then revised it as follows:

“The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be “small” because the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene may be inaccurate and unreliable. Accurate and reliable calculations of the concentrations of those chemicals in the wastewater are necessary so it might reasonably be concluded that those chemicals will not adversely impact the groundwater should they migrate from the Boulder Zone to the Upper Floridan Aquifer.” Memorandum and Order (Granting in Part and Denying in Part Motion for Summary Disposition of Amended Contention 2.1) slip op. at 10 (Aug. 30, 2012) (NRC ADAMS Accession No. ML12243A323).

19. In February 2015, the NRC published the Draft Environmental Impact Statement (“DEIS”).
20. On December 15, 2015, FPL moved for summary disposition of Contention 2.1.
21. On February 3, 2016, the NRC Staff filed a response in support of FPL's motion for summary disposition.
22. On February 3, 2016, the Joint Intervenors filed a response opposing FPL's motion for summary disposition.
23. On April 5, 2016, oral argument was held on FPL's motion for summary disposition.
24. On April 21, 2016, the Board granted FPL's motion in part and denied FPL's motion in part. The Board revised Contention 2.1 to read as follows:

“The DEIS is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be “small.” The chemicals ethylbenzene, heptachlor, tetrachloroethylene, and toluene in the wastewater injections at concentrations listed in DEIS Table 3-5 may adversely impact the groundwater should they migrate from the Boulder Zone to the Upper Floridan Aquifer.” *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), LBP-16-03, 83 NRC 169, 186 (2016).

25. On October 28, 2016, the NRC published the Final Environmental Impact Statement (“FEIS”).

Other Facts

Geology

- 26. FPL drilled an exploratory well, EW-1, at the Turkey Point site.
- 27. The Lower Floridan Aquifer includes the Boulder Zone.

Use of Reclaimed Wastewater

- 28. FPL intends to use reclaimed wastewater in cooling towers to remove waste heat from the circulating water system and reject that heat to the atmosphere.
- 29. Under normal operating conditions with both units using 100 percent reclaimed water, the delivery rate from MDWASD South District Wastewater Treatment Plant to the reclaimed water-treatment facility would be approximately 50,481 gallons per minute. FEIS at 3-30.
- 30. The reclaimed wastewater will be obtained from the Miami-Dade Water and Sewer Department, South District Wastewater Treatment Plant (“South District Plant”), which is approximately 9 miles north of the Turkey Point site.
- 31. The wastewater will travel through 9 miles of pipeline from the South District Plant to the Turkey Point site.
- 32. From the on-site treatment facility, the wastewater will go to the makeup water reservoir, and then to the Unit 6 and 7 cooling towers.
- 33. A portion of the reclaimed wastewater will evaporate in the cooling towers in the process of removing heat from the service water system, with the remainder (the “blowdown” and other plant wastewater) ultimately going to the blowdown sump and from the blowdown sump to the injection wells.
- 34. The blowdown, which will total approximately 18-18.6 Mgd when operating on reclaimed water, will then be injected into the Boulder Zone via injection wells. FEIS at 3-32.
- 35. The Boulder Zone is currently used for treated municipal wastewater injection at the South District Plant.
- 36. FPL intends to drill twelve additional deep injection wells at the Turkey Point site.
- 37. FPL intends to construct six dual-zone monitoring wells.
- 38. The six dual-zone monitoring wells would be located between each pair of the twelve deep-injection wells.
- 39. Each dual-zone monitoring well would be positioned about 75 feet from its pair of injection wells.

Characteristics of reclaimed wastewater

40. The values listed in Table 3-5 of the FEIS for ethylbenzene, heptachlor, tetrachloroethylene, and toluene are as follows:

Constituent Name	Concentration Using 100% Reclaimed Wastewater (mg/L)
Heptachlor	0.000023
Ethylbenzene	(a)
Toluene	0.00174
Tetrachloroethylene	0.00359
(a) Constituent concentration was below the method detection limit. mg/L = milligrams per liter.	

41. The values listed in Table 3-5 of the FEIS for ethylbenzene, heptachlor, tetrachloroethylene, and toluene are conservative and reliable.
42. The EPA Maximum Contaminant Levels for ethylbenzene, heptachlor, tetrachloroethylene, and toluene are as follows:

Constituent Name	EPA Maximum Contaminant Level (mg/L)
Heptachlor	0.0004
Ethylbenzene	0.7
Toluene	1.0
Tetrachloroethylene	0.005
mg/L = milligrams per liter.	

43. The MCLG for Heptachlor is 0.
44. The MCLG for Tetrachloroethylene is 0.

Respectfully submitted this 1st day of March, 2017.

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