

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Environmental Cost Recovery Clause
_____ /

Docket No. 20170007-EI

Filed: September 14, 2017

**OFFICE OF PUBLIC COUNSEL'S NOTICE OF SUBSTITUTION OF EXHIBIT SP-2 TO THE
TESTIMONY OF SORAB PANDAY**

Pursuant to Section 350.0611, Florida Statutes, the Citizens of the State of Florida, by and through J. R. Kelly, Public Counsel, hereby give notice that they have served the attached substitute for Exhibit SP-2 to the Direct Testimony of Sorab Panday filed on August 23, 2017.

Exhibit SP-2 consists of an inventory of studies referenced in Dr. Panday's testimony. Due to a clerical error, the studies listed in Tables 1, 2 and 4 of Exhibit SP-2 were enumerated incorrectly. The items on the inventory have been properly numbered in the substitute exhibit so that they align with the references cited in the testimony. Also attached hereto as Attachment A is an explanation of the corrections to the referenced Tables.

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CERTIFICATE OF SERVICE

I **HEREBY CERTIFY** that a true and correct copy of the foregoing Notice of Substitution of Exhibit to the Direct Testimony of Sorab Panday has been furnished by electronic mail on this 15th day of September, 2017 to the following:

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DIRECT TESTIMONY OF SORAB PANDAY – EXPLANATION OF DIFFERENCES BETWEEN THE ORIGINAL AND SUBSTITUTE EXHIBIT SP-2

Table 1

Note: Changes apply to both the column titled “Reference Abbreviation” and the column titled “Reference”

Reference No. 21	Change “Golder, 2008a” to “Golder, 2008c”
Reference No. 22	Change “Golder, 2008b” to “Golder, 2008d”
Reference No. 23	Change “Golder, 2008c” to “Golder, 2008e”
Reference No. 24	Change “Golder, 2008d” to “Golder, 2008f”
Reference No. 28	Change “Golder, 2011b” to “Golder, 2011c”
Reference No. 31	Change “Miami-Dade Co., 2015a” to “Miami-Dade Co., 2015b”
Reference No. 35	Change “Tetra Tech, 2013” to “Tetra Tech, 2013b”
Reference No. 39	Change “Tetra Tech, 2015” to “Tetra Tech, 2015a”
Reference No. 40	Change “Tetra Tech, 2016a” to “Tetra Tech, 2016c”
Reference No. 41	Change “Tetra Tech, 2016b” to “Tetra Tech, 2016d”
Reference No. 42	Change “Tetra Tech, 2016c” to “Tetra Tech, 2016f”
Reference No. 43	Change “Tetra Tech, 2016d” to “Tetra Tech, 2016l”
Reference No. 44	Change “Tetra Tech, 2016e” to “Tetra Tech, 2016m”

Table 2

Note: Changes apply to both the column titled “Reference Abbreviation” and the column titled “Reference”

Reference No. 19	Change “Golder, 2008a” to “Golder, 2008c”
Reference No. 20	Change “Golder, 2008b” to “Golder, 2008d”
Reference No. 21	Change “Golder, 2008c” to “Golder, 2008e”
Reference No. 22	Change “Golder, 2008d” to “Golder, 2008f”
Reference No. 28	Change “Tetra Tech, 2013” to “Tetra Tech, 2013b”
Reference No. 32	Change “Tetra Tech, 2015” to “Tetra Tech, 2015a”
Reference No. 33	Change “Tetra Tech, 2016a” to “Tetra Tech, 2016c”

Reference No. 34	Change “Tetra Tech, 2016b” to “Tetra Tech, 2016d”
Reference No. 35	Change “Tetra Tech, 2016c” to “Tetra Tech, 2016f”
Reference No. 36	Change “Tetra Tech, 2016d” to “Tetra Tech, 2016l”
Reference No. 37	Change “Tetra Tech, 2016e” to “Tetra Tech, 2016m”

Table 4

Note: Changes apply to both the column titled “Reference Abbreviation” and the column titled “Reference”

