

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before the Licensing Board:

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

In the Matter of )  
 )  
Florida Power & Light Company ) Docket Nos. 52-040 and 52-041  
 )  
Turkey Point, ) ASLBP No. 10-903-02-COL-BD01  
Units 6 and 7 )  
\_\_\_\_\_ )

**JOINT INTERVENORS' ANSWER TO FLORIDA POWER & LIGHT COMPANY'S MOTION FOR SUMMARY DISPOSITION OF JOINT INTERVENORS' AMENDED CONTENTION 2.1**

**I. INTRODUCTION**

Pursuant to 10 C.F.R. § 2.1205, SOUTHERN ALLIANCE FOR CLEAN ENERGY, NATIONAL PARKS CONSERVATION ASSOCIATION, DAN KIPNIS, and MARK ONCAVAGE (collectively, “Joint Intervenors”) hereby file their answer in opposition to Florida Power & Light Company's (“FPL”) second Motion for Summary Disposition of Joint Intervenors’ Amended Contention 2.1, filed December 15, 2015 (the “Second Motion for Summary Disposition”). The attached Joint Intervenors’ Statement of Material Facts as to which a Genuine Issue Exists (“Statement of Facts in Dispute”) and Third Affidavit of Mark Quarles, P.E. (February 2, 2016) (“Third Affidavit of Mark Quarles” or “Quarles Third Aff.”) support this Answer.

Summary disposition is appropriate only when there are no genuine issues in dispute. Here, however, significant disputes remain regarding many of the 90 material facts FPL submitted in its “Statement of Material Facts As To Which No Genuine Issue Exists, In Support of Florida Power &

Light Company's Motion for Summary Disposition of Joint Intervenors' Amended Contention 2.1," filed December 15, 2015, almost all of which concern the upward migration of ethylbenzene, heptachlor, tetrachloroethylene, and toluene into the Upper Floridan Aquifer, an underground source of drinking water ("USDW"). *See* Statement of Material Facts in Dispute. In particular, Joint Intervenors and their expert continue to maintain that FPL (and now the Nuclear Regulatory Commission ("NRC")) in its Draft Environmental Impact Statement ("DEIS")) has not adequately analyzed and discussed the site specific-conditions of Turkey Point that make upward migration possible, the risks associated with wastewater injection activities, and the potential of wastewater chemical constituents to contaminate USDWs.

As explained in greater detail below and in the Third Affidavit of Mark Quarles, the documented presence of ethylbenzene, heptachlor, tetrachloroethylene, and toluene is relevant to an analysis of environmental impacts of injecting Turkey Point's wastewater into the Boulder Zone. FPL has not demonstrated that an adequate geologic confining layer with sufficient aerial extent, thickness, or lithological and hydraulic conditions exists on the Turkey Point site to prevent upward migration of these chemical constituents into USDWs. Indeed, FPL's own test results, a 2008 report by Reese and Richardson, and a 2012 report completed by Cunningham, et. al., casts doubt that an adequate confining layer exists. Therefore, a genuine dispute remains regarding the DEIS' conclusions that the environmental impacts of injecting wastewater into the Boulder Zone using deep well injection will be "SMALL" because that injectate will not migrate into USDWs. Accordingly, FPL's Second Motion for Summary Disposition must be denied.

## **II. STATEMENT OF FACTS**

On June 30, 2009, FPL submitted an application for a combined license ("COL") for two new AP1000 nuclear reactors ("Units 6 & 7") at its Turkey Point site in Homestead, Florida.

On June 12, 2010, the NRC issued a Notice of Hearing and Opportunity to Petition for Leave to Intervene, which provided members of the public 60 days from the date of publication to petition for

leave to intervene in this proceeding. Joint Intervenors filed a timely petition to intervene. The Atomic and Safety Licensing Board (“Board”) ruled that Joint Intervenors had standing to participate in the proceeding and admitted the following contention (“Contention 2.1”):

[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.

*Turkey Point Units 6 & 7*, Memorandum and Order (Ruling on Petitions to Intervene), LBP-11-06, 73 NRC 149, 190 (Feb. 28, 2011).

