TIERRA CONSULTING GROUP, INC.
ENVIRONMENTAL ENGINEERING & CONSULTING
5815 NORTH ANDREWS WAY, STE. B, FORT LAUDERDALE, FL 33309
TELEPHONE: (954) 202-9226 EMAIL: ADMIN@TIERRACONSULTING.COM

LICENSED ENGINEERING, ASBESTOS & GEOLOGICAL BUSINESS

August 17, 2017

Mr. Wilbur Mayorga, P.E., Chief
Miami-Dade County Department of Regulatory & Economic Resources
701 NW 1st Court, 4th Floor
Miami, Florida 33136

RE: Year 1 Event 2 Interim Groundwater Monitoring Only Report
Florida Power & Light Company
Former Cutler Power Plant Property, Miami, Florida
HWR-442/File-16360/IW-79

RECEIVED
8/25/17

Dear Mr. Mayorga,

Florida Power & Light Company (FPL) is pleased to present the Year 1 Event 2 Semi-Annual Groundwater Monitoring Report for the Former Cutler Power Plant Property. The objective of the work is to monitor groundwater quality during the interim period prior to implementation of proposed engineering and institutional controls. A copy of the approved Interim Groundwater Monitoring Only Plan (IMOP) is included as **Attachment A.**

Prior to collecting the samples, depth to water was measured in the monitoring wells. Monitoring well construction details are provided in **Table 1** and the well locations are depicted on **Figure 1.**

Depth to water measurements were compared with top-of-casing (TOC) elevations to determine the groundwater elevation at each well. A summary of groundwater elevation data is provided in **Table 2** and depicted on **Figure 2**.

On August 9, 2017, groundwater samples were collected from monitoring wells MW-A2R, MW-B5R, MW-B8, MW-B11, MW-C6, MW-D1R, MW-D5R, MW-D6R, MW-E2, MW-E11, MW-E7, MW-E7DD, MW-G2, and MW-G8. The sampling was conducted in accordance with DEP-SOP-001/01 FS 2200 as provided by Chapter 62-160 FAC, and analyzed at a National Environmental Laboratory Accreditation Conference (NELAC)-certified environmental laboratory, Jupiter Environmental Labs, Inc. [Florida DOH certification number E86546]. In accordance with the approved IMOP, all samples were analyzed for arsenic and vanadium. The laboratory analytical reports, chain of custody, groundwater sampling logs, and calibration logs are provided as **Attachment B**.

A cumulative summary of groundwater analytical results is provided in **Tables 3** and **4** and the detected concentrations of vanadium and arsenic are presented on **Figures 3** and **4,** respectively. The analytical results were generally consistent with previous sampling events. The results show that concentrations of target analytes met their respective Groundwater Cleanup Target Levels (GCTLs) listed in Chapter 62-777, Florida Administrative Code (F.A.C.) at the property boundaries. The next sampling event is scheduled for December 2017 and the results will be provided by January 31, 2018.

Please contact me or Pete LaForge at 954-202-9226 with any questions or if you require additional information.

Geological Certification

The geological services addressed herein, as defined in Chapter 492, Florida Statutes and in accordance with applicable provisions of Chapter 62-701 of the Florida Administrative Code, have been performed by and under the responsible charge of the professional geologist named below. These geological services are based upon the named professional's knowledge, information and belief, and in accordance with commonly accepted procedures consistent with applicable standards of practice. This certification is not a guaranty or warranty, either expressed or implied.

Sincerely,

Scott Zednek

Scott C. Zednek, P.G.
Florida License No. 0002086

Enclosures

SCOTT C. ZEDNEK
LICENSE
PG000 2086
8-17-17
STATE OF
FLORIDA
PROFESSIONAL GEOLOGIST

TABLES

Table 1
Well Construction Details
Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Well ID	Permit Number	Installation Date	Installation Method	TOC Elevation (Feet)	Diameter (inches)	Total Depth (Feet)	Screened Interval (Feet bls)
MW-A2R	13-59-13304	12/13/2016	HSA	15.91	2	18	8 - 18
MW-B5R	13-59-13237	12/9/2016	HSA	6.87	2	13	3 - 13
MW-B8	13-59-8847	4/19/2013	HSA	3.56	2	11	1 - 11
MW-B11	13-59-8841	4/19/2013	HSA	3.15	2	11	1 - 11
MW-C6	13-59-8925	5/25/2013	HSA	4.97	2	12.1	2.1 - 12.1
MW-D1R	13-59-13237	12/9/2016	HSA	17.03	2	20	10 - 20
MW-D5R	13-59-13237	12/9/2016	HSA	8.20	2	12	2 - 12
MW-D6R	13-59-13237	12/9/2016	HSA	6.72	2	12	2 - 12
MW-E2	13-59-12467	1/15/2016	HSA	15.05	2	18	8 - 18
MW-E7	13-59-8927	5/25/2013	HSA	7.31	2	11.7	1.7 - 11.7
MW-E7DD	13-59-9023	5/28/2013	HSA	6.57	2	69.6	64.6 - 69.6
MW-E11	13-59-8843	4/19/2013	HSA	2.59	2	10.8	0.8 - 10.8
MW-G2	13-59-8840	4/19/2013	HSA	11.41	2	17.9	7.9 - 17.9
MW-G8	13-59-8842	4/19/2013	HSA	5.97	2	10.8	0.8 - 10.8

Notes:
bls- below land surface
TOC- Top of Casing Elevation (feet-relative NGVD29)
NGVD29- National Geodetic Vertical Datum of 1929
HAS- Hollow Stem Auger

Table 2
Groundwater Elevations
Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Well ID	Screened Interval	TOC Elevation	12/20/2016		8/9/2017	
			Depth to Water	Water Table Elevation	Depth to Water	Water Table Elevation
	(Feet bls)	(feet)	(feet)	(feet)	(feet)	(feet)
MW-A2R	8 - 18	15.91	14.53	1.38	13.99	1.92
MW-B5R	3 - 13	6.87	5.80	1.07	5.42	1.45
MW-B8	1 - 11	3.56	2.47	1.09	2.13	1.43
MW-B11	1 - 11	3.15	2.03	1.12	1.67	1.48
MW-C6	2.1 - 12.1	4.97	4.14	0.83	3.12	1.85
MW-D1R	10 - 20	17.03	15.71	1.32	15.99	1.04
MW-D5R	2 - 12	8.20	7.04	1.16	6.26	1.94
MW-D6R	2 - 12	6.72	5.70	1.02	4.84	1.88
MW-E2	8 - 18	15.05	13.65	1.40	13.01	2.04
MW-E7	1.7 - 11.7	7.31	4.87	2.44	5.20	2.11
MW-E7DD	64.6 - 69.6	6.57	4.90	1.67	3.74	2.83
MW-E11	0.8 - 10.8	2.59	1.37	1.22	1.03	1.56
MW-G2	7.9 - 17.9	11.41	9.84	1.57	9.42	1.99
MW-G8	0.8 - 10.8	5.97	5.61	0.36	3.88	2.09

Notes:
bls- below land surface
TOC- Top of Casing Elevation (feet-relative to NGVD29)
NGVD29- National Geodetic Vertical Datum of 1929

Table 3
Summary of Metals Analytical Results
Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Monitoring Well	Analyte	Antimony	Arsenic	Nickel	Vanadium
	GCTL	**6**	**10**	**100**	**49**
	NADC	**60**	**100**	**1000**	**490**
	Units/Sample Date	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-A2R	4/23/2013	0.95 U	1.6i	0.59i	5.1i
	1/21/2014	0.95 U	1.1i	0.77i	4.6
	12/20/2016	0.95 U	0.65 U	0.25i	1.2i
	8/9/2017	NA	0.65 U	NA	1.1i
MW-B11	4/24/2013	0.95 U	0.70i	1.2i	1.6i
	1/22/2014	0.95 U	0.65 U	1.2i	1.7i
	12/20/2016	0.95 U	4.1	1.8i	4.3
	8/9/2017	NA	1.8i	NA	5.6
MW-B5/MW-B5R	4/23/2013	0.95 U	2.5i	1.5i	4.9i
	1/21/2014	0.95 U	1.8i	2.1	6.4
	12/20/2016	0.95 U	1.6i	2.1	48
	8/9/2017	NA	0.65 U	NA	30
MW-B8	4/23/2013	0.95 U	0.90i	1.9i	1.3i
	1/22/2014	0.95 U	1.2i	2	2.2
	12/20/2016	0.95 U	0.65 U	0.77i	2.9
	8/9/2017	NA	0.84i	NA	3.6
MW-C6	5/14/2013	NA	NA	NA	**760**
	6/5/2013	NA	NA	NA	**620**
	12/20/2016	0.95U	2.1	24	**450**
	8/9/2017	NA	2.5	NA	**580**
MW-1D/MW-D1R	4/24/2013	0.95 U	2.3i	1.6i	**9.6**
	1/21/2014	0.95 U	**12**	1.5i	**28**
	1/30/2014	NA	8.6	NA	NA
	12/20/2016	0.95 U	0.65 U	1.0i	9.9
	8/9/2017	NA	0.65 U	NA	9.5
MW-D5/MW-D5R	5-Jun-13	NA	NA	NA	2.2
	22-Jan-14	0.95 U	**110**	1.4i	3.4
	20-Dec-16	0.95 U	**240**	2.2	0.28i
	8/9/2017	NA	**130**	NA	7.0
MW-D6R	5/14/2013	NA	NA	NA	**310**
	6/5/2013	NA	NA	NA	**1200**
	1/22/2014	0.95 U	2.8	9.4	**300**
	12/20/2016	3.1	5	7.9	**850 L**
	8/9/2017	NA	2.7	NA	**280**
MW-E11	4/24/2013	1.2i	0.87i	2.2i	0.78i
	1/22/2014	2.4	1.5i	0.86i	7.2
	12/20/2016	0.95 U	2.8	4.1	21
	8/9/2017	NA	2.1	NA	14
MW-E2	1/19/2016	NA	NA	NA	**103**
	12/20/2016	3.3	4.8	2	**120**
	8/9/2017	NA	6.8	NA	**160**
MW-E7	5/14/2013	NA	NA	NA	40
	1/23/2014	0.95	3.3	34	34
	12/20/2016	0.95 U	2.7	38	**50**
	8/9/2017	NA	4.9	NA	9
MW-E7DD	6/5/2013	NA	NA	NA	3.6
	1/22/2014	2.6	1.5i	0.95i	1.6i
	12/20/2016	0.95 U	1.0i	0.80i	2.8
	8/9/2017	NA	0.65 U	NA	1.7i
MW-G2	4/24/2013	0.95 U	1.9i	1.9i	1.6i
	1/21/2014	0.95 U	0.96i	2	1.2i
	12/20/2016	0.95 U	0.65 U	2.9	2.4
	8/9/2017	NA	0.65 U	NA	2.8
MW-G8	4/24/2013	0.95 U	0.65 U	1.3i	0.81i
	1/21/2014	0.95 U	0.65 U	0.88i	0.91i
	12/20/2016	0.95 U	0.65 U	2.2	1.3i
	8/9/2017	NA	0.65 U	NA	2