Reference No. 12	Change “Tetra Tech, 2013” to “Tetra Tech, 2013b”
Reference No. 14	Change “Tetra Tech, 2015” to “Tetra Tech, 2015a”
Reference No. 15	Change “Tetra Tech, 2016a” to “Tetra Tech, 2016c”
Reference No. 16	Change “Tetra Tech, 2016b” to “Tetra Tech, 2016d”
Reference No. 17	Change “Tetra Tech, 2016e” to “Tetra Tech, 2016m”

SECTION II - HISTORY OF WATER FLOW AND SALINITY IN AND AROUND THE TPCCS

TABLE 1

DATA AND STUDIES REGARDING SALINITY WITHIN THE TPCCS AND ITS EFFECTS ON GROUNDWATER

Ref No.	Year	Reference Abbreviation	Reference
1	2016	Chin, 2016	Chin, David A., 2016, The Cooling-Canal System at the FPL Turkey Point Power Station (Chin, 2016).
2	1978	Dames & Moore, 1978	Dames & Moore, 1978, Salinity Evaluation, Turkey Point Cooling Canal System, Florida Power & Light Company, January 5 (Dames & Moore, 1978).
3	1990	Dames & Moore, 1990	Dames & Moore, 1990, Annual Report, August 1990, Ground-Water Monitoring Program, Florida Power & Light Company Turkey Point Plant, August 30 (Dames & Moore, 1990).
4	1992	Dames & Moore, 1992	Dames & Moore, 1992, Annual Report, August 1992, Ground-Water Monitoring Program, Florida Power & Light Company Turkey Point Plant, Date County, Florida, August 31 (Dames & Moore, 1992).
5	2011	Ecology and Environment, 2011a	Ecology and Environment, Inc., 2011, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, February 15 (Ecology and Environment, 2011a).
6	2011	Ecology and Environment, 2011b	Ecology and Environment, Inc., 2011, Turkey Point Plant, Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011b).
7	2011	Ecology and Environment, 2011c	Ecology and Environment, Inc., 2011, Turkey Point Plant, Appendices - Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011c).
8	2012	Ecology and Environment, 2012a	Ecology and Environment, Inc., 2012, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, March 28 (Ecology and Environment, 2012a).
9	2012	Ecology and Environment, 2012b	Ecology and Environment, Inc., 2012, Turkey Point Plant, Initial Ecologic Condition Characterization Report, June (Ecology and Environment, 2012b).
10	2012	Ecology and Environment, 2012c	Ecology and Environment, Inc., 2012, Turkey Point Plant, Comprehensive Pre-Uprate Monitoring Report, Units 3 & 4 Uprate Project, October 31 (Ecology and Environment, 2012c).
11	2014	Ecology and Environment, 2014	Ecology and Environment, Inc., 2014, Turkey Point Plant, Annual Post-Uprate Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2014).
12	2016	Ecology and Environment, 2016a	Ecology and Environment, Inc., 2016, Florida Power & Light Company, Turkey Point Power Plant, Cooling Canal System (CCS) Freshening Effectiveness Report, January 29 (Ecology and Environment, 2016a).
13	2016	Ecology and Environment, 2016b	Ecology and Environment, Inc., 2016, Turkey Point Plant, Comprehensive Post-Uprate Monitoring Report, Units 3 and 4 Uprate Project, March 31 (Ecology and Environment, 2016b).