In admitting Contention 2.1, the Board 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 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.’” *Turkey Point Units 6 & 7*, Memorandum and Order (Granting, In Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1), LBP-12-09 (May 2, 2012) at 2-3 (citing Memorandum and Order (Ruling on Petitions to Intervene), LBP-11-06 (Feb. 8, 2011), slip op. at 37).

On December 16, 2011, FPL submitted the NRC Revision 3 of its COL application. FPL followed this submittal with a Motion to Dismiss Contention 2.1 on January 3, 2012. Joint Intervenors filed an answer opposing FPL's motion on January 23, 2012, along with the First Affidavit of Mark Quarles (“Quarles First Aff.”) and alternatively moved the Board to admit an amended version of Contention 2.1. The Board dismissed Contention 2.1 on January 26, 2012, but granted in part Joint Intervenors' Motion to Admit Amended Contention 2.1 on May 2, 2012. *Turkey Point Units 6 & 7*, Memorandum and Order (Granting, In Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1), LBP-12-09 (May 2, 2012). Amended Contention 2.1 reads:

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.

*Id.* at 16.

On July 19, 2012, FPL filed a Motion for Summary Disposition of Amended Contention 2.1. Joint Intervenors filed their answer on August 6, 2012, with the Second Affidavit of Mark Quarles (Quarles Second Aff.™) attached thereto. On August 30, 2012, the Board granted in part and denied in part FPL's motion. *Turkey Point Units 6 & 7, Memorandum and Order (Granting, In Part and Denying In Part Motion for Summary Disposition of Amended Contention 2.1) (August 30, 2012)*. The Board found that while FPL had cured an omission regarding the source of data used to calculate concentrations of ethylbenzene, heptachlor, tetrachloroethylene, and toluene in its Environmental Report (“ER”), “the accuracy and reliability of FPL's claims regarding the environmental impacts to the Upper Floridan Aquifer remain in dispute.” *Id.* at 9-10. Accordingly, the Board denied the motion with regard to all other aspects of Amended Contention 2.1. The Board reformulated Amended Contention 2.1 “to eliminate the moot issue” and the contention now reads:

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.

*Id.* at 10.

FPL filed its Second Motion for Summary Disposition on December 15, 2015. The Board issued an order on December 23, 2015, granting Joint Intervenors' Motion for Extension of Time to file their answer. *Turkey Point Units 6 & 7, Order (Granting Joint Intervenors' Motion for Extension of Time) (December 23, 2015)*.

In response to FPL's Second Motion for Summary Disposition, Joint Intervenors hereby file this

Answer, their Statement of Material Facts in Dispute, and the Third Affidavit of Mark Quarles.

### **III. STANDARD FOR SUMMARY DISPOSITION**

The standard for summary disposition is set forth in 10 C.F.R. §§ 2.710 and 2.1205. Pursuant to these regulations, a party is entitled to summary disposition only if the Board finds that 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). When ruling on motions for summary disposition, the Board “applies standards analogous to those used by federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure.” *Detroit Edison Company* (Fermi Nuclear Power Plant, Unit 3) LBP-12-23 at 4 (Nov. 9, 2012) (internal citations omitted). Under Rule 56, the moving party has the initial burden of demonstrating that no genuine issue as to any material facts exists and that it is entitled to judgment as a matter of law. Fed. R. Civ. Pro. 56. Further, “because the initial burden rests on the moving party, a licensing board must examine the record in the light most favorable to the non-moving party and all justifiable inferences must be drawn in favor of the non-moving party.” *Detroit Edison Company* at 4-5. If there is any possibility that a litigable issue of fact exists or any doubt as to whether the parties should have been permitted or required to proceed further, the motion must be denied. *Gen Elc. Co.* (GE Morris Operation Spent Fuel Storage Facility), LBP-82-14, 15 NRC 530, 532 (1982); *Safety Light Corp.* (Bloomsburg Site Decommissioning and License Renewal Denials), LBP-95-9, 41 NRC 412, 449 n. 167 (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). Thus, a motion for summary disposition can only be granted where it is quite clear what the truth is and where there is no genuine issue of material fact that remains for trial. *Tenn. Valley Auth.* (Browns Ferry Nuclear Plant, Units 1, 2, & 3), LBP-73-29, 6 AEC 682, 688 (1973); *Private Fuel Storage, L.L.C.*, LBP-99-23, 49 NRC 485, 491 (1999); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 384 (2001)).