Notes:
GCTL- Groundwater Cleanup Target Levels as provided by Chapter 62-777 FAC
NADC-Natural Attenuation Default Source as provided by Chapter 62-777 FAC
ug/L- micrograms per liter
U- indicates that the compound was analyzed for but not detected above the MDL
i- indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit
L- Reported value is above the calibration range
Bold text indicates concentration exceeds GCTL
Bold and underlined text indicates concentration exceeds NADC
NA- Not Analyzed

Table 4
Summary of Polycyclic Aromatic Hydrocarbon and Total Recoverable Hydrocarbon Analytical Results
Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Monitoring Well	Analyte	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	TRPH
	GCTL	**28**	**28**	**20**	**210**	**2100**	**0-Jan-00**	**0-Jan-00**	**0-Jan-00**	**210**	**0-Jan-00**	**4.8**	**0-Jan-00**	**280**	**280**	**0-Jan-00**	**14**	**210**	**210**	**8-Sep-13**
	NADC	**280**	**280**	**200**	**2100**	**21000**	**5**	**20**	**5**	**2100**	**50**	**480**	**0-Jan-00**	**2800**	**2800**	**5**	**140**	**2100**	**2100**	**21-Nov-36**
	Units/Sample Date	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-A2R	4/23/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	225
	1/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-B11	4/24/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	256
	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-B5/MW-B5R	4/23/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	254
	1/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-B8	4/23/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	97
	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-C6	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.065i	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1D/MW-D1R	4/24/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	46 U
	1/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-D5/MW-D5R	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73i
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-D6/MW-D6R	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	121
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-E11	4/24/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	66i
	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-E2	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-E7	1/23/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46 U
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-E7DD	1/22/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	109
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-G2	4/24/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	66i
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-G8	4/24/2013	0.050 U	0.050 U	0.025 U	0.025 U	0.025 U	0.025 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.00510 U	0.025 U	0.025 U	0.015 U	0.050 U	0.025 U	0.025 U	46 U
	1/21/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	237
	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	NA
	8/10/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

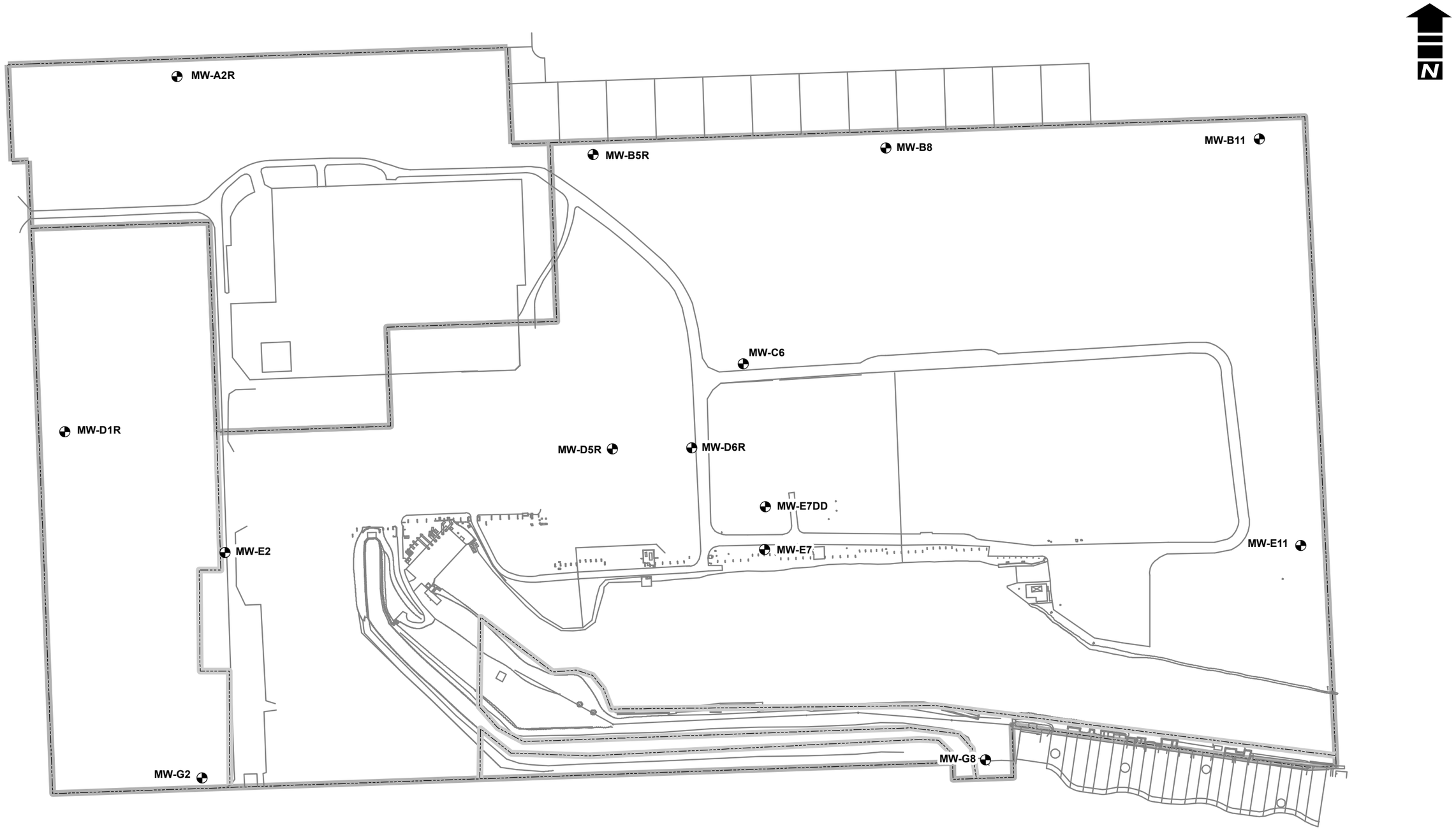
Notes:
GCTL- Groundwater Cleanup Target Levels as provided by Chapter 62-777 FAC
NADC-Natural Attenuation Default Source as provided by Chapter 62-777 FAC
ug/L- micrograms per liter
U- indicates that the compound was analyzed for but not detected above the MDL
i- indicates that the reported value is between the laboratory method detection limit and thepractical quantitation limit.
NA- Not Analyzed
TRPH- total recoverable petroleum hydrocarbons

Table 4
Summary of Groundwater Analytical Results
Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Monitoring Well	Analyte	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Vanadium	Nickel	Arsenic	Antimony
	GCTL	**28**	**28**	**20**	**210**	**2100**	**0-Jan-00**	**0-Jan-00**	**0-Jan-00**	**210**	**0-Jan-00**	**4.8**	**0-Jan-00**	**280**	**280**	**0-Jan-00**	**14**	**210**	**210**	**49**	**100**	**10**	**6**
	NADC	**280**	**280**	**200**	**2100**	**21000**	**5**	**20**	**5**	**2100**	**50**	**480**	**0-Jan-00**	**2800**	**2800**	**5**	**140**	**2100**	**2100**	**490**	**1000**	**100**	**60**
	Units/Sample Date	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-A2R	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	1.2i	0.25i	0.65 U	0.95 U
MW-B11	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	4-Jan-00	1.8i	4-Jan-00	0.95 U
MW-B5R	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	17-Feb-00	2-Jan-00	1.6i	0.95 U
MW-B8	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	2-Jan-00	0.77i	0.65 U	0.95 U
MW-C6	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.065i	0.023 U	0.023 U	**########**	24-Jan-00	2-Jan-00	0.95U
MW-D1R	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	9-Jan-00	1.0i	0.65 U	0.95 U
MW-D5R	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	0.28i	2-Jan-00	**27-Aug-00**	0.95 U
MW-D6R	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	**850L**	7-Jan-00	5.0	3-Jan-00
MW-E11	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	21-Jan-00	4-Jan-00	2-Jan-00	0.95 U
MW-E2	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	**29-Apr-00**	2.0	4-Jan-00	3-Jan-00
MW-E7	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	**19-Feb-00**	7-Feb-00	2-Jan-00	0.95 U
MW-E7DD	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	2-Jan-00	0.80i	1.0i	0.95 U
MW-G2	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	2-Jan-00	2-Jan-00	0.65 U	0.95 U
MW-G8	12/20/2016	0.047 U	0.047 U	0.023 U	0.023 U	0.023 U	0.023 U	0.014 U	0.014 U	0.014 U	0.014 U	0.023 U	0.0048 U	0.023 U	0.023 U	0.014 U	0.047 U	0.023 U	0.023 U	1.3i	2-Jan-00	0.65 U	0.95 U

Notes:
GCTL- Groundwater Cleanup Target Levels as provided by Chapter 62-777 FAC
NADC-Natural Attenuation Default Source as provided by Chapter 62-777 FAC
ug/L- micrograms per liter
U- indicates that the compound was analyzed for but not detected above the MDL
i- indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit
L- Reported value is above the calibration range
Bold text indicates concentration exceeds GCTL
Bold and underlined text indicates concentration exceeds NADC