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Ref No.	Year	Reference Abbreviation	Reference
14	2016	Enercon, 2016	Enercon Services Inc., 2016, PTN Cooling Canal System, Electromagnetic Conductance Geophysical Survey, Final Report, Florida Light & Power (FPL) Turkey Point Plant, May (Enercon, 2016).
15	1972	FCD, 1972	Central and Southern Florida Flood Control District, Agreement with FPL, dated February 2nd, 1972 (FCD, 1972).
16	2003	FPL, 2003	FPL, 2003, Annual Report - 2003, Ground-Water Monitoring Program, Turkey Point Plant, Dade County, Florida, September 9 (FPL, 2003).
17	2005	FPL, 2005	FPL, 2005, Annual Report - 2004, Ground-Water Monitoring Program, Turkey Point Plant, Dade County, Florida, February 28 (FPL, 2005).
18	2016	FPL, 2016a	FPL, 2016, Response to Chin, 2016, and Technical Addendum, March 18 (FPL, 2016a).
19	2010	GeoTrans, 2010a	GeoTrans, Inc., 2010, Technical Memorandum, Water/Salt Balance Model of Turkey Point Cooling Canal System, August 4 (GeoTrans, 2010a).
20	2010	GeoTrans, 2010b	GeoTrans, Inc., 2010, Feasibility Study to Assess Engineering Options for Stopping Westward Migration of Saline Water and Decreasing Cooling Canal System Concentrations, Turkey Point Plant, Florida, August 11 (GeoTrans, 2010b).
21	2008	Golder, 2008c	Golder Associates, Inc., 2008, 2005 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, June 13 (Golder, 2008a).
22	2008	Golder, 2008d	Golder Associates, Inc., 2008, 2006 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, July 9 (Golder, 2008b).
23	2008	Golder, 2008e	Golder Associates, Inc., 2008, 2007 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, July 14 (Golder, 2008c).
24	2008	Golder, 2008f	Golder Associates, Inc., 2008, 2008 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 28 (Golder, 2008d).
25	2009	Golder, 2009	Golder Associates, Inc., 2009, 2009 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, September 16 (Golder, 2009).
26	2010	Golder, 2010	Golder Associates, Inc., 2010, 2010 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 30 (Golder, 2010).

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Ref No.	Year	Reference Abbreviation	Reference
27	2011	Golder, 2011a	Golder Associates, Inc., 2011, Appendix A of 2011 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida (Golder, 2011a).
28	2011	Golder, 2011c	Golder Associates, Inc., 2011, 2011 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 31 (Golder, 2011b).
29	2009	Hughes et al., 2009	Hughes, Joseph D., Langevin, Christian D., Brakefield-Goswami, Linzy, 2009, Effect of Hypersaline Cooling Canals on Aquifer Salinization, U.S. Geological Survey, (Hughes et al., 2009).
30	2010	JLA Geosciences, 2010	JLA Geosciences, Inc., 2010, Geology & Hydrogeology Report for FPL, Turkey Point Plant, Groundwater, Surface Water, & Ecological Monitoring Plan, FPL, Turkey Point Plant, Homestead, Florida, October (JLA Geosciences, 2010).
31	2015	Miami-Dade Co., 2015b	Miami-Dade County, 2015, Consent Agreement between Miami-Dade County, Division of Environmental Resources Management and FPL, dated October 7, 2015 (Miami-Dade Co., 2015a).
32	2009	SFWMD, 2009	South Florida Water Management District, 2009, FPL Turkey Point Power Plant, Groundwater, Surface Water, and Ecological Monitoring Plan, Exhibit B, October 14 (SFWMD, 2009).
33	2010	SFWMD, 2010	South Florida Water Management District, 2010, Response to the Florida Power and Light 2008 and 2009 Annual Reports, Ground-Water Monitoring Program, August 3 (SFWMD, 2010).
34	2013	SFWMD, 2013	South Florida Water Management District, 2013, Consultation Pursuant to the October 14, 2009 Fifth Supplemental Agreement between the South Florida Water Management District and Florida Power & Light, April 16 (SFWMD, 2013).
35	2013	Tetra Tech, 2013b	Tetra Tech, 2013, Technical Memorandum, Cross-Sectional Model of Turkey Point Cooling Canal System, July 15 (Tetra Tech, 2013).
36	2014	Tetra Tech, 2014a	Tetra Tech, 2014, Technical Memorandum, Evaluation of Required Floridan Water for Salinity Reduction in the Cooling Canal System, May 9 (Tetra Tech, 2014a).
37	2014	Tetra Tech, 2014b	Tetra Tech, 2014, Technical Memorandum, Evaluation of Drawdown in the Upper Floridan Aquifer Due to Proposed Salinity Reduction-based Withdrawals, May 13 (Tetra Tech, 2014b).
38	2014	Tetra Tech, 2014c	Tetra Tech, 2014, Technical Memorandum, Evaluation of Drawdown in the Upper Floridan Aquifer Due to Proposed Salinity Reduction-based Withdrawals, December 3 (Tetra Tech, 2014c).
39	2015	Tetra Tech, 2015a	Tetra Tech, 2015, Technical Memorandum, Evaluation of Alternative Measures for Cooling Canal System Salinity Reduction, January 29 (Tetra Tech, 2015).