It is further well established that summary disposition “is not a tool for trying to convince a

Licensing Board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing.” *Detroit Edison Company* (Fermi Nuclear Power Plant, Unit 3), LBP-11-14 at 5 (May 20, 2010) (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001) (emphasis omitted)). “Summary disposition is particularly inappropriate when a licensing board is presented with conflicting expert testimony, for at that stage of a proceeding it is not the role of licensing boards to ‘untangle the expert affidavits and decide which experts are more correct.’” *Id.* (internal citations omitted). “At this stage, the judge's function is not himself to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for [hearing]...If ‘reasonable minds could differ as to the import of the evidence,’ summary disposition is not appropriate.” *Id.* (quoting *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC \_\_\_, (slip op., at 13) (Mar. 26, 2010)).

As explained in more detail below, FPL has introduced no new evidence to resolve the underlying disputes regarding upward migration that were raised by Joint Intervenor in their Amended Contention 2.1 and explained by their expert, Mark Quarles, in his first, second, and third affidavits. Instead, FPL again asks the court to side with its experts rather than Joint Intervenor, making evidentiary determinations more appropriate for a hearing than at this stage of the proceeding. Because material disputes remain, summary disposition is inappropriate, and FPL's Second Motion for Summary Disposition must be denied.

#### **IV. ARGUMENT**

##### **A. There Remains a Genuine Dispute as to Whether an Adequate Geologic Confining Layer with Sufficient Aerial Extent, Thickness, or Lithological and Hydraulic Conditions Exists on the Turkey Point Site to Prevent Upward Migration of Injected Wastewater into USDWs.**

Contrary to FPL's assertions in its Second Motion for Summary Disposition, and as Joint Intervenor have long maintained, there is not an adequate geologic confining layer with sufficient

aerial extent, thickness, or lithological and hydraulic conditions at the Turkey Point site to prevent upward migration of injected wastewater into the USDWs.

As Mark Quarles explained in his first affidavit more than four years ago, three independent studies support the conclusion that wastewater injected via deep well injection into the Boulder Zone at the Turkey Point site may migrate into the Upper Floridan Aquifer; FPL's conclusion in its ER that upward migration would not occur was incorrectly based on generalized data and assumed values as opposed to actual geological subsurface data from Turkey Point. Quarles First Aff. at ¶ 10. Indeed, FPL conducted no actual investigation into the hydrological and geological conditions at the deep well injection site. *Id.* at ¶ 26. Without actual subsurface data, Mr. Quarles maintained that FPL could not conclude that the middle confining layer would prevent upward migration of wastewater injectate or accurately calculate the rate and direction of flow of the injectate with a reasonable degree of certainty. *Id.* Therefore, any conclusion by FPL about the impact of contamination was based on inaccurate and incomplete data. *Id.* As Mr. Quarles further explained at the time, several studies documented contamination that previously occurred from prior deep well injection operations in the Boulder Zone, and these studies "raised doubts regarding the efficacy of the (middle) confining unit and the resultant water quality impact of overlying aquifers." *Id.* at ¶¶ 14-16. The "lessons learned" from the studies and risks associated with deep well injection underscore the importance of conducting a thorough subsurface investigation at a site before deep well injection begins. *Id.* at ¶¶ 11, 17.

Little has changed since Mr. Quarles first voiced these concerns in 2012. The single well ("Well EW-1") now used by FPL to evaluate the site hydrogeology at Turkey Point and confirm the presence of an appropriate confining layer is inadequate. Quarles Third Aff. at ¶ 9. As explained in more detail below, FPL continues to rely on unacceptable generalities and flawed methods. Moreover, FPL's own research results, as well as the results from outside studies, continue to raise doubts regarding the efficacy of the confining layer.

