



Hydrogeologist
Palm Beach Solid Waste Authority
7501 N. Jog Rd.
West Palm Beach, FL 33412

Pace Project Number: 35444442
Report Period: 2019/Q1

Client Project ID: Central Transfer Station Groun

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MAR 29 2019

Lab Sample ID	Client Sample ID
35444442001	CTMW-4S
35444442002	CTMW-4I
35444442003	CSTSFD-012819
35444442004	METAL TRIP BLANK 012819

Sincerely,

Martha Montero

Florida Certifications:
E83079 - Ormond Beach
E86240 - South Florida



CASE NARRATIVE SUMMARY

Client Name: Palm Beach Solid Waste Authority
Project Name: Central Transfer Station Ground

Pace Project Number: 35444442

Date Received: 01/28/2019

Report Date: 02/06/2019

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, Inc.

Project Name : Central Transfer Station Groun
 Diameter (in) : 2
 Depth to Water (ft) : 13.72
 Total Depth (ft) : 32.45
 Top of Casing (ft) : 20.95

Order # : 35444442001
 Sheen : None
 Color : Lt yellow
 Odor : None
 Matrix : Ground Water

PARAMETER MONITORING REPORT

Part III Analytical Results

Facility WACS ID : PBCC01
 Test Site ID # : PBCC07
 Well Name : CTMW-4S
 Classification of Ground Water : G-II
 Groundwater Elevation (NGVD) : 7.23

Sampling Date/Time : 01/28/2019 11:40
 Report Period : 2019/Q1
 Well Purge (Y/N) : Y
 Well Type : () Background () Compliance
 () Intermediat () Other

Storet Code	Parameter Monitored	Sampling Method	Field Filter	Analysis Method	Analysis Date/Time	Analysis Results/Units	Detection Limits/Units		Dilution Factor
							MDL	PQL	

FIELD PARAMETERS

000537	Field Specific Conductance	Grab	N		01/28/2019 11:40	451 umhos/cm			umhos/cm	1
000010	Field Temperature	Grab	N		01/28/2019 11:40	26.3 deg C			deg C	1
000664	Field pH	Grab	N		01/28/2019 11:40	6.89 Std. Units			Std. Units	1
082078	Turbidity	Grab	N		01/28/2019 11:40	2.00 NTU			NTU	1

OTHER

000593	Chloride	Grab	N	EPA 300.0	01/30/2019 05:16	21.1 mg/L	2.5	5.0	mg/L	1
000945	Sulfate	Grab	N	EPA 300.0	01/30/2019 05:16	13.1 mg/L	2.5	5.0	mg/L	1
000599	Nitrogen, Ammonia	Grab	N	EPA 350.1	02/01/2019 09:27	0.19 mg/L	0.035	0.050	mg/L	1
000601	Nitrogen, Kjeldahl, Total	Grab	N	EPA 351.2	02/04/2019 16:05	0.59 mg/L	0.086	0.50	mg/L	1
000620	Nitrogen, Nitrate	Grab	N	EPA 353.2	01/29/2019 05:25	<0.025 mg/L	0.025	0.050	mg/L	1
000340	Chemical Oxygen Demand	Grab	N	EPA 410.4	01/31/2019 09:50	55.2 mg/L	12.5	20.0	mg/L	1
	Threshold Odor Number	Grab	N	SM 2150B	01/29/2019 09:15	<1N2 TON	1.0	1.0	TON	1
000410	Alkalinity, Total as CaCO3	Grab	N	SM 2320B	01/29/2019 16:13	177 mg/L	5.0	5.0	mg/L	1
000515	Total Dissolved Solids	Grab	N	SM 2540C	01/30/2019 16:13	363 mg/L	5.0	5.0	mg/L	1
000745	Sulfide	Grab	N	SM 4500-S2F	01/29/2019 12:08	0.64 mg/L	0.10	0.10	mg/L	1
038260	MBAS, Calculated as LAS	Grab	N	SM 5540C	01/30/2019 11:14	<0.099 mg/L	0.099	0.20	mg/L	1
	True Color	Grab	N	SM2120B-01	01/29/2019 12:38	80.0 units	10.0	10.0	units	2