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Ref No.	Year	Reference Abbreviation	Reference
40	2016	Tetra Tech, 2016c	Tetra Tech, 2016, A Groundwater Flow and Salt Transport Model of the Biscayne Aquifer, June (Tetra Tech, 2016a).
41	2016	Tetra Tech, 2016d	Tetra Tech, 2016, Addendum to Regional Biscayne Aquifer Groundwater Model Report (Tetra Tech, 2016b).
42	2016	Tetra Tech, 2016f	Tetra Tech, 2016, Application of Parameter Estimation Techniques to Simulation of Remedial Alternatives at the FPL Turkey Point Cooling Canal System, July 20 (Tetra Tech, 2016c).
43	2016	Tetra Tech, 2016l	Tetra Tech, 2016, Powerpoint Presentation: Allocation of Costs for CCS Remediation and Improvement, Methodology and Results, December 7 (Tetra Tech, 2016d).
44	2016	Tetra Tech, 2016m	Tetra Tech, 2016, Determination of Allocation of Costs for CCS Recovery and Improvement, December 21 (Tetra Tech, 2016e).
45	1971	US District Court, 1971	United States District Court for the Southern District of Florida, 1971, United States v. Florida Power & Light Co., September 10, 1971, Civ. A. No. 70-328 (US District Court, 1971).
46	2014	USGS, 2014	USGS, 2014, Origins and Delineation of Saltwater Intrusion in the Biscayne Aquifer and Changes in the Distribution of Saltwater in Miami-Dade County, Florida, Scientific Investigations Report 2014-5025 (USGS, 2014).
47	1978	USNRC, 1978	United States Office of Nuclear Reactor Regulation, 1978, Environmental Impact Appraisal by the Office of Nuclear Reactor Regulation Supporting Amendment Nos. 41 and 33 to Facility License Nos. DPR-31 and DPR-41, Florida Power and Light Company, Turkey Point Plant, Units 3 and 4, Docket Nos. 50-250 and 50-251 (USNRC, 1978).

SECTION II - HISTORY OF WATER FLOW AND SALINITY IN AND AROUND THE TPCCS

TABLE 2
ANALYSES CONDUCTED BY OR ON BEHALF OF FPL SINCE 1978 TO EVALUATE SALTWATER MIGRATION

Ref No.	Year	Reference Abbreviation	Reference
1	1978	Dames & Moore, 1978	Dames & Moore, 1978, Salinity Evaluation, Turkey Point Cooling Canal System, Florida Power & Light Company, January 5 (Dames & Moore, 1978).
2	1990	Dames & Moore, 1990	Dames & Moore, 1990, Annual Report, August 1990, Ground-Water Monitoring Program, Florida Power & Light Company Turkey Point Plant, August 30 (Dames & Moore, 1990).
3	1992	Dames & Moore, 1992	Dames & Moore, 1992, Annual Report, August 1992, Ground-Water Monitoring Program, Florida Power & Light Company Turkey Point Plant, Date County, Florida, August 31 (Dames & Moore, 1992).
4	2011	Ecology and Environment, 2011a	Ecology and Environment, Inc., 2011, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, February 15 (Ecology and Environment, 2011a).
5	2011	Ecology and Environment, 2011b	Ecology and Environment, Inc., 2011, Turkey Point Plant, Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011b).
6	2011	Ecology and Environment, 2011c	Ecology and Environment, Inc., 2011, Turkey Point Plant, Appendices - Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011c).
7	2012	Ecology and Environment, 2012a	Ecology and Environment, Inc., 2012, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, March 28 (Ecology and Environment, 2012a).
8	2012	Ecology and Environment, 2012b	Ecology and Environment, Inc., 2012, Turkey Point Plant, Initial Ecologic Condition Characterization Report, June (Ecology and Environment, 2012b).
9	2012	Ecology and Environment, 2012c	Ecology and Environment, Inc., 2012, Turkey Point Plant, Comprehensive Pre-Uprate Monitoring Report, Units 3 & 4 Uprate Project, October 31 (Ecology and Environment, 2012c).
10	2014	Ecology and Environment, 2014	Ecology and Environment, Inc., 2014, Turkey Point Plant, Annual Post-Uprate Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2014).
11	2016	Ecology and Environment, 2016a	Ecology and Environment, Inc., 2016, Florida Power & Light Company, Turkey Point Power Plant, Cooling Canal System (CCS) Freshening Effectiveness Report, January 29 (Ecology and Environment, 2016a).
12	2016	Ecology and Environment, 2016b	Ecology and Environment, Inc., 2016, Turkey Point Plant, Comprehensive Post-Uprate Monitoring Report, Units 3 and 4 Uprate Project, March 31 (Ecology and Environment, 2016b).
13	2016	Enercon, 2016	Enercon Services Inc., 2016, PTN Cooling Canal System, Electromagnetic Conductance Geophysical Survey, Final Report,