FIGURES



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

SITE PLAN

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

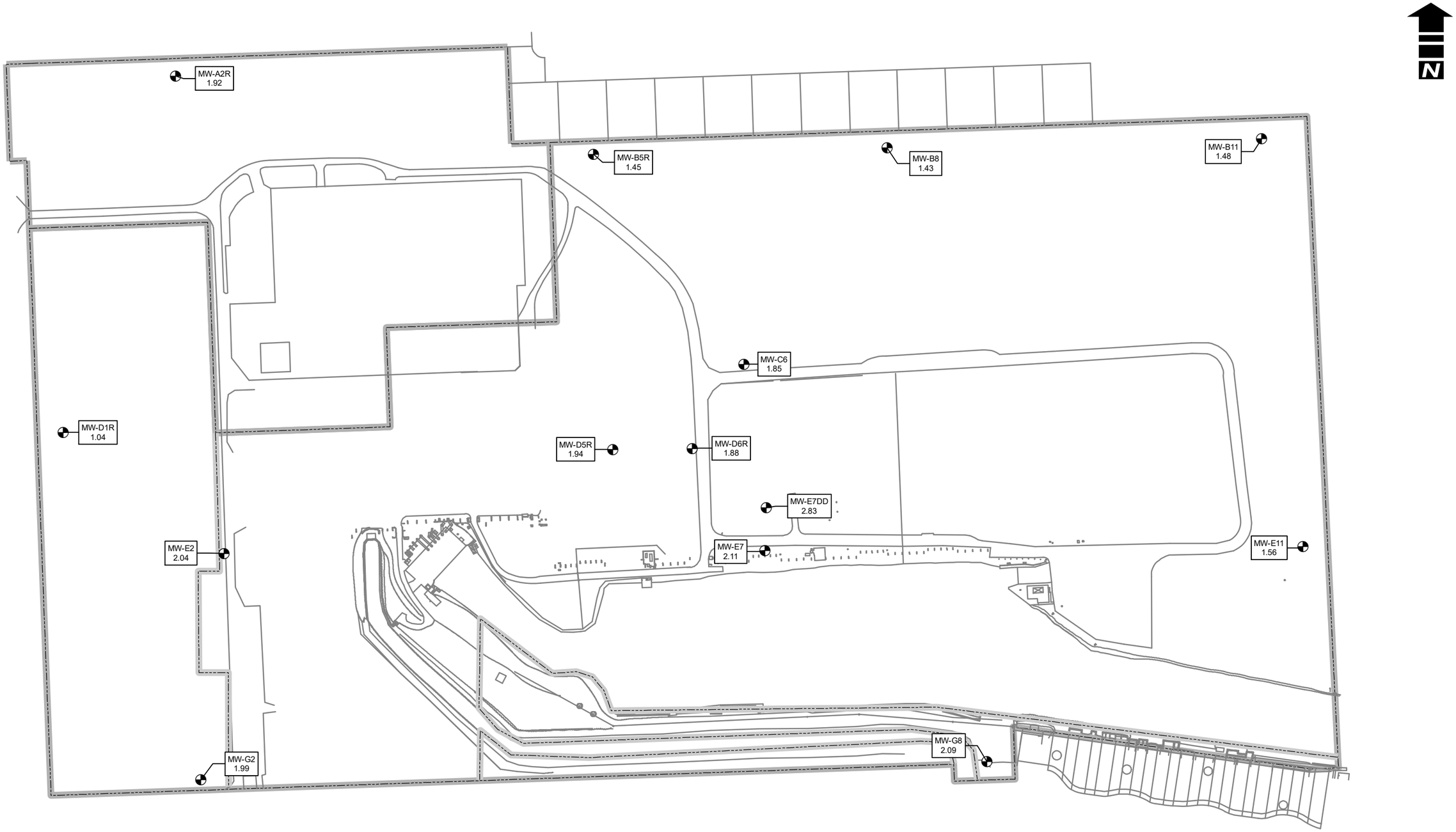
LEGEND:

MONITORING WELL

SCALE:

200 100 0 200
Feet

FIGURE 1



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

GROUNDWATER ELEVATIONS (AUGUST 2017)

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

LEGEND:

MONITORING WELL

NOTES:

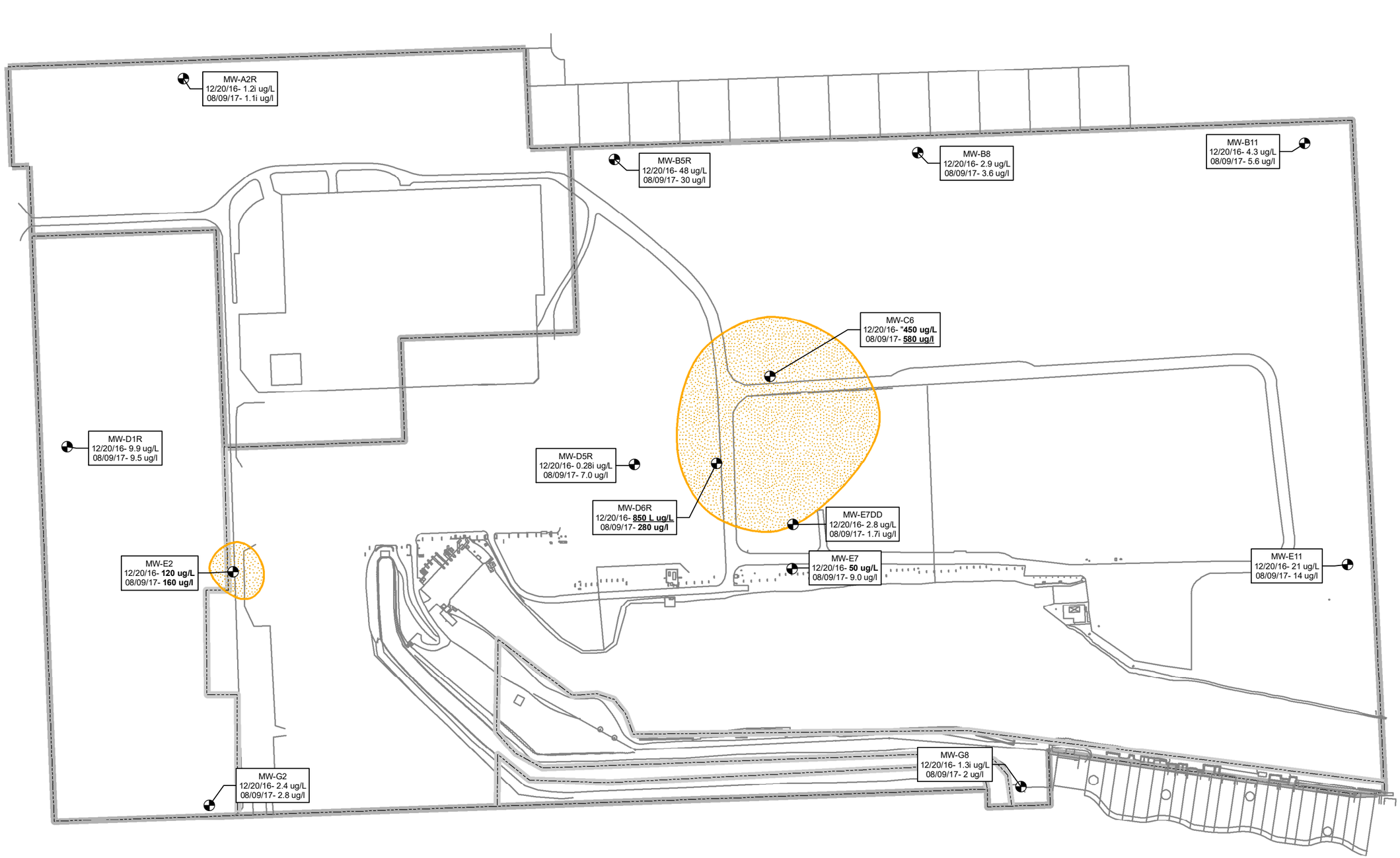
Top of Casing Elevation in feet and relative to National Geodetic Vertical Datum of 1929 (NGVD29)

MW-G2 1.99 — Monitoring Well; Top of Casing Elevation (feet-relative NGVD29)

SCALE:

200 100 0 200
Feet

FIGURE 2



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

VANADIUM IN GROUNDWATER (AUGUST 2017)

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

LEGEND:

MONITORING WELL

EXTENT OF VANADIUM EXCEEDING 49 ug/L

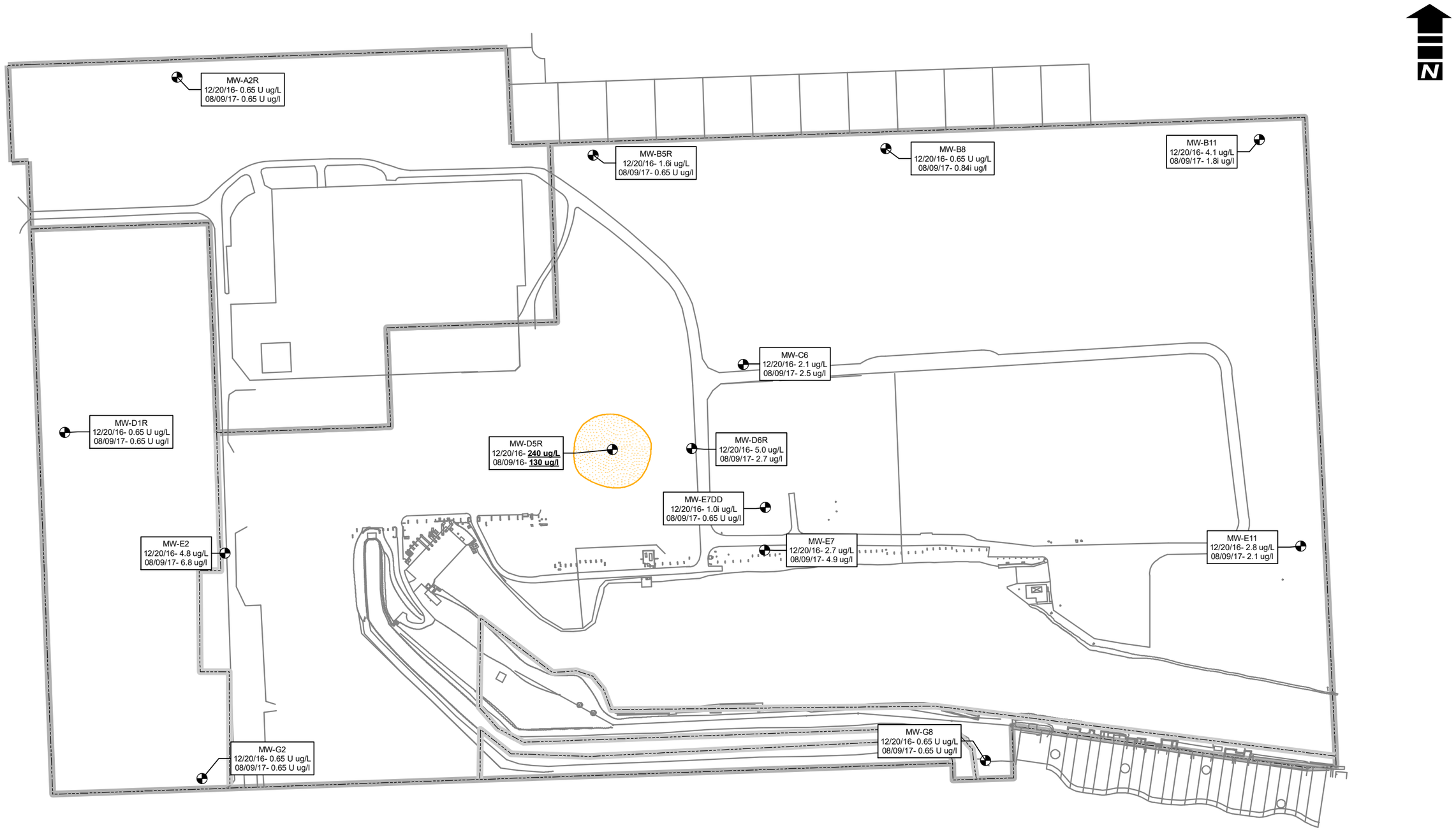
NOTES:

ug/L- micrograms per liter
U- indicates that the compound was analyzed for but not detected above the MDL
i- indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit
L- Reported value is above the calibration range
Bold text indicates concentration exceeds GCTL
Bold and underlined text indicates concentration exceeds NADC

