Environmental Consultants
and Contractors

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SCS ENGINEERS

February 14, 2018
File No. 09217186.02

Mr. Wilbur Mayorga, P.E., Chief
Department of Regulatory and Economic Resources
Division of Environmental Resources Management
701 NW 1st Court, 4th Floor
Miami, Florida 33136-3912

Re: **Ludlam Corridor Properties 'All Green Trail'**
Former 1-Mile and 5-Mile Railroad Corridors
Between NW 7th and SW 80th Streets
Miami, Florida
DERM HWR-836

Subject: **Soil and Groundwater Sampling Report**

Dear Mr. Mayorga:

On behalf of LR 13 – 18 LLC and FECI LT 1 LLC, SCS Engineers (SCS) submits this Soil and Groundwater Sampling Report to the Miami-Dade County Department of Regulatory and Economic Resources, Division of Environmental Resources Management (DERM) for the above referenced site (the Site). The groundwater sampling was conducted in accordance with the Groundwater Sampling Plan approved by DERM with modifications in the December 21, 2017 correspondence. The report also addresses DERM's comment 2.c of the October 31, 2017 correspondence regarding phenolic compounds in soil and comment 2.d in the same correspondence regarding soil boring SB-7. **Attachment A** contains relevant DERM correspondences. **Figure 1** is a site location plan.

FIELD ACTIVITIES

SCS performed field sampling activities in accordance with the Standard Operating Procedures (SOPs) provided within Chapter 62-160, Florida Administrative Code as amended. Underground utility clearance was performed via Sunshine State One Call prior to mobilizing to the Site. SCS retained JAEE Environmental Services, a Florida-licensed driller, and Pace Analytical Services and Jupiter Environmental Laboratories, Inc. (Jupiter), National Environmental Laboratory Accreditation Program (NELAP)-certified laboratories, for drilling and laboratory analyses.

Soil Assessment

On December 8, 2017, SCS advanced seven soil borings SB-8A, SB-12A, SB-30A, SB-40A, SB-42A and SB-48A at the original locations SB-8, SB-12, SB-30, SB-40, SB-42 and SB-48, respectively. The borings were advanced via direct push technology to water table (six or seven feet below ground surface). SCS collected soil samples from 0-0.5 feet (ft) below ground surface (bgs) and 0.5 ft-2 ft bgs intervals. The soil samples were submitted to Pace for analysis for

cresols, pentachlorophenol and phenol via EAP Method 82701. Sample SB-30A (0.5-2) was also analyzed for pentachlorophenol via synthetic precipitation leaching procedure (SPLP) after receiving the initial pentachlorophenol data. **Attachment B** contains the soil boring logs.

On January 16, 2018, SCS advanced soil boring SB-7R via direct push technology approximately 500 ft south of SB-6, near the property boundary. **Table 1a** includes the global positioning system (GPS) coordinates of SB-7R and historical soil borings. The soil samples were collected from 0-0.5 feet (ft) bgs, 0.5 ft-2 ft bgs, and in 2-ft intervals thereafter to the water table. The water table was encountered at approximately six feet bgs as shown on the soil boring log provided in **Attachment B**.

Soil samples collected from the 0-0.5 ft and 0.5 ft-2 ft bgs intervals were submitted to Jupiter for analysis for arsenic, cadmium, chromium, copper, and lead via EPA Method 6020, polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270, total recoverable petroleum hydrocarbons (TRPH) via FL-PRO, and volatile organic compounds (VOCs) via EPA Method 8260. The remaining samples at deeper intervals were archived.

After receiving initial data from the 0-0.5 ft and 0.5 ft-2 ft intervals, the 0.5 ft-2 ft interval was analyzed for lead via SPLP.

Groundwater Assessment

On January 12, 15, 16 and17, 2018, SCS installed 18 shallow and one intermediate monitoring wells utilizing hollow stem auger (shallow wells) and direct push drilling method (intermediate well). **Table 1b** summarizes the GPS coordinates of the monitoring wells. The depth of shallow monitoring wells range from 15 feet to 20 feet bgs, depending on water table encountered. The shallow wells were installed with 10-foot of 0.01-inch slotted screen, and completed with flush-mounted steel manhole cover and lockable caps.

The 27-foot deep intermediate monitoring well was installed with a double casing with four inches of outer casing to 20 ft deep. The well has 5-foot of 0.01-inch slotted screen from 22 ft bgs to 27 ft bgs and was completed with a flush-mounted steel manhole cover and lockable caps. Refer to **Attachment C** for monitoring well construction and development logs. Well development water and drill cuttings were contained in 55-gallon drums, pending off-site disposal.

On January 11 and 16 through19, 2018, SCS sampled the 18 newly installed and 20 existing wells for the parameters show in **Table 2**. Refer to **Attachment D** for copies of the groundwater sampling logs and associated equipment calibration logs.

ANALYTICAL RESULTS SUMMARY AND DISCUSSION

SCS compared the results to applicable groundwater cleanup target levels (GCTLs) or soil cleanup target levels (SCTLs) pursuant to Chapter 24, Code of Miami-Dade County. Laboratory

[1] Note that the chains-of-custody were inadvertently marked for analysis for PAHs and arsenic. None of the samples were analyzed for arsenic and PAHs.

reports and chain of custodies are provided as **Attachment E**. The benzo(a)pyrene equivalents (BaPE) were calculated for SB-7R (0-0.5'). **Attachment F** contains the calculation. A summary of the soil analytical results is provided in **Table 3** and groundwater analytical results in **Tables 4** and **5**.

Soil Sampling Results

Concentrations of cresols, pentachlorophenol and phenol at the samples collected SB-8A, SB-12A, SB-30A, SB-40A, SB-42A and SB-48A were below the direct exposure residential SCTLs or leachability based on groundwater criteria (LBGC) except for pentachlorophenol at SB-30A(0.5-2). Pentachlorophenol concentration at SB-30A (0.5-2) was detected at 0.23 mg/kg (estimated value with flag "I"), exceeding the LBGC of 0.03 mg/kg. However, the SPLP pentachlorophenol was not detected.

Two soil samples collected at SB-7R were analyzed for the parameters shown on **Table 2**. Only benozo(a)pyrene total equivalent (BaPE) at SB-7R (0-0.5) was reported exceeding the direct exposure residential SCTL (0.2 mg/kg). The remainder of PAH compounds were reported less than their respective residential SCTLs or LBGC.

The concentrations of the remaining parameters analyzed, including chromium, copper, arsenic, lead, cadmium, VOCs, and TRPH, were below either the corresponding direct exposure residential SCTLs or leachability based groundwater criteria. The SPLP lead concentration at SB-7R (0.5-2) was reported less than the GCTL.

Groundwater Sampling Results

Thirty-nine groundwater samples were collected and analyzed for select parameters as shown in **Table 2**. Below is a summary of groundwater analytical data.

- Arsenic concentrations from 15 shallow monitoring wells ranged from below the method detection limit (MDL) (at multiple wells) to 100 µg/L (at MW-9). The arsenic concentration at the intermediate well at MW-37I was below the GCTL. Arsenic concentrations exceeded the GCTL of 10 ug/L at three of 16 wells sampled (100 µg/L at MW-9, 21 µg/L at MW-12, and 17 µg/L at MW-27).

- Arsenic concentrations were reported below the GCTL at the boundary wells MW-3E, MW-7E, MW-10E, MW-29E, and MW-33E, which serve as delineation points for the corresponding wells (MW-3, MW-7, MW-10, MW-29, and MW-33), where arsenic concentrations were previously reported above the GCTL.

- Chloromethane concentrations at MW-31 and 23 were below the laboratory method detection limit (MDL).

- The ammonia concentration at MW-33 was below the laboratory MDL.

- The lead concentration at MW-21-2 was below the GCTL of 15 ug/L.

- Concentrations of cresols, phenol and pentachlorophenol at the four wells (MW-7, MW-29, MW-33 and MW-37) were below the corresponding laboratory MDLs.

- PAHs were sampled at 36 monitoring wells, and were not detected above the GCTLs. Note that PAHs were sampled at a total of 46 locations through temporary and permanent monitoring wells at the site. PAHs were not detected above the GCTLs at any of these location.

Figures 2 through **10** depict the arsenic, chloromethane and PAHs data in groundwater samples.

CONCLUSIONS AND RECOMMENDATIONS

Soil analytical results at SB-8A, SB-12A, SB-30A, SB-40A, SB-42A and SB-48A suggest that phenolic compounds are not contaminants of concern in soil at the site. Soil analytical results at SB-7R suggest surficial PAH-impact slightly above the residential direct exposure SCTL at this location (the upper six inches).

Groundwater data indicate that arsenic is the only contaminants of concern in groundwater at the site and that arsenic impact is limited to the shallow groundwater. Arsenic concentrations historically exceeded the GCTL in samples collected from nine monitoring wells (MW-3, MW-7, MW-9, MW-10, MW-12, MW-27, MW-29, MW-33, and MW-37). Groundwater impacts in six previously installed monitoring wells MW-3, MW-7, MW-10, MW-29, MW-33, and MW-37 have been delineated by their corresponding boundary wells, which were sampled and reported below the GCTLs for arsenic and PAHs. Groundwater arsenic concentrations appear to attenuate prior to reaching property boundary.

SCS recommends resampling MW-9, MW-12 and MW-27 to confirm the arsenic results. If confirmed, SCS recommends installing boundary wells to delineate these wells, and an intermediate well adjacent to MW-9 if warranted.

Should you have any questions, please contact the undersigned at 305-412-8185.

Sincerely,

Anthony Pezzotti, P.G.
Staff Professional
SCS ENGINEERS

Fangmei Zhang, P.E., PhD
Senior Project Manager
SCS ENGINEERS

Enclosures:

Table 1a – GPS coordinates of soil borings
Table 1b – GPS coordinates of monitoring wells and temporary wells
Table 2 – Groundwater and soil sampling matrix
Table 3 – Soil Analytical Summary
Table 4 – Groundwater Analytical Summary - Arsenic

Table 5 – Groundwater Analytical Summary
Figure 1 – Site Location Plan
Figure 2 to 10 – Groundwater Analytical Data
Attachment A – DERM correspondences
Attachment B – Soil Boring Logs
Attachment C – Well Installation Documentation
Attachment D – Groundwater Sampling Logs and Associated Calibration Logs
Attachment E – Laboratory Reports and Chains of Custody
Attachment F – BaPE calculation

cc: Lee Hefty, Lorna Bucknor, Sandra Rezola, Becky Varley – DERM
Jose Gonzalez, Adam Furstein, Kolleen Cobb – LR 13 – 18 LLC and FECI LT 1 LLC
Howard Nelson – Bilzin Sumberg
Lisa Smith, Eddy Smith – SCS

FIGURES