SECTION II - HISTORY OF WATER FLOW AND SALINITY IN AND AROUND THE TPCCS

Ref No.	Year	Reference Abbreviation	Reference
			Florida Light & Power (FPL) Turkey Point Plant, May (Enercon, 2016).
14	2003	FPL, 2003	FPL, 2003, Annual Report - 2003, Ground-Water Monitoring Program, Turkey Point Plant, Dade County, Florida, September 9 (FPL, 2003).
15	2005	FPL, 2005	FPL, 2005, Annual Report - 2004, Ground-Water Monitoring Program, Turkey Point Plant, Dade County, Florida, February 28 (FPL, 2005).
16	2016	FPL, 2016a	FPL, 2016, Response to Chin, 2016, and Technical Addendum, March 18 (FPL, 2016a).
17	2010	GeoTrans, 2010a	GeoTrans, Inc., 2010, Technical Memorandum, Water/Salt Balance Model of Turkey Point Cooling Canal System, August 4 (GeoTrans, 2010a).
18	2010	GeoTrans, 2010b	GeoTrans, Inc., 2010, Feasibility Study to Assess Engineering Options for Stopping Westward Migration of Saline Water and Decreasing Cooling Canal System Concentrations, Turkey Point Plant, Florida, August 11 (GeoTrans, 2010b).
19	2008	Golder, 2008c	Golder Associates, Inc., 2008, 2005 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, June 13 (Golder, 2008a).
20	2008	Golder, 2008d	Golder Associates, Inc., 2008, 2006 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, July 9 (Golder, 2008b).
21	2008	Golder, 2008e	Golder Associates, Inc., 2008, 2007 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, July 14 (Golder, 2008c).
22	2008	Golder, 2008f	Golder Associates, Inc., 2008, 2008 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 28 (Golder, 2008d).
23	2009	Golder, 2009	Golder Associates, Inc., 2009, 2009 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, September 16 (Golder, 2009).
24	2010	Golder, 2010	Golder Associates, Inc., 2010, 2010 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 30 (Golder, 2010).
25	2011	Golder, 2011a	Golder Associates, Inc., 2011, Appendix A of 2011 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida (Golder, 2011a).