SCALE:

200 100 0 200
Feet

FIGURE 3



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ARSENIC IN GROUNDWATER (AUGUST 2017)

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

LEGEND:

MONITORING WELL

EXTENT OF ARSENIC EXCEEDING 10 ug/L

NOTES:

ug/L- micrograms per liter
U- indicates that the compound was analyzed for but not detected above the MDL
i- indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit
L- Reported value is above the calibration range
Bold text indicates concentration exceeds GCTL
Bold and underlined text indicates concentration exceeds NADC

SCALE:

200 100 0 200
Feet

FIGURE 4

ATTACHMENT A

INTERIM GROUNDWATER MONITORING ONLY PLAN (IMOP)

(*AECOM, JULY 7, 2016*)

Interim Groundwater Monitoring Only Plan (IMOP)

July 7, 2016

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Table of Contents

1. Objective 1

2. Interim Groundwater Monitoring Only Plan 1

2.1 Groundwater Sampling Location and Schedule 1

2.2 Groundwater Elevation Contours 1

2.3 Groundwater Sampling Activities 1

2.4 Groundwater Sample Analysis 1

2.5 Report Preparation 2

Figures

1 Site Vicinity Map

1A Monitoring Only Plan – Well Location Map

1. Objective

The main objective of this Interim Groundwater Monitoring Only (IMOP) is to monitor the groundwater quality during the interim period prior to implementation of the proposed engineering and institutional controls at the former Cutler Plant (Site) currently owned by the Florida Power & Light Company (FPL). **Figure 1,** attached to this IMOP, is the Site Vicinity Map. The controls will be implemented as a part of site remediation activities approved by the Division of Environmental Resources Management (DERM) of the Miami-Dade County Department of Economic and Regulatory Resources.

2. Interim Groundwater Monitoring Only Plan

2.1 Groundwater Sampling Location and Schedule

As required by the DERM, the IMOP will be implemented prior to implementation of engineering controls on the Site. The monitoring wells listed in the Table below and illustrated on the attached **Figure 1A** shall be sampled and analyzed semi-annually for arsenic and vanadium. Polyaromatic hydrocarbons (PAHs), antimony and nickel will be analyzed on an annual basis.

2.2 Groundwater Elevation Contours

During each sampling event, the depth to water (DTW) in each monitoring well will be recorded by measuring the distance from the top of the water table to the top of the monitoring well casing using a water level indicator. The DTW measurements will be subtracted from the TOC elevations to obtain the groundwater elevation for each monitoring well. Groundwater elevations will be contoured to evaluate the site-specific groundwater flow direction.

2.3 Groundwater Sampling Activities

Groundwater samples will be collected from the monitoring wells in accordance with Florida Department of Environmental Protection's Standard Operating Procedures (FDEP-SOP) 001/01 FS 2200 guidelines. The monitoring wells will be purged and sampled utilizing a low flow peristaltic pump or submersible pump. During purging activities, field parameters including pH, temperature, conductivity, dissolved oxygen, turbidity, and depth to water measurements will be recorded. Once the field parameters stabilized each monitoring well will be sampled. The groundwater samples will be collected from the monitoring wells utilizing dedicated polyethylene tubing and submitted for analysis, under chain-of-custody record, to a State-certified laboratory in laboratory supplied bottle ware.

2.4 Groundwater Sample Analysis

The groundwater samples will be submitted to a NELAC certified environmental laboratory under a chain of custody documentation. The semi-annual groundwater samples will be analyzed for arsenic and vanadium by method SW846/6010B. The annual groundwater samples will be analyzed for arsenic, vanadium, antimony and nickel by SW846/6010B and PAHs by EPA Method 8270.

The sampling locations, frequency, and analytical parameters for groundwater monitoring only plan are summarized in the table below:

Sampling Location	Frequency	Analytical Parameters
MW-E2, MW-D5, MW-D6, MW-C6, MW-D1, MW-A2, MW-B5, MW-B8, MW-B11, MW-E11, MW-G8, MW-E7, MW-E7DD, MW-G2	Annual	Arsenic, Vanadium, Antimony, Nickel, PAH
MW-E2, MW-D5, MW-D6, MW-C6, MW-D1, MW-A2, MW-B5, MW-B8, MW-B11, MW-E11, MW-G8, MW-E7, MW-E7DD, MW-G2	Semi-annual	Arsenic, Vanadium

2.5 Report Preparation

Semi-annual and Annual Groundwater Monitoring Reports will be submitted to DERM within forty (45) days of each sampling event. The reports will summarize the details of the groundwater sampling events including FDEP groundwater sampling logs and groundwater analytical reports, conclusions, and recommendations.

FIGURES

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

SITE VICINITY MAP

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

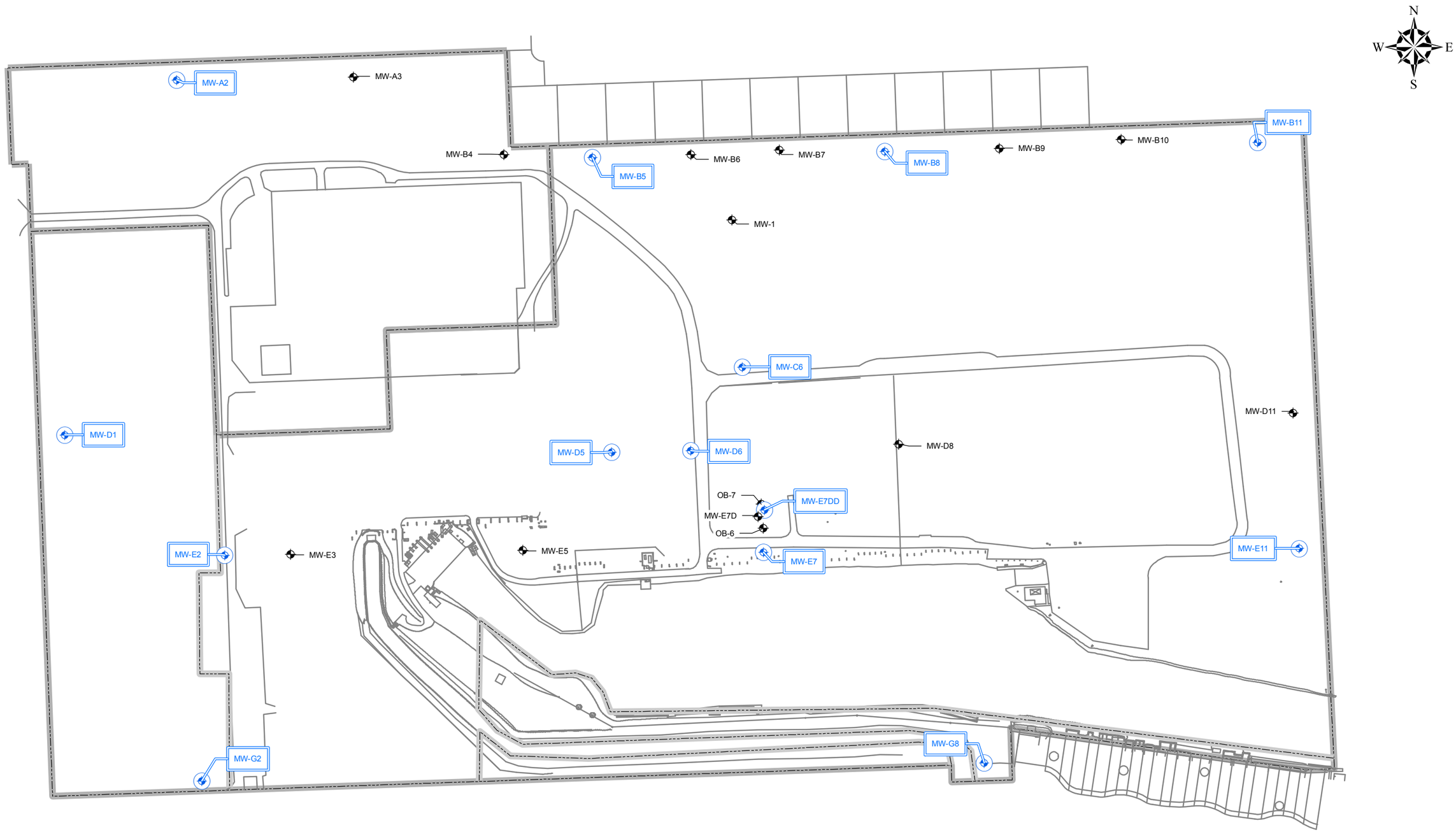
LEGEND:

FORMER PLANT PROPERTY BOUNDARY

SCALE:

300 150 0 300
Feet

FIGURE 1



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

MONITORING ONLY PLAN
WELL LOCATION MAP

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

LEGEND:

MONITORING WELL INCLUDED IN MOP

MONITORING WELL NOT INCLUDED IN MOP

SUBSTATION

PROPERTY BOUNDARY

SCALE:

200 100 0 200

Feet

FIGURE 1A

REVISED: 2/2/2016

ATTACHMENT B

LABORATORY ANALYTICAL REPORT, GROUNDWATER SAMPLING LOGS & CALIBRATION LOGS

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118
www.jupiterlabs.com
clientservices@jupiterlabs.com

August 14, 2017

Pete LaForge
Tierra Consulting Group, Inc.
5815 N. Andrews Way
Suite B
Fort Lauderdale, FL 33309

RE:	LOG#	1752836
	Project ID:	Former Cutler Power Plan
	COC#	1752836

Dear Pete LaForge:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, August 10, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless indicated by * in the body of the report. The enclosed Chain of Custody is a component of this package and should be retained with the package and incorporated therein.