*FPL continues to rely on unacceptable generalities and flawed methods, and its own research results raise doubts regarding the efficacy of the confining layer.*

FPL's expert, Mr. McNabb, determined the bedrock type and the presence of aquifers and confining layers at Turkey Point, in part, by interpreting pulverized drill cuttings that were brought to the surface from Well EW-1. *Id.* at ¶ 12. Pulverized drilling cuttings that are inspected on the ground surface from deep drilling depths, however, do not provide adequate information to determine bedrock conditions such as the presence of voids, fractures, faults, hydraulic capacity, or the confining nature of the bedrock. *Id.* ¶ 13. Consequently, determinations of those cuttings can only be general and qualitative. *Id.* As such, they are insufficient to support FPL's finding that upward migration will not occur.

Other methods Mr. McNabb used to characterize the bedrock from Well EW-1 included water samples, aquifer hydraulic testing, geophysical logs to determine casing depths, and bedrock core samples at very select intervals. *Id.* at ¶12. But, these methods were likewise ineffective and flawed. For example, Mr. McNabb only collected ten bedrock core samples that varied between two and fourteen feet long from the entire 3,230-foot deep well. *Id.* at ¶ 14. Given the number of cores and lengths of each, the core sampling program only included 122 feet, or 4% of the total 3,230-foot depth of the well. *Id.* at ¶ 15. As a result, the remaining 96% of the boring was generalized. *Id.* This is significant because Mr. McNabb relied on data collected for a mere 4% of the total boring to make a conclusion about the remaining 96% of total depth of the well.

Based in part on this limited core sampling program, and notwithstanding all of its deficiencies, Mr. McNabb then concluded that a 650-foot section of the Avon Park Formation was the "primary confinement below the base of the lower most USDW and prevents fluids of differing quality from migrating between more permeable zones above and below this confining interval." *Id.* at ¶ 16 (quoting McNabb at 15). But as Mr. Quarles explains, Mr. McNabb's conclusion is not supported by his test results. The low percent of "recoveries" of the core samples in Mr. McNabb's testing (a



measurement used to determine the amount of air or water-filled voids in the bedrock) are actually suggestive of voids in the bedrock-characteristics that are *not* favorable for bedrock to be considered a “confining unit.” *Id.* at ¶ 18 (emphasis added). In other words, Mr. McNabb’s results indicate that there may be substantial fracturing and weathering in the bedrock, which could lead to upward migration of the injected wastewater.

Mr. McNabb’s other test methods also indicate that the confining layer contains voids. For example, Mr. McNabb’s porosity measurements confirm that voids were in fact present in the bedrock core samples. *Id.* at ¶ 19. Similarly, Mr. McNabb’s straddle packer testing results could also be interpreted to indicate voids and fractures in the bedrock. Eight of the thirteen tests that were attempted within the “confining unit” designated by Mr. McNabb failed and were “terminated due to pacers not isolating test interval.” Quarles Third Aff. at ¶ 20. Although Mr. McNabb contends that the only way for a packer test to fail is by the packer not sealing against the wall of the geologic strata, thus allowing leakage, his conclusion does not recognize that the bedrock strata within the packer and more importantly above/below the packers could also be hydraulically connected through voids and fractures in the bedrock. Quarles Third Aff. at ¶ 21. These are the very conditions demonstrated by low bedrock “percent recovery tests” and also by the bedrock “percent porosity” results, discussed above. *Id.* at ¶ 20-21.

Thus, Mr. McNabb’s conclusion that the primary confinement unit had “no indication of vertically extensive or significant fracturing” (McNabb at 24) cannot be supported by well-specific data from Well EW-1. Quarles Third Aff. at ¶ 22. The presence of voids in the bedrock that resulted in relatively high porosities, low bedrock core recoveries, and failed bedrock straddle packer tests, all belie Mr. McNabb’s conclusion. *Id.* The results of all three of those tests, in fact, suggests significant fractures and substantial weathering that may not be capable of preventing substantial vertical and horizontal migration of injected wastewater. *Id.*

Outside, regional studies also raise doubts regarding the efficacy of the confining layer.

Outside, regional studies, including a 2008 study by Reese and Richardson and co-authored by scientists from the United States Geologic Study (“USGS”) and the South Florida Water Management District, also do not support FPL’s conclusions. *Id.* at ¶¶ 26 and 28; FPL Statement of Material Facts at #63; *Synthesis of the Hydrogeologic Framework of the Floridan Aquifer System and Delineation of the Major Avon Park Permeable Zone in Central and Southern Florida*, Ronald Reese (USGS Florida Integrated Science Center) and Emily Richardson (South Florida Water Management District, Scientific Investigations Report 2007-5207, 2008 (“Reese and Richardson”).