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Ref No.	Year	Reference Abbreviation	Reference
26	2011	Golder, 2011c	Golder Associates ,Inc., 2011, 2011 Annual Report, Ground-Water Monitoring Program, Florida Power & Light Company, Turkey Point Plant, Miami-Dade County, Florida, August 31 (Golder, 2011c).
27	2010	JLA Geosciences, 2010	JLA Geosciences, Inc., 2010, Geology & Hydrogeology Report for FPL, Turkey Point Plant, Groundwater, Surface Water, & Ecological Monitoring Plan, FPL, Turkey Point Plant, Homestead, Florida, October (JLA Geosciences, 2010).
28	2013	Tetra Tech, 2013b	Tetra Tech, 2013, Technical Memorandum, Cross-Sectional Model of Turkey Point Cooling Canal System, July 15 (Tetra Tech, 2013).
29	2014	Tetra Tech, 2014a	Tetra Tech, 2014, Technical Memorandum, Evaluation of Required Floridan Water for Salinity Reduction in the Cooling Canal System, May 9 (Tetra Tech, 2014a).
30	2014	Tetra Tech, 2014b	Tetra Tech, 2014, Technical Memorandum, Evaluation of Drawdown in the Upper Floridan Aquifer Due to Proposed Salinity Reduction-based Withdrawals, May 13 (Tetra Tech, 2014b).
31	2014	Tetra Tech, 2014c	Tetra Tech, 2014, Technical Memorandum, Evaluation of Drawdown in the Upper Floridan Aquifer Due to Proposed Salinity Reduction-based Withdrawals, December 3 (Tetra Tech, 2014c).
32	2015	Tetra Tech, 2015a	Tetra Tech, 2015, Technical Memorandum, Evaluation of Alternative Measures for Cooling Canal System Salinity Reduction, January 29 (Tetra Tech, 2015).
33	2016	Tetra Tech, 2016c	Tetra Tech, 2016, A Groundwater Flow and Salt Transport Model of the Biscayne Aquifer, June (Tetra Tech, 2016a).
34	2016	Tetra Tech, 2016d	Tetra Tech, 2016, Addendum to Regional Biscayne Aquifer Groundwater Model Report (Tetra Tech, 2016b).
35	2016	Tetra Tech, 2016f	Tetra Tech, 2016, Application of Parameter Estimation Techniques to Simulation of Remedial Alternatives at the FPL Turkey Point Cooling Canal System, July 20 (Tetra Tech, 2016c).
36	2016	Tetra Tech, 2016l	Tetra Tech, 2016, Powerpoint Presentation: Allocation of Costs for CCS Remediation and Improvement, Methodology and Results, December 7 (Tetra Tech, 2016d).
37	2016	Tetra Tech, 2016m	Tetra Tech, 2016, Determination of Allocation of Costs for CCS Recovery and Improvement, December 21 (Tetra Tech, 2016e).

TABLE 3
ANALYSES TO WHICH FPL HAD ACCESS

Ref No.	Year	Reference Abbreviation	Reference
1	2016	Chin, 2016	Chin, David A., 2016, The Cooling-Canal System at the FPL Turkey Point Power Station (Chin, 2016).
2	2009	Hughes et al., 2009	Hughes, Joseph D., Langevin, Christian D., Brakefield-Goswami, Linzy, 2009, Effect of Hypersaline Cooling Canals on Aquifer Salinization, U.S. Geological Survey, (Hughes et al., 2009).
3	2016	Miami-Dade Co., 2016	Miami-Dade County, 2016, Report on Recent Biscayne Bay Water Quality Observations associated with Florida Power and Light Turkey Point Cooling Canal System Operations - Directive 152884, March 7 (Miami-Dade Co., 2016).
4	2009	SFWMD, 2009	South Florida Water Management District, 2009, FPL Turkey Point Power Plant, Groundwater, Surface Water, and Ecological Monitoring Plan, Exhibit B, October 14 (SFWMD, 2009).
5	2010	SFWMD, 2010	South Florida Water Management District, 2010, Response to the Florida Power and Light 2008 and 2009 Annual Reports, Ground-Water Monitoring Program, August 3 (SFWMD, 2010).
6	2013	SFWMD, 2013	South Florida Water Management District, 2013, Consultation Pursuant to the October 14, 2009 Fifth Supplemental Agreement between the South Florida Water Management District and Florida Power & Light, April 16 (SFWMD, 2013).
7	2016	USGS, 2014	USGS, 2014, Origins and Delineation of Saltwater Intrusion in the Biscayne Aquifer and Changes in the Distribution of Saltwater in Miami-Dade County, Florida, Scientific Investigations Report 2014-5025 (USGS, 2014).