Results for all solid matrices are reported in dry weight unless otherwise noted. Results for all liquid matrices are reported as received in the laboratory unless otherwise noted. Results relate only to the samples received. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

Samples are disposed of after 30 days of their receipt by the laboratory unless extended storage is requested in writing. The laboratory maintains the right to charge storage fees for archived samples. This report will be archived for 5 years after which time it will be destroyed without further notice, unless prior arrangements have been made.

Certain analyses are subcontracted to outside NELAC certified laboratories, please see the Project Summary section of this report for NELAC certification numbers of laboratories used. A Statement of Qualifiers is available upon request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rebecca Lourido

Rebecca Lourido for
Edward Dabrea
edabrea@jupiterlabs.com

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE ANALYTE COUNT

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID	Sample ID	Method	Analytes Reported
1752836001	MW-A2R	EPA 200.8 (Total)	2
1752836002	MW-B5R	EPA 200.8 (Total)	2
1752836003	MW-B8	EPA 200.8 (Total)	2
1752836004	MW-B11	EPA 200.8 (Total)	2
1752836005	MW-C6	EPA 200.8 (Total)	2
1752836006	MW-D1R	EPA 200.8 (Total)	2
1752836007	MW-D5R	EPA 200.8 (Total)	2
1752836008	MW-D6R	EPA 200.8 (Total)	2
1752836009	MW-E2	EPA 200.8 (Total)	2
1752836010	MW-E7DD	EPA 200.8 (Total)	2
1752836011	MW-E11	EPA 200.8 (Total)	2
1752836012	MW-G2	EPA 200.8 (Total)	2
1752836013	MW-G8	EPA 200.8 (Total)	2
1752836014	MW-E7	EPA 200.8 (Total)	2

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE SUMMARY

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1752836001	MW-A2R	Aqueous Liquid	8/9/2017 11:46	8/10/2017 19:11
1752836002	MW-B5R	Aqueous Liquid	8/9/2017 08:32	8/10/2017 19:11
1752836003	MW-B8	Aqueous Liquid	8/9/2017 09:13	8/10/2017 19:11
1752836004	MW-B11	Aqueous Liquid	8/9/2017 10:09	8/10/2017 19:11
1752836005	MW-C6	Aqueous Liquid	8/9/2017 11:50	8/10/2017 19:11
1752836006	MW-D1R	Aqueous Liquid	8/9/2017 13:34	8/10/2017 19:11
1752836007	MW-D5R	Aqueous Liquid	8/9/2017 13:42	8/10/2017 19:11
1752836008	MW-D6R	Aqueous Liquid	8/9/2017 13:05	8/10/2017 19:11
1752836009	MW-E2	Aqueous Liquid	8/9/2017 14:34	8/10/2017 19:11
1752836010	MW-E7DD	Aqueous Liquid	8/9/2017 10:45	8/10/2017 19:11
1752836011	MW-E11	Aqueous Liquid	8/9/2017 10:48	8/10/2017 19:11
1752836012	MW-G2	Aqueous Liquid	8/9/2017 15:12	8/10/2017 19:11
1752836013	MW-G8	Aqueous Liquid	8/9/2017 12:34	8/10/2017 19:11
1752836014	MW-E7	Aqueous Liquid	8/9/2017 11:15	8/10/2017 19:11

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836001**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-A2R**	Date Collected:	8/9/2017 11:46		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	1.1i	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 15:34	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 15:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836002**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-B5R**	Date Collected:	8/9/2017 08:32		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	30	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 15:39	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 15:39	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836003**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-B8**	Date Collected:	8/9/2017 09:13		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	3.6	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 15:44	ZS	
Arsenic	0.84i	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 15:44	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836004**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-B11**	Date Collected:	8/9/2017 10:09		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	5.6	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 15:48	ZS	
Arsenic	1.8i	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 15:48	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836005**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-C6**	Date Collected:	8/9/2017 11:50		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	580	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 15:57	ZS	
Arsenic	2.5	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 15:57	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836006**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-D1R**	Date Collected:	8/9/2017 13:34		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	9.5	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 16:07	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 16:07	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836007**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-D5R**	Date Collected:	8/9/2017 13:42		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	7.0	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 16:12	ZS	
Arsenic	130	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 16:12	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836008**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-D6R**	Date Collected:	8/9/2017 13:05		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	280	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 16:16	ZS	
Arsenic	2.7	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 16:16	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836009**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-E2**	Date Collected:	8/9/2017 14:34		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	160	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 16:21	ZS	
Arsenic	6.8	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 16:21	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836010**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-E7DD**	Date Collected:	8/9/2017 10:45		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	1.7i	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 16:58	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 16:58	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836011**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-E11**	Date Collected:	8/9/2017 10:48		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	14	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 17:02	ZS	
Arsenic	2.1	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 17:02	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836012**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-G2**	Date Collected:	8/9/2017 15:12		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	2.8	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 17:07	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 17:07	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836013**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-G8**	Date Collected:	8/9/2017 12:34		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	2.0	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 17:12	ZS	
Arsenic	U	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 17:12	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID:	**1752836014**	Date Received:	8/10/2017 19:11	Matrix:	Aqueous Liquid
Sample ID:	**MW-E7**	Date Collected:	8/9/2017 11:15		

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 200.8 Metals (W)						Preparation Method: EPA 200.2 mod.				
						Analytical Method: EPA 200.8 (Total)				
Vanadium	9.0	ug/L	2.0	0.18	4	8/11/2017 10:19	ZS	8/11/2017 17:16	ZS	
Arsenic	4.9	ug/L	2.0	0.65	4	8/11/2017 10:19	ZS	8/11/2017 17:16	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS QUALIFIERS

Workorder: 1752836

Project ID: Former Cutler Power Plan

PARAMETER QUALIFIERS

PROJECT COMMENTS

1752836	A reported value of U indicates that the compound was analyzed for but not detected above the MDL. A value flagged with an "i" flag indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit.

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA

Workorder: 1752836

Project ID: Former Cutler Power Plan

QC Batch: MXX/8887 Analysis Method: EPA 200.8 (Total)

QC Batch Method: EPA 200.2 mod.

Associated Lab Samples: 1752822001 1752836001 1752836002 1752836003 1752836004 1752836005 1752836006 1752836007 1752836008 1752836009 1752836010 1752836011 1752836012 1752836013 1752836014

METHOD BLANK: 123434

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Vanadium	ug/L	U	0.046	
Arsenic	ug/L	U	0.16	

LABORATORY CONTROL SAMPLE & LCSD: 123435 123436

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Vanadium	ug/L	50	49	48	97.5	96.6	85-115	2.06	20	
Arsenic	ug/L	50	48	48	96.6	96.5	85-115	0	20	

MATRIX SPIKE SAMPLE: 123438 Original: 1752835002

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Vanadium	ug/L	0.88	50	49	95.3	70-130	
Arsenic	ug/L	0.64	50	49	96.3	70-130	

MATRIX SPIKE SAMPLE: 123440 Original: 1752836009

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Vanadium	ug/L	160	50	190	73	70-130	
Arsenic	ug/L	6.8	50	54	93.7	70-130	

SAMPLE DUPLICATE: 123437 Original: 1752835002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Vanadium	ug/L	0.88	0.96i	8.7	20	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA

Workorder: 1752836

Project ID: Former Cutler Power Plan

SAMPLE DUPLICATE: 123437 Original: 1752835002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Arsenic	ug/L	0.64	U	16.9	20	

SAMPLE DUPLICATE: 123439 Original: 1752836009

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Vanadium	ug/L	160	140	13.3	20	
Arsenic	ug/L	6.8	6.2	9.23	20	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 1752836

Project ID: Former Cutler Power Plan

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1752836001	**MW-A2R**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836002	**MW-B5R**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836003	**MW-B8**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836004	**MW-B11**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836005	**MW-C6**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836006	**MW-D1R**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836007	**MW-D5R**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836008	**MW-D6R**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836009	**MW-E2**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836010	**MW-E7DD**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836011	**MW-E11**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836012	**MW-G2**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836013	**MW-G8**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021
1752836014	**MW-E7**	EPA 200.2 mod.	MXX/8887	EPA 200.8 (Total)	MMS/8021

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • (888) 287-3218 • clientservices@jupiterlabs.com

J.E.L. Log # 1752836
P.O. # _____
Quote # _____

Company Name: Tierra Consulting Group
Address: 5815 N. Andrews Way Suite B
City: Ft Lauderdale State: FL Zip: 33309
Sampling Site Address: Miami, FL
Attn: Pete LaForge Email: on file
Project Name: Former Cutler Power Plan Project #
Sampler Name/Signature: Pete LaForge

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
X Standard
___ Expedited
Due___/___/___

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Arsenic	Vanadium	Field Filtered (Y/N)	Comments
1	MW-A2R	8/9/17	1148	GW	1	X	X		
2	MW-B5R		832						
3	MW-B8		913						
4	MW-B11		1009						
5	MW-C6		1150						
6	MW-D1R		1334						
7	MW-D5R		1342						
8	MW-D6R		1305						
9	MW-E2		1434						
0	~~MW-E11~~ R ~~MW-E1~~ R		1048				R		

Matrix Codes*: S Soil/Solid Sediment; GW Ground Water; WW Waste Water; DW Drinking Water; SW Surface Water; SL Sludge; O Other (Please Specify)

Pres Codes: A- none; B- HNO_3; C- H_2SO_4; D- NaOH; E- HCl; I- Ice; O- Other; M- MeOH; N- $Na_2S_2O_3$; Z- ZnAc

Relinquished by	Date	Time	Received by	Date	Time
[signature]	8/10/17	13:29	[signature]	8/10/17	13:29
[signature]	8/10/17	19:11	[signature]	8/10/17	1911

QA/QC level with report
None ___1___2___3___ See price guide for applicable fees

FDEP Dry Cleaning ❑ FDEP UST Pre-Approval ❑
SFWMD ❑ ADaPT ❑ DOT ❑

Temp Control: 2.9 °C

752836

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • (888) 287-3218 • clientservices@jupiterlabs.com

J.E.L. Log # 1752836
P.O. # _____
Quote # _____

Company Name
Address SEE SHEET 1
City State Zip
Sampling Site Address
Attn: Email
Project Name Project #
Sampler Name/Signature

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
___ Standard
___ Expedited
Due___/___/___

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Arsenic	Vanadium	Field Filtered (Y/N)	Comments
10 ~~1~~ 1	MW-E7DD	8/9/17	1045	GW	1	X	X		
11 ~~1~~ 2	MW-E11	↓	1048 1512 ~~1500~~	↓	↓	X	X		
12 ~~1~~ 3	MW-G2					X	X		
13 ~~1~~ 4	MW-G8		1234			X	X		
14 ~~1~~ 5	MW-E7		1115			X	X		
6									
7									
8									
9									
0									