The Reese and Richardson report concluded that the degree of confinement provided by confining units below the Upper Florida Aquifer is “uncertain.” *Id.* at ¶ 29. The authors also stated that additional data and studies are needed to provide more certainty about the degree of confinement between the Upper and Lower portions of the Floridan Aquifer. *Id.* at ¶ 28 (citing Reese and Richardson at 2).

In addition, a 2012 report was completed by Cunningham, et. al. to supplement the 2008 Reese and Richardson study. *Id.* at ¶ 30 (citing *Near-Surface, Marine Seismic-Reflection Data Define Potential Hydrogeologic Confinement Bypass in the Carbonate Floridan Aquifer System, Southeastern Florida*, Kevin Cunningham (USGS), Cameron Walker (Walker Marine Geophysical Company), and Richard Westcott (USGS), Society of Exploration Geophysics Annual Meeting, 2012) (“Cunningham, et. al.”). The authors cited an “immediate need” in preparing the report because of the practice of deep well injection of municipal wastewater and the threat to USDWs. Quarles Third Aff. at ¶ 30. The purpose of the study was to evaluate geologic formations in the Biscayne Bay and shoreline and to determine whether those formations are in fact confining layers that can protect USDWs. *Id.* The data collected from 2007 through 2011 was used to provide a “new perspective” of subsurface geologic details for the Biscayne Bay adjacent to the Turkey Point site. *Id.* The study concluded that two bedrock structural systems -- tectonic faults and karst collapse structures -- both breach confining

layers in the Floridan aquifer system. *Id.* at ¶ 31. One of these faults runs along the shoreline of the Biscayne Bay, where Turkey Point is located. *Id.* Tectonic faults cut across the aquifer and have the potential to act as passageways for upward migration that could extend into permeable zones that occur within the USDW. *Id.* at ¶ 32. Karst structures also exist in Biscayne Bay, and create breaches in confining layers, which can result in upward migration of injected wastewater. *Id.* This study, which neither FPL nor the DEIS review team relied upon although it contains data collected very near the Turkey Point site (*Id.* at ¶ 30), casts additional doubt about the conclusions made by FPL in its Statement of Material Facts and the DEIS relating to the presence of adequate confining layers to prevent vertical migration of wastewater.

Despite all the information above, FPL (and NRC staff in the DEIS) nevertheless conclude that “enhanced vertical flow” of wastewater through confining units is “unlikely” based on the data collected by McNabb during drilling Well EW-1 and the results of “regional” studies. *Id.* at ¶ 35; FPL Statement of Material Facts #63, #65, #66, #70 and #71. Joint Interveners respectfully dispute such a conclusion. The results from Well EW-1, the Richardson and Reese Report, and the Cunningham, et. al. study, do not support a finding that a confining layer of sufficient thickness, lithological and hydraulic characteristics exists to prevent vertical migration of wastewater injected into the Boulder Zone from migrating into USDWs. Quarles Third Aff. at ¶¶ 12-24, 29-38. Moreover, vertical flow pathways such as faults or similar bedrock fractures may only be a few inches or a few feet wide, underscoring the inadequacy of the single well site investigation and “regional studies” and the need for accurate and complete information based on site-specific studies. *Id.* at ¶¶ 36-37. A thorough, Turkey Point-specific investigation similar to the Cunningham, et. al. study is needed to fully determine the confining nature of the bedrock beneath and adjacent to the Turkey Point site and the associated risks and impacts to USDWs. *Id.* at ¶ 38.