SECTION II - HISTORY OF WATER FLOW AND SALINITY IN AND AROUND THE TPCCS

TABLE 4

ANALYSES CONDUCTED BY OR ON BEHALF OF FPL TO MEASURE THE EFFECT OF EFFORTS TO REDUCE SALINITY

Ref No.	Year	Reference Abbreviation	Reference
1	2011	Ecology and Environment, 2011a	Ecology and Environment, Inc., 2011, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, February 15 (Ecology and Environment, 2011a).
2	2011	Ecology and Environment, 2011b	Ecology and Environment, Inc., 2011, Turkey Point Plant, Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011b).
3	2011	Ecology and Environment, 2011c	Ecology and Environment, Inc., 2011, Turkey Point Plant, Appendices - Annual Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2011c).
4	2012	Ecology and Environment, 2012a	Ecology and Environment, Inc., 2012, Turkey Point Plant, Semi-Annual Monitoring Report, Units 3 & 4 Uprate Project, March 28 (Ecology and Environment, 2012a).
5	2012	Ecology and Environment, 2012b	Ecology and Environment, Inc., 2012, Turkey Point Plant, Initial Ecologic Condition Characterization Report, June (Ecology and Environment, 2012b).
6	2012	Ecology and Environment, 2012c	Ecology and Environment, Inc., 2012, Turkey Point Plant, Comprehensive Pre-Uprate Monitoring Report, Units 3 & 4 Uprate Project, October 31 (Ecology and Environment, 2012c).
7	2014	Ecology and Environment, 2014	Ecology and Environment, Inc., 2014, Turkey Point Plant, Annual Post-Uprate Monitoring Report, Units 3 & 4 Uprate Project, August (Ecology and Environment, 2014).
8	2016	Ecology and Environment, 2016a	Ecology and Environment, Inc., 2016, Florida Power & Light Company, Turkey Point Power Plant, Cooling Canal System (CCS) Freshening Effectiveness Report, January 29 (Ecology and Environment, 2016a).
9	2016	Enercon, 2016	Enercon Services Inc., 2016, PTN Cooling Canal System, Electromagnetic Conductance Geophysical Survey, Final Report, Florida Light & Power (FPL) Turkey Point Plant, May (Enercon, 2016).
10	2010	GeoTrans, 2010a	GeoTrans, Inc., 2010, Technical Memorandum, Water/Salt Balance Model of Turkey Point Cooling Canal System, August 4 (GeoTrans, 2010a).
11	2010	GeoTrans, 2010b	GeoTrans, Inc., 2010, Feasibility Study to Assess Engineering Options for Stopping Westward Migration of Saline Water and Decreasing Cooling Canal System Concentrations, Turkey Point Plant, Florida, August 11 (GeoTrans, 2010b).
12	2013	Tetra Tech, 2013b	Tetra Tech, 2013, Technical Memorandum, Cross-Sectional Model of Turkey Point Cooling Canal System, July 15 (Tetra Tech, 2013).

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Ref No.	Year	Reference Abbreviation	Reference
13	2014	Tetra Tech, 2014a	Tetra Tech, 2014, Technical Memorandum, Evaluation of Required Floridan Water for Salinity Reduction in the Cooling Canal System, May 9 (Tetra Tech, 2014a).
14	2015	Tetra Tech, 2015a	Tetra Tech, 2015, Technical Memorandum, Evaluation of Alternative Measures for Cooling Canal System Salinity Reduction, January 29 (Tetra Tech, 2015).
15	2016	Tetra Tech, 2016c	Tetra Tech, 2016, A Groundwater Flow and Salt Transport Model of the Biscayne Aquifer, June (Tetra Tech, 2016a).
16	2016	Tetra Tech, 2016d	Tetra Tech, 2016, Addendum to Regional Biscayne Aquifer Groundwater Model Report (Tetra Tech, 2016b).
17	2016	Tetra Tech, 2016m	Tetra Tech, 2016, Determination of Allocation of Costs for CCS Recovery and Improvement, December 21 (Tetra Tech, 2016e).