Matrix Codes*
S Soil/Solid Sediment; SW Surface Water; GW Ground Water; SL Sludge; WW Waste Water; O Other (Please Specify); DW Drinking Water

Pres Codes
A- none; I- Ice; B- HNO_3; O- Other; C- H_2SO_4; M- MeOH; D- NaOH; N - $Na_2S_2O_3$; E- HCl; Z- ZnAc

Relinquished by	Date	Time	Received by	Date	Time
[signature]	8/10/17	13:29	[signature]	8/10/17	13:29
[signature]	8/10/17	19:11		8/10/17	1911

QA/QC level with report
None ___1___2___3___ See price guide for applicable fees

FDEP Dry Cleaning ❑ FDEP UST Pre-Approval ❑
SFWMD ❑ ADaPT ❑ DOT ❑

Temp Control: 2.9 °C

752836

SAMPLE RECEIPT CONFIRMATION SHEET

Client Information

SDG:	1752836	**Req:**	992
Client:	TIERRA C.G.	**Project:**	Pete LaForge
Level:	1	**Date Rec'd:**	8/10/2017 7:11:00 PM
Rec'd via:	courier		

Cooler Check

ID	Temp	# of samples	Security Tape Present	Security Tape Intact	Method of Receipt	Comments
	2.9	14	☐	☐		

Checked By: CF

Sample Verification

Loose Caps?	No	**All Samples on COC accounted For?**	Yes
Broken Containers?	No	**All Samples on COC?**	Yes
pH Verified?	Yes	**Written on Internal COC?**	No
pH Strip Lot #	HC601354	**Sample Vol. Suff. For Analysis?**	Yes
Acid Preserved Samples Lot #	15127	**Samples Rec'd W/I Hold Time?**	Yes
Base Preserved Samples Lot #		**Are All Samples to be Analyzed?**	Yes
Samples Received From	courier	**Correct Sample Containers?**	Yes
Soil Origin (Domestic/Foreign		**COC Comments written on COC?**	No
Site Location/Project on COC?	Yes	**Samplers Initials on COC?**	Yes
Client Project # on COC?	No	**Sample Date/Time Indicated?**	Yes
Project Mgr. Indicated on COC	Yes	**TAT Requested:**	STD
COC relinquished/Dated by Client?	Yes	**Client Requests Verbal Results?**	No
COC Received/Dated by JEL	Yes		
JEL to Conduct ALL Analyses?	Yes		

Subcontract Analysis

Parameter	Via	Lab Name	Comments

Form FD 9000-24

GROUNDWATER SAMPLING LOG

FPL

SITE NAME: ~~Outlook~~ Barner Cutler Plant SITE LOCATION: Miami FL

WELL NO: MW-A2 SAMPLE ID: DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 TUBING DIAMETER (inches): 1/4 WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet STATIC DEPTH TO WATER (feet): 13.99 PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18 feet - 13.99 feet) X 0.16 gallons/foot = 0.64 X 2 = 16 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.5 PURGING INITIATED AT: 1115 PURGING ENDED AT: 1146 TOTAL VOLUME PURGED (gallons): 2.5

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1130 Lost	1.0	1.0	0.1	13.99	7.05	26.63	736	2.43	21.2	Clear	none
1134	0.4	1.4	0.1	14.00	7.05	26.64	736	1.62	11.4	↓	↓
1138	0.4	1.8	0.1	14.01	7.06	26.64	733	1.03	8.59		
1142	0.4	2.1	0.1	↓	7.05	26.65	733	1.01	8.42		
1146	0.4	2.5	0.1		7.04	26.65	732	0.99	8.40		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: R LaForce / TCB SAMPLER(S) SIGNATURE(S): SAMPLING INITIATED AT: 1145 SAMPLING ENDED AT: 1148

PUMP OR TUBING DEPTH IN WELL (feet): 14.5 TUBING MATERIAL CODE: HDPE FIELD-FILTERED: Y (N) Filtration Equipment Type: FILTER SIZE: µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125	HNO_3		<2	metals	APP	200-400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former ~~Cutler~~ Cutler Plant

SITE LOCATION: Miami FL

WELL NO: MW-B5R

SAMPLE ID:

DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2

TUBING DIAMETER (inches): 1/4

WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet

STATIC DEPTH TO WATER (feet): 5.42

PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13 feet – 5.42 feet) X 0.16 gallons/foot = 1.2128 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.5

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.5

PURGING INITIATED AT: 7:44

PURGING ENDED AT:

TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
7:57	1.3	1.3	0.1	5.42	7.11	26.96	1186	1.52	98.	cloudy	none
801	0.4	1.7	0.1	5.42	7.08	27.01	1151	1.49	71.3	cloudy	none
805	0.4	2.1	0.1	5.42	7.07	26.99	1174	1.14	62.1	cloudy	none
809	0.4	2.5	0.1	5.42	7.07	26.98	1178	1.08	39.1	cloudy	none
813	0.4	2.9	0.1	5.42	7.07	27.00	1185	1.03	28.2	clear	none
817	0.4	3.3	0.1	↓	7.06	27.04	1192	1.04	21.8	↓	↓
821	0.4	3.7	0.1		7.06	27.06	1198	1.04	19.6		
825	0.4	4.1	0.1		7.06	27.06	1201	1.03	[illegible]		
829	0.4	4.5	0.1		7.05	27.06	1203	1.03	12.8		
832	0.4	4.9	0.1		7.05	27.06	1203	1.07	13.1		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: [illegible]

SAMPLER(S) SIGNATURE(S): [signature]

SAMPLING INITIATED AT: 832

SAMPLING ENDED AT: 840

PUMP OR TUBING DEPTH IN WELL (feet): 6.5

TUBING MATERIAL CODE: HDPE

FIELD-FILTERED: Y (N)
Filtration Equipment Type:

FILTER SIZE: µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced)

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125	HNO3	—	<2	metals	APP	100-400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former FPL - Cutler Plant | SITE LOCATION: Miami FL

WELL NO: MW-B8 | SAMPLE ID: | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 1 feet to 11 feet | STATIC DEPTH TO WATER (feet): 2.13 | PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: (only fill out if applicable) 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

= (11 feet – 2.13 feet) X 0.16 gallons/foot = 1.4192 gallons

EQUIPMENT VOLUME PURGE: (only fill out if applicable) 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 3.5 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 3.5 | PURGING INITIATED AT: 836 | PURGING ENDED AT: 913 | TOTAL VOLUME PURGED (gallons): 3.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
851	1.5	1.5	0.1	2.13	7.06	26.50	2455	0.54	48.3	Cloudy	none
855	0.4	1.9	0.1	↓	7.07	26.47	2412	0.51	24.1	clear	none
900	0.4	2.3	0.1		7.07	26.51	2398	0.51	18.4	↓	↓
905	0.4	2.7	0.1		7.06	26.49	2382	0.49	11.3		
909	0.4	3.1	0.1		7.07	26.49	2395	0.49	10.5		
913	0.4	3.5	0.1		7.07	26.50	2390	0.49	10.2		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: LaFore / JTCG | SAMPLER(S) SIGNATURE(S): [signature] | SAMPLING INITIATED AT: 917 | SAMPLING ENDED AT: 917

PUMP OR TUBING DEPTH IN WELL (feet): 3.5 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125	HNO3	—	<2	metals	APP	200-400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former Cutter Plant | SITE LOCATION: Cutter R Miami FL

WELL NO: MW-B11 | SAMPLE ID: | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 1 feet to 11 feet | STATIC DEPTH TO WATER (feet): 1.67 | PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (11 feet – 1.67 feet) X 0.16 gallons/foot = 1.4928 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 3 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 3 | PURGING INITIATED AT: 930 | PURGING ENDED AT: 1069 | TOTAL VOLUME PURGED (gallons): 39

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
945	1.5	1.5	0.1	1.67	7.25	26.01	3268	1.99	45.3	Yellow	none
949	0.4	1.9	0.1	1.68	7.22	25.53	3277	1.56	29.0		
953	0.4	2.3	0.1	1.69	7.18	25.91	3480	1.12	15.2		
957	0.4	2.7	0.1	1.69	7.15	25.90	3670	1.00	11.3		
1000	0.3	3.0	0.1		7.11	25.89	3754	0.91	8.12		
1003	0.3	3.3	0.1		7.10	25.88	3755	0.83	7.54		
1006	0.3	3.6	0.1		7.10	25.88	3758	0.83	7.01		
1009	0.3	3.9	0.1		7.10	25.88	3760	0.82	6.88		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: LGforge / TCC | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1009 | SAMPLING ENDED AT: 1012

PUMP OR TUBING DEPTH IN WELL (feet): 3 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125ml	HNO3	—	<2	Metals	APP	200-400

REMARKS

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler

SITE LOCATION: Miami FL

WELL NO: MW-C6

SAMPLE ID: MW-C6

DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2

TUBING DIAMETER (inches): 1/4

WELL SCREEN INTERVAL DEPTH: 2.1 feet to 12.1 feet

STATIC DEPTH TO WATER (feet): 3.12

PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: (only fill out if applicable) **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

= (12.1 feet – 3.12 feet) X 0.16 gallons/foot = 1.44 gallons

EQUIPMENT VOLUME PURGE: (only fill out if applicable) **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7

PURGING INITIATED AT: 1125

PURGING ENDED AT: 1144

TOTAL VOLUME PURGED (gallons): 2.4

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1135	1.5	1.5	0.1	3.15	6.70	28.46	578	1.12	0.80	Clear	None
1138	0.3	1.8	0.1	3.15	6.66	28.46	578	1.02	0.60	Clear	None
1141	0.3	2.1	0.1	3.15	6.64	28.45	578	0.96	0.68	Clear	None
1144	0.3	2.4	0.1	3.15	6.64	28.41	578	0.98	0.66	Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG

SAMPLER(S) SIGNATURE(S):

PUMP OR TUBING DEPTH IN WELL (feet): 7

TUBING MATERIAL CODE: HDPE

SAMPLING INITIATED AT: 1150

SAMPLING ENDED AT: 1152

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced)

FIELD-FILTERED: Y (N) Filtration Equipment Type:

FILTER SIZE: ____ µm

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-C6	1	PE	125 mL	HNO_3	–	<2	Metals	APP	400

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former FPL Cutler Plant | SITE LOCATION: Miami FL

WELL NO: MW-D1R | SAMPLE ID:

DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet | STATIC DEPTH TO WATER (feet): 15.99 | PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (20 feet – 15.99 feet) X 0.16 gallons/foot = 0.6416 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17 | PURGING INITIATED AT: 1300 | PURGING ENDED AT: 1334 | TOTAL VOLUME PURGED (gallons): 3.4

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1310	1.0	1.0	0.1	15.99	6.71	26.87	836	1.89	36.8	Cloudy	none
1314	0.4	1.4	0.1	↓	6.76	26.70	820	1.21	15.7	Clear	none
1318	0.4	1.8	0.1	↓	6.77	26.70	818	1.09	11.0	↓	↓
1322	0.4	2.2	0.1	↓	6.78	26.89	815	1.11	7.59	↓	↓
1326	0.4	2.6	0.1	↓	6.78	26.68	824	1.10	5.47	↓	↓
1330	0.4	3.0	0.1	↓	6.80	26.70	825	1.09	4.22	↓	↓
1334	0.4	3.4	0.1	↓	6.80	26.70	826	1.08	4.18	↓	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Pete LaForge / TCG | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1334 | SAMPLING ENDED AT: 1336

PUMP OR TUBING DEPTH IN WELL (feet): 17 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125ml	HNO_3	—	<2	Metals	APP	200-400

REMARKS

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler Plant | SITE LOCATION: Miami FL

WELL NO: MW-D5R | SAMPLE ID: MW-D5R | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): | TUBING DIAMETER (inches): | WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet | STATIC DEPTH TO WATER (feet): 6.26 | PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (12 feet – 6.26 feet) x 0.16 gallons/foot = 0.92 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9 | PURGING INITIATED AT: 1320 | PURGING ENDED AT: | TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1330	1.0	1.0	0.1	6.28	6.14	27.44	773	0.71	2.15	Clear	None
1333	0.3	1.3	0.1	6.28	6.13	27.41	762	0.65	4.71	Clear	None
1336	0.3	1.6	0.1	6.28	6.16	27.40	755	0.59	3.80	Clear	None
1339	0.3	1.9	0.1	6.28	6.19	27.40	750	0.54	2.39	Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG | SAMPLER(S) SIGNATURE(S): [signature] | SAMPLING INITIATED AT: 1342 | SAMPLING ENDED AT: 1344

PUMP OR TUBING DEPTH IN WELL (feet): 9 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-D5R	1	PE	125mL	HNO_3	-	<2	Metals	APP	400

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler

SITE LOCATION: Miami FL

WELL NO: MW-D6R

SAMPLE ID: MW-D6R

DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2

TUBING DIAMETER (inches): 1/4

WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet

STATIC DEPTH TO WATER (feet): 4.84

PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (12 feet - 4.84 feet) x 0.16 gallons/foot = 1.15 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7

PURGING INITIATED AT: 1200

PURGING ENDED AT: 13:02

TOTAL VOLUME PURGED (gallons): 6.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1212	1.2	1.2	0.1	4.86	6.69	28.59	910	2.34	1.19	Clear	None
1217	0.5	1.7	0.1	4.86	6.71	28.59	910	2.30	1.03	Clear	None
1222	0.5	2.2	0.1	4.86	6.74	28.62	909	2.24	1.08	Clear	None
1227	0.5	2.7	0.1	4.86	6.74	28.61	909	2.22	1.08	Clear	None
1232	0.5	3.2	0.1	4.86	6.75	28.60	910	2.16	0.98	Clear	None
1237	0.5	3.7	0.1	4.86	6.75	28.56	910	2.21	0.98	Clear	None
1242	0.5	4.2	0.1	4.86	6.75	28.59	909	2.25	0.97	Clear	None
1247	0.5	4.7	0.1	4.86	6.75	28.57	909	2.21	1.01	Clear	None
1252	0.5	5.2	0.1	4.86	6.75	28.61	909	2.22	0.96	Clear	None
1257	0.5	5.7	0.1	4.86	6.75	28.59	909	2.19	1.01	Clear	None
1302	0.5	6.2	0.1	4.86	6.76	28.60	909	2.26	0.98	Clear	None

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG

SAMPLER(S) SIGNATURE(S):

PUMP OR TUBING DEPTH IN WELL (feet): 7

TUBING MATERIAL CODE: HDPE

SAMPLING INITIATED AT: 1305

SAMPLING ENDED AT: 1308

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced)

FIELD-FILTERED: Y (N)
Filtration Equipment Type:

FILTER SIZE: ____ µm

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-D6R	1	PE	125 mL	HNO_3	–	<2	Metals	APP	400

REMARKS: DO > 20% could not be achieved after purging an excess of five well volumes.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former FPL Cutler Plant

SITE LOCATION: Miami FL

WELL NO: MW-E2

SAMPLE ID:

DATE: 8/8/17

PURGING DATA

WELL DIAMETER (inches): 2

TUBING DIAMETER (inches): 1/4

WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet

STATIC DEPTH TO WATER (feet): 13.01

PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18 feet – 13.01 feet) X 0.16 gallons/foot = 0.7984 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.25

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.25

PURGING INITIATED AT: 1340

PURGING ENDED AT: 1434

TOTAL VOLUME PURGED (gallons): 8.3

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1350	1.0	1.0	0.1	13.03	7.14	28.56	564	2.07	446	Cloudy	none
1355	0.5	1.5	0.1	13.03	7.11	28.53	607	1.34	376	↓	↓
1400	0.5	2.0	0.1	↓	7.10	28.43	607	1.06	298		
1405	0.5	2.5	0.1		7.13	29.26	612	1.04	321		
1410	~~0.5~~ 10	~~2.0~~ 3.5	~~0.1~~ 0.2		7.15	29.42	589	1.03	130		
1420	2	5.5	0.2	13.05	7.12	28.64	576	1.04	34.8	clear	none
1425	1	6.5	0.2	13.05	7.13	28.58	578	1.01	19.9	↓	↓
1430	1	7.5	0.2	13.05	7.15	28.57	576	1.00	19.7		
1434	0.8	8.3	0.2	13.05	7.17	28.57	576	0.99	19.9		

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Pete LaPorte / TCG

SAMPLER(S) SIGNATURE(S):

SAMPLING INITIATED AT: 1434

SAMPLING ENDED AT: 1436

PUMP OR TUBING DEPTH IN WELL (feet): 14.25

TUBING MATERIAL CODE: HDPE

FIELD-FILTERED: Y (N)
Filtration Equipment Type:

FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N-replaced)

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125	HNO3	~~[illegible]~~	<2	metals	APP	200-400

REMARKS: Adjusted flow rate to 0.2 gpm after 1405 reading

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler | SITE LOCATION: Miami FL

WELL NO: MW-E7 | SAMPLE ID: MW-E7 | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 1.7 feet to 11.7 feet | STATIC DEPTH TO WATER (feet): 5.20 | PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (11.7 feet – 5.20 feet) X 0.16 gallons/foot = 1.04 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X ~~0~~ 7A feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7 | PURGING INITIATED AT: 1050 | PURGING ENDED AT: 1110 | TOTAL VOLUME PURGED (gallons): 2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1101	1.1	1.1	0.1	5.22	6.73	27.97	716	1.48	12.7	Clear	None
1104	0.3	1.4	0.1	5.22	6.55	27.93	684	0.87	5.90	Clear	None
1107	0.3	1.7	0.1	5.22	6.51	27.91	673	0.76	2.74	Clear	None
1110	0.3	2.0	0.1	5.22	6.51	27.92	671	0.68	1.65	Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG | SAMPLER(S) SIGNATURE(S): [signature] | SAMPLING INITIATED AT: 1115 | SAMPLING ENDED AT: 1117

PUMP OR TUBING DEPTH IN WELL (feet): 7 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-E7	1	PE	125 mL	HNO_3	-	<2	Metals	APP	400

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler

SITE LOCATION: Miami FL

WELL NO: MW-E7DD

SAMPLE ID: MW-E7DD

DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2

TUBING DIAMETER (inches): 1/4

WELL SCREEN INTERVAL DEPTH: 64.8 feet to 69.8 feet

STATIC DEPTH TO WATER (feet): 3.74

PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: (only fill out if applicable) **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: (only fill out if applicable) **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

= 0.01 gallons + (0.0026 gallons/foot X 75 feet) + 0.25 gallons = 0.46 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 66

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 66

PURGING INITIATED AT: 1000

PURGING ENDED AT: 1040

TOTAL VOLUME PURGED (gallons): 4.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1005	0.5	0.5	~~+.0~~ 0.1	3.74	6.81	26.54	46640	1.07	104	Cloudy	None
1010	0.5	1.0	~~+.0~~ 0.1	3.74	6.86	26.50	46626	1.18	43.9	Cloudy	None
1015	0.5	1.5	~~+.0~~ 0.1	3.74	6.89	26.46	46614	1.16	33.7	Cloudy	None
1020	0.5	2.0	~~+.0~~ 0.1	3.74	6.89	26.42	46649	1.17	19.0	Cloudy	None
1025	0.5	2.5	~~+.0~~ 0.1	3.74	6.91	26.39	46658	1.09	10.4	Cloudy	None
1030	0.5	3.0	~~+.0~~ 0.1	3.74	6.92	26.30	16646	1.03	5.56	Cloudy	None
1035	0.5	3.5	~~+.0~~ 0.1	3.74	6.93	26.30	16645	1.03	3.94	Cloudy	None
1040	0.5	4.0	~~+.0~~ 0.1	3.74	6.92	26.32	16663	1.01	2.88	Cloudy	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG

SAMPLER(S) SIGNATURE(S):

SAMPLING INITIATED AT: 1045

SAMPLING ENDED AT: 1047

PUMP OR TUBING DEPTH IN WELL (feet): 66

TUBING MATERIAL CODE: HDPE

FIELD-FILTERED: Y (N) Filtration Equipment Type:

FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced)

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-E7DD	1	PE	125 mL	HNO_3	–	<2	Metals	APP	400

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

E11

SITE NAME: Turner FPL Cutler Plant | SITE LOCATION: Miami, FL

WELL: MW-E11 | SAMPLE ID: | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): | TUBING DIAMETER (inches): | WELL SCREEN INTERVAL DEPTH: 0.6 feet to 10.6 feet | STATIC DEPTH TO WATER (feet): 1.03 | PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (10.6 feet – 1.03 feet) x 0.16 gallons/foot = 1.5312 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 2.2 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 2.2 | PURGING INITIATED AT: 1020 | PURGING ENDED AT: 1048 | TOTAL VOLUME PURGED (gallons): 2.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) umhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1036	1.6	1.6	0.3	1.03	6.96	28.62	27462	0.36	5.66	Clear	Non
1040	0.4	2.0	↓	↓	6.97	28.64	27469	0.34	2.71	↓	↓
1044	0.4	2.4			6.97	28.63	27475	0.34	2.69		
1048	0.4	2.8			6.98	28.63	27478	0.33	2.67		