INORGANICS

001007	Barium	Grab	N	EPA 6010	02/04/2019 12:49	14.6 ug/L	0.84	10.0	ug/L	1
001027	Cadmium	Grab	N	EPA 6010	02/04/2019 12:49	<0.33 ug/L	0.33	1.0	ug/L	1
001034	Chromium	Grab	N	EPA 6010	02/04/2019 12:49	3.4 ug/L	1.7	5.0	ug/L	1
001045	Iron	Grab	N	EPA 6010	02/04/2019 12:49	917 ug/L	9.2	40.0	ug/L	1
000572	Lead	Grab	N	EPA 6010	02/04/2019 12:49	<4.6 ug/L	4.6	10.0	ug/L	1
001147	Selenium	Grab	N	EPA 6010	02/04/2019 12:49	<8.5 ug/L	8.5	15.0	ug/L	1
000929	Sodium	Grab	N	EPA 6010	02/04/2019 12:49	14.7 mg/L	0.27	2.0	mg/L	1
001002	Arsenic	Grab	N	EPA 6020	02/05/2019 16:11	2.4 ug/L	0.50	1.0	ug/L	1
001042	Copper	Grab	N	EPA 6020	02/05/2019 16:11	<0.93 ug/L	0.93	1.0	ug/L	1
000576	Mercury	Grab	N	EPA 7470	01/30/2019 17:19	<0.10 ug/L	0.10	0.20	ug/L	1

ORGANICS

	Petroleum Range Organics	Grab	N	FL-PRO	02/01/2019 00:16	<0.78 mg/L	0.78	0.98	mg/L	1
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Pace Analytical Services, Inc.

Project Name : Central Transfer Station Groun
 Diameter (in) : 2
 Depth to Water (ft) : 13.86
 Total Depth (ft) : 69.42
 Top of Casing (ft) : 21.07

Order # : 35444442002
 Sheen : None
 Color : Lt yellow
 Odor : None
 Matrix : Ground Water

PARAMETER MONITORING REPORT

Part III Analytical Results

Facility WACS ID : PBCC01
 Test Site ID # : PBCC08
 Well Name : CTMW-4I
 Classification of Ground Water : G-II
 Groundwater Elevation (NGVD) : 7.21

Sampling Date/Time : 01/28/2019 11:50
 Report Period : 2019/Q1
 Well Purge (Y/N) : Y
 Well Type : () Background (X) Compliance
 () Intermediat () Other

Storet Code	Parameter Monitored	Sampling Method	Field Filter	Analysis Method	Analysis Date/Time	Analysis Results/Units	Detection Limits/Units		Dilution Factor
							MDL	PQL	

FIELD PARAMETERS

000537	Field Specific Conductance	Grab	N		01/28/2019 11:50	478 umhos/cm			umhos/cm	1
000010	Field Temperature	Grab	N		01/28/2019 11:50	26.1 deg C			deg C	1
000664	Field pH	Grab	N		01/28/2019 11:50	6.89 Std. Units			Std. Units	1
082078	Turbidity	Grab	N		01/28/2019 11:50	0.50 NTU			NTU	1

OTHER

000593	Chloride	Grab	N	EPA 300.0	01/30/2019 11:24	21.4 mg/L	2.5	5.0	mg/L	1
000945	Sulfate	Grab	N	EPA 300.0	01/30/2019 11:24	11.7 mg/L	2.5	5.0	mg/L	1
000599	Nitrogen, Ammonia	Grab	N	EPA 350.1	02/01/2019 09:29	0.20 mg/L	0.035	0.050	mg/L	1
000601	Nitrogen, Kjeldahl, Total	Grab	N	EPA 351.2	02/04/2019 16:06	0.47 mg/L	0.086	0.50	mg/L	1
000620	Nitrogen, Nitrate	Grab	N	EPA 353.2	01/29/2019 05:27	<0.025 mg/L	0.025	0.050	mg/L	1
000340	Chemical Oxygen Demand	Grab	N	EPA 410.4	01/31/2019 09:50	31.4 mg/L	12.5	20.0	mg/L	1
	Threshold Odor Number	Grab	N	SM 2150B	01/29/2019 09:15	<1N2 TON	1.0	1.0	TON	1
000410	Alkalinity, Total as CaCO3	Grab	N	SM 2320B	01/29/2019 16:19	198 mg/L	5.0	5.0	mg/L	1
000515	Total Dissolved Solids	Grab	N	SM 2540C	01/30/2019 16:13	274 mg/L	5.0	5.0	mg/L	1
000745	Sulfide	Grab	N	SM 4500-S2F	01/29/2019 12:12	0.32 mg/L	0.10	0.10	mg/L	1
038260	MBAS, Calculated as LAS	Grab	N	SM 5540C	01/30/2019 11:14	<0.099 mg/L	0.099	0.20	mg/L	1
	True Color	Grab	N	SM2120B-01	01/29/2019 12:39	60.0 units	5.0	5.0	units	1