**B. There Remains a Genuine Dispute as to Whether the Injection Well Construction Details and a Groundwater Monitoring System after Injection as an “Early Warning System” Will Ensure that the Impacts of Any Upward Migration of Injected Municipal Wastewater into USDWs will be “SMALL.”**

As Mr. Quarles explained in his first and second affidavits, there have been 18 documented instances where deep well injection of wastewater has contaminated an USDW. *Id.* at ¶ 40. Studies have shown that contamination began immediately upon injection and the contamination was widespread. *Id.* at ¶ 41. This is unsurprising. Because groundwater monitoring programs usually consist of only quarterly or semi-annual sampling frequencies (*Id.* at ¶ 42), these programs do not provide an “early warning” for vertical migration, which can occur along pathways such as faults, fractures, and well failures, within days of injection. *Id.* Thus, significant and widespread contamination can (and often does) occur before detection. *Id.*

Further, there is little support for FPL's claims that “the highly regulated design and testing of Turkey Point's injection wells” would lead to a conclusion that any impacts to the USDWs will be “SMALL”. There is no indication that a formation pressure test was ever conducted to monitor for leakage between the concrete that is in contact with bedrock formations and all outer steel casings. *Id.* at ¶ 43. Buoyant municipal wastewater can migrate up the borehole outside of steel protective casings. *Id.* Formation pressure tests and cement bond logs of each well casing string should have been completed to document cement coverage and seal. *Id.* The multiple seals between the bedrock and well casings can also fail at any time due to the repeated stresses and strains from the high-pressure injections and wastewater, and the five year mechanical integrity testing would not necessarily detect a well failure. *Id.* at ¶ 44. This can only be determined through groundwater monitoring and identification of contamination in the upper monitoring wells during periodic sampling events. *Id.* Lastly, while “remedial action” is contemplated, there is no indication whether similar remedial actions have ever been required for documented cases where municipal wastewater has contaminated a USDW. *Id.* at ¶ 46. Neither the McNabb study nor the DEIS discuss the extent of the contamination cases at the

South District and Sunrise locations they cite, much less explain how those instances would differ from the proposed Turkey Point site to support an impact determination of “SMALL.” *Id.* at ¶ 46.

**C. There Remains a Genuine Dispute Regarding the Purported Concentration Levels of Ethylbenzene, Heptachlor, Tetrachloroethylene, and Toluene in the Wastewater Stream and the DEIS's Conclusion that the Environmental Impact from the Deep Well Injection of Wastewater Containing these Constituents will be “SMALL.”**

Contrary to FPL's assertion on page 12 of its Second Motion for Summary Disposition, the purported concentration levels of the four constituents at issue are indeed relevant to the DEIS's conclusion that the environmental impact from the deep well injection would be “SMALL.” This is because the purported concentrations are variable, as evidenced by the reported detections of toluene, ethylbenzene, tetrachloroethylene, and heptachlor in previously collected samples and listed in DEIS Table 3.5-2. *Id.* at ¶ 51. The fact that these constituents were previously detected in the wastewater stream is significant. As Mr. Quarles noted in his second affidavit, the United States Environmental Protection Agency has determined that there is no safe concentration of tetrachloroethylene and heptachlor for human consumption. The Maximum Contaminant Level Goal for those constituents is ZERO, and they are probable human carcinogens. Quarles Second Aff. at ¶¶ 15, 19. Further, if the South District Wastewater Treatment Plan has the capacity to effectively treat the domestic and industrial wastewater it receives, these constituents would not be present. Quarles Third Aff. at ¶¶ 51, 53. As explained above, because FPL has not demonstrated that an adequate geologic confining layer with sufficient aerial extent, thickness, or lithological and hydraulic conditions exists on the Turkey Point site to prevent upward migration of injected municipal wastewater into USDWs, it cannot be concluded at this time that the environmental impacts of these four migrating constituents into the Upper Floridan Aquifer would be “SMALL.”

**IV. CONCLUSION**

The conclusion in the DEIS that the environmental impacts of injecting wastewater via deep well injection into the Boulder Zone will be “SMALL” cannot be supported by the facts and a

substantial, genuine dispute remains. While FPL asks the court to side with its experts rather than Joint Intervenors, such evidentiary determinations are more appropriate for a hearing than at this stage of the proceeding. Because material disputes remain, summary disposition is inappropriate. Therefore, Joint Intervenors respectfully request that FPL's Second Motion for Summary Disposition be denied.

Respectfully submitted this 3<sup>rd</sup> day of February, 2016.

/signed electronically by/

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