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FT.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: LaForge / TCG | SAMPLER(S) SIGNATURE(S): [signature]

PUMP OR TUBING DEPTH IN WELL (feet): 2.2 | TUBING MATERIAL CODE: HDPE | SAMPLING INITIATED AT: 1048 | SAMPLING ENDED AT: 1051

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ___ µm

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125ml	HNO3	—	<2	metals	APP	200-400

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: FPL Cutler | SITE LOCATION: Miami, FL

WELL NO: MW-62 | SAMPLE ID: MW-62 | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 7.7 feet to 17.9 feet | STATIC DEPTH TO WATER (feet): 9.42 | PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (17.9 feet – 9.42 feet) X 0.16 gallons/foot = 1.36 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12 | PURGING INITIATED AT: 1400 | PURGING ENDED AT: 1509 | TOTAL VOLUME PURGED (gallons): 6.9

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1414	1.4	1.4	0.1	9.45	6.43	26.89	512	4.86	12.5	Clear	None
1419	0.5	1.9	0.1	9.45	6.43	26.90	513	4.89	7.63	Clear	None
1424	0.5	2.4	0.1	9.45	6.48	26.94	520	4.97	4.78	Clear	None
1429	0.5	2.9	0.1	9.45	6.52	26.94	522	5.03	28.1	~~Clear~~ Cloudy	None
1434	0.5	3.4	0.1	9.45	6.55	26.87	518	5.14	32.1	~~Clear~~ Cloudy	None
1439	0.5	3.9	0.1	9.45	6.55	26.89	518	5.18	26.5	~~Clear~~ Cloudy	None
1444	0.5	4.4	0.1	9.45	6.56	26.93	518	5.01	24.7	Cloudy	None
1449	0.5	4.9	0.1	9.45	6.57	26.89	518	5.23	20.2	Clear	None
1454	0.5	5.4	0.1	9.45	6.58	26.87	517	5.33	16.1	Clear	None
1459	0.5	5.9	0.1	9.45	6.59	26.88	518	5.20	14.6	Clear	None
1504	0.5	6.4	0.1	9.45	6.60	26.89	517	5.19	12.6	Clear	None

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.86
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeremy Ally / TCG | SAMPLER(S) SIGNATURE(S): [signature] | SAMPLING INITIATED AT: 1512 ~~1506~~ | SAMPLING ENDED AT: 1514 ~~1508~~ JA

PUMP OR TUBING DEPTH IN WELL (feet): 12 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ___ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL. ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-62	1	PE	125 mL	HNO_3	–	<2	Metals	APP	400

REMARKS: DO >20% could not be achieved after purging an excess of five well volumes. All equipment connections checked with no change in DO.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

→ 1509 0.5 6.4 0.1 9.45 6.60 26.89 517 5.23 11.3 Clear None

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Former FPL Cutler Plant | SITE LOCATION: Miami FL

WELL NO: MW-G8 | SAMPLE ID: | DATE: 8/9/17

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: 0.8 feet to 10.8 feet | STATIC DEPTH TO WATER (feet): 3.88 | PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (10.8 feet – 3.88 feet) x 0.16 gallons/foot = 1.1072 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 5 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 5 | PURGING INITIATED AT: 1215 | PURGING ENDED AT: 1234 | TOTAL VOLUME PURGED (gallons): 3.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1222	1.2	1.2	0.2	3.88	6.85	27.88	1154	1.05	15.3	Clear	none
1226	0.8	2.0	0.2	3.89	6.85	27.74	1162	0.88	12.9	Clear	none
1230	0.8	2.8	0.2	3.90	6.84	27.69	1169	0.87	12.4	↓	↓
1234	0.8	3.6	0.2	3.90	6.84	27.70	1165	0.87	12.1		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Peter LaFosse / TCG | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1234 | SAMPLING ENDED AT: 1236

PUMP OR TUBING DEPTH IN WELL (feet): 5 | TUBING MATERIAL CODE: HDPE | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION / SAMPLE PRESERVATION

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	125 mL	HNO_3	—	<2	metals	APP	200-400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Certificate of Calibration
Multi-Parameter Water Quality

Equipment Type:	YSI 556				
Date	August 8, 2017				
Serial #	0C100848				
Calibration Standard # 1	pH 4.01				
Calibration Standard # 2	pH 7.00				
Calibration Standard # 3	pH 10.00				
Calibration Standard # 4	100% D.O Saturation				
Calibration Standard # 5	Zobell ORP Solution				
Calibration Standard # 6	1000uS Conductivity				
Calibration Standard # 7					
Calibration Standard # 8					
Calibration Standard # 9					
Lot # (s)	6K289	6G240	6G237	6C160	16A100497
	pH4.01	pH7.00	1000uS	PH10.00	237.5 ORP
Expiration Date(s)	Jun-18	Jun-18	May-18	Jun-18	Jan-18
Ambient Temperature	24°C (75.2°F)				
Instrument Reading: Calibrated	pH 3.98	pH 6.99	pH 10.01	Cond. 1005uS	
	237.0mV ORP	8.56 mg/L D.O.			
Calibrated By:	Miami Regional Manager	***Signature:***			

NOTES:

Peterson Environmental, Inc.
1704 W. Grace Street
Tampa, FL 33607
Phone: 813-871-2626| Fax 813-871-1366

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 55 **INSTRUMENT #** 06A2173 AA

PARAMETER: *[check only one]*

- ☐ TEMPERATURE
- ☐ TURBIDITY
- ☒ CONDUCTIVITY
- ☐ RESIDUAL Cl
- ☐ SALINITY
- ☐ DO
- ☐ pH
- ☐ OTHER
- ☐ ORP

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 84 uS/cm / Lot 8732 / Exp: 03/18

Standard B 80,000 uS/cm / Lot 7824 / Exp: 6/19

Standard C

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	0650	A	84	82,700	2.4	Yes	Int	RL
17/8/10	↓	B	80,000	80,700	0.9%	Yes	Int	RL
17/8/10	1730	A	84	85	1.2	No	Cont	RL
↓	↓	B	80,000	81,000	1.3	No	Cont	RL

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 06A2173AA

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☒ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 / Lot: 6K289 / ~~6/18~~ PL Expiration Date: 6/18
Standard B 7.00 / Lot 6G240 / Expiration Date: 6/18
Standard C 10.00 / Lot 6C160 / Expiration Date: 6/18

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	0700	A	4.01	4.01	0 %	Yes	Init	PL
↓		B	7.00	7.00	0	Yes	Init	PL
		C	10.00	9.98	2 %	Yes	Init	PL
17/8/10	1700	A	4.01	4.00	1 %	No	Cont	PL
		B	7.00	7.00	0 %	No	↓	PL
		C	10.00	9.98	2 %	No	↓	PL

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) Hach 2100 Q **INSTRUMENT #** ~~11~~ PZ / 310C02948

PARAMETER: *[check only one]*

- ☐ TEMPERATURE
- ☒ TURBIDITY
- ☐ CONDUCTIVITY
- ☐ RESIDUAL Cl
- ☐ SALINITY
- ☐ DO
- ☐ pH
- ☐ OTHER
- ☐ ORP

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 1.00 NTU / Lot: A1732 / Exp 8/18

Standard B 10 NTU / A7132 / Exp: 8/18

Standard C 100 NTU / A7132 / Exp 8/18

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	6:45	A	1.00	1.02		Yes	Int	PZ
↓		B	10	10.3		Yes	↓	PZ
		C	100	99.3		Yes	↓	PZ
17/8/10	1740	A	1.00	1.03		No	Cont	PZ
↓		B	10	10.2		No	↓	PZ
		C	100	99.7		No	↓	PZ

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 05M146640

PARAMETER: *[check only one]*

- ☐ TEMPERATURE
- ☐ TURBIDITY
- ☐ CONDUCTIVITY
- ☐ RESIDUAL Cl
- ☐ SALINITY
- ☐ DO
- ☒ pH
- ☐ OTHER
- ☐ ORP

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 / Lot: 6K289 / Expiration Date: 6/18
Standard B 7.00 / Lot: 6B240 / " : 6/18
Standard C 10.00 / Lot: 6C160 / " : 6/18

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	0645	A	4.01	4.03	2%	Yes	Init	PL
17/8/10		B	7.00	6.99	1%	↓	↓	↓
17/8/10		C	10.00	9.97	3%	↓	↓	↓
17/8/10	1725	A	4.01	4.04	3%	No	Cont	PL
↓		B	7.00	7.00	0	↓	↓	↓
		C	10.00	9.99	1%	↓	↓	↓

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 05M,466AD

PARAMETER: *[check only one]*

- ☐ TEMPERATURE
- ☒ CONDUCTIVITY
- ☐ SALINITY
- ☐ pH
- ☐ ORP
- ☐ TURBIDITY
- ☐ RESIDUAL Cl
- ☐ DO
- ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 84 / Lot 8732 / Exp: 3/18

Standard B 80,000 / Lot 7824 / Exp: 6/19

Standard C

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	7:10	A	84	85	1.2	Yes	Int	RL
↓	↓	B	80,000	81,090	1.4	Yes	Int	RL
17/8/10	17:15	A	84	84	0	No	Cont	RL
↓	↓	B	80,000	80.990	1.2	No	Cont	RL

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) Hach 2100Q **INSTRUMENT #** 16030 CO 48237

PARAMETER: *[check only one]*

- ☐ TEMPERATURE
- ☒ TURBIDITY
- ☐ CONDUCTIVITY
- ☐ RESIDUAL Cl
- ☐ SALINITY
- ☐ DO
- ☐ pH
- ☐ OTHER
- ☐ ORP

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 1.00 / Lot A1732 / Exp: 8/18

Standard B 10.0 / Lot A1732 / Exp: 8/18

Standard C 100 / Lot A1732 / Exp: 8/18

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
17/8/10	7 20	A	1.00	0.99	1.0	Yes	Int	PZ
↓	↓	B	10.0	9.98	0.2	↓	↓	PZ
↓	↓	C	100	99.8	0.2	↓	↓	PZ
17/8/10	1750	A	1.00	1.01	1.0	No	Cont	PZ
↓	↓	B	10.0	9.98	0.2	↓	↓	PZ
		C	100	99.5	0.5	↓	↓	PZ