INORGANICS

001007	Barium	Grab	N	EPA 6010	02/04/2019 12:52	8.4 ug/L	0.84	10.0	ug/L	1
001027	Cadmium	Grab	N	EPA 6010	02/04/2019 12:52	<0.33 ug/L	0.33	1.0	ug/L	1
001034	Chromium	Grab	N	EPA 6010	02/04/2019 12:52	1.8 ug/L	1.7	5.0	ug/L	1
001045	Iron	Grab	N	EPA 6010	02/04/2019 12:52	500 ug/L	9.2	40.0	ug/L	1
000572	Lead	Grab	N	EPA 6010	02/04/2019 12:52	<4.6 ug/L	4.6	10.0	ug/L	1
001147	Selenium	Grab	N	EPA 6010	02/04/2019 12:52	<8.5 ug/L	8.5	15.0	ug/L	1
000929	Sodium	Grab	N	EPA 6010	02/04/2019 12:52	14.5 mg/L	0.27	2.0	mg/L	1
001002	Arsenic	Grab	N	EPA 6020	02/05/2019 16:14	<0.50 ug/L	0.50	1.0	ug/L	1
001042	Copper	Grab	N	EPA 6020	02/05/2019 16:14	<0.93 ug/L	0.93	1.0	ug/L	1
000576	Mercury	Grab	N	EPA 7470	01/30/2019 17:21	<0.10 ug/L	0.10	0.20	ug/L	1

ORGANICS

	Petroleum Range Organics	Grab	N	FL-PRO	02/01/2019 00:16	<0.80 mg/L	0.80	1.0	mg/L	1
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Pace Analytical Services, Inc.

Project Name : Central Transfer Station Groun
 Diameter (in) : 2
 Depth to Water (ft) :
 Total Depth (ft) :
 Top of Casing (ft) :

Order # : 35444442003
 Sheen : None
 Color : Lt yellow
 Odor : None
 Matrix : Ground Water

PARAMETER MONITORING REPORT

Part III Analytical Results

Facility WACS ID : PBCC01
 Test Site ID # : NA
 Well Name : CSTSFD-012819
 Classification of Ground Water : G-II
 Groundwater Elevation (NGVD) : _____

Sampling Date/Time : 01/28/2019 11:40
 Report Period : 2019/Q1
 Well Purge (Y/N) : Y
 Well Type : () Background (X) Compliance
 () Intermediat () Other

Storet Code	Parameter Monitored	Sampling Method	Field Filter	Analysis Method	Analysis Date/Time	Analysis Results/Units	Detection Limits/Units		Dilution Factor
							MDL	PQL	

FIELD PARAMETERS

000537	Field Specific Conductance	Grab	N		01/28/2019 11:40	451 umhos/cm			umhos/cm	1
000010	Field Temperature	Grab	N		01/28/2019 11:40	26.3 deg C			deg C	1
000664	Field pH	Grab	N		01/28/2019 11:40	6.89 Std. Units			Std. Units	1
082078	Turbidity	Grab	N		01/28/2019 11:40	2.00 NTU			NTU	1

OTHER

000593	Chloride	Grab	N	EPA 300.0	01/30/2019 11:46	20.9 mg/L	2.5	5.0	mg/L	1
000945	Sulfate	Grab	N	EPA 300.0	01/30/2019 11:46	12.9 mg/L	2.5	5.0	mg/L	1
000599	Nitrogen, Ammonia	Grab	N	EPA 350.1	02/01/2019 09:30	0.19 mg/L	0.035	0.050	mg/L	1
000601	Nitrogen, Kjeldahl, Total	Grab	N	EPA 351.2	02/04/2019 16:07	0.59 mg/L	0.086	0.50	mg/L	1
000620	Nitrogen, Nitrate	Grab	N	EPA 353.2	01/29/2019 05:26	<0.025 mg/L	0.025	0.050	mg/L	1
000340	Chemical Oxygen Demand	Grab	N	EPA 410.4	01/31/2019 09:50	50.1 mg/L	12.5	20.0	mg/L	1
	Threshold Odor Number	Grab	N	SM 2150B	01/29/2019 09:15	<1N2 TON	1.0	1.0	TON	1
000410	Alkalinity, Total as CaCO3	Grab	N	SM 2320B	01/29/2019 16:25	178 mg/L	5.0	5.0	mg/L	1
000515	Total Dissolved Solids	Grab	N	SM 2540C	01/30/2019 16:13	269 mg/L	5.0	5.0	mg/L	1
000745	Sulfide	Grab	N	SM 4500-S2F	01/29/2019 12:17	0.40 mg/L	0.10	0.10	mg/L	1
038260	MBAS, Calculated as LAS	Grab	N	SM 5540C	01/30/2019 11:14	<0.099 mg/L	0.099	0.20	mg/L	1
	Truc Color	Grab	N	SM2120B-01	01/29/2019 12:39	80.0 units	10.0	10.0	units	2

INORGANICS

001007	Barium	Grab	N	EPA 6010	02/04/2019 12:55	14.5 ug/L	0.84	10.0	ug/L	1
001027	Cadmium	Grab	N	EPA 6010	02/04/2019 12:55	<0.33 ug/L	0.33	1.0	ug/L	1
001034	Chromium	Grab	N	EPA 6010	02/04/2019 12:55	3.3 Iug/L	1.7	5.0	ug/L	1
001045	Iron	Grab	N	EPA 6010	02/04/2019 12:55	909 ug/L	9.2	40.0	ug/L	1
000572	Lead	Grab	N	EPA 6010	02/04/2019 12:55	<4.6 ug/L	4.6	10.0	ug/L	1
001147	Selenium	Grab	N	EPA 6010	02/04/2019 12:55	<8.5 ug/L	8.5	15.0	ug/L	1
000929	Sodium	Grab	N	EPA 6010	02/04/2019 12:55	14.5 mg/L	0.27	2.0	mg/L	1
001002	Arsenic	Grab	N	EPA 6020	02/05/2019 16:22	2.5 ug/L	0.50	1.0	ug/L	1
001042	Copper	Grab	N	EPA 6020	02/05/2019 16:22	<0.93 ug/L	0.93	1.0	ug/L	1
000576	Mercury	Grab	N	EPA 7470	01/30/2019 17:23	<0.10 ug/L	0.10	0.20	ug/L	1

ORGANICS

	Petroleum Range Organics	Grab	N	FL-PRO	02/01/2019 00:31	<0.77 mg/L	0.77	0.96	mg/L	1
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Pace Analytical Services, Inc.

Project Name : Central Transfer Station Groun
 Diameter (in) :
 Depth to Water (ft) :
 Total Depth (ft) :
 Top of Casing (ft) :

Order # : 35444442004
 Sheen :
 Color :
 Odor :
 Matrix : DI Water

PARAMETER MONITORING REPORT

Part III Analytical Results

Facility WACS ID : PBCC01
 Test Site ID # : NA
 Well Name : METAL TRIP BLANK 012819
 Classification of Ground Water : Trip Blank
 Groundwater Elevation (NGVD) : _____

Sampling Date/Time : 01/28/2019 11:40
 Report Period : 2019/Q1
 Well Purge (Y/N) : N
 Well Type : () Background () Compliance
 () Intermediat () Other

Storet Code	Parameter Monitored	Sampling Method	Field Filter	Analysis Method	Analysis Date/Time	Analysis Results/Units	Detection Limits/Units		Dilution Factor
							MDL	PQL	

INORGANICS

001007	Barium	Grab	N	EPA 6010	02/04/2019 12:58	<0.84 ug/L	0.84	10.0	ug/L	1
001027	Cadmium	Grab	N	EPA 6010	02/04/2019 12:58	<0.33 ug/L	0.33	1.0	ug/L	1
001034	Chromium	Grab	N	EPA 6010	02/04/2019 12:58	<1.7 ug/L	1.7	5.0	ug/L	1
001045	Iron	Grab	N	EPA 6010	02/04/2019 12:58	<9.2 ug/L	9.2	40.0	ug/L	1
000572	Lead	Grab	N	EPA 6010	02/04/2019 12:58	<4.6 ug/L	4.6	10.0	ug/L	1
001147	Selenium	Grab	N	EPA 6010	02/04/2019 12:58	<8.5 ug/L	8.5	15.0	ug/L	1
000929	Sodium	Grab	N	EPA 6010	02/04/2019 12:58	<0.27 mg/L	0.27	2.0	mg/L	1
001002	Arsenic	Grab	N	EPA 6020	02/05/2019 16:26	<0.50 ug/L	0.50	1.0	ug/L	1
001042	Copper	Grab	N	EPA 6020	02/05/2019 16:26	<0.93 ug/L	0.93	1.0	ug/L	1
000576	Mercury	Grab	N	EPA 7470	01/30/2019 17:25	<0.10 ug/L	0.10	0.20	ug/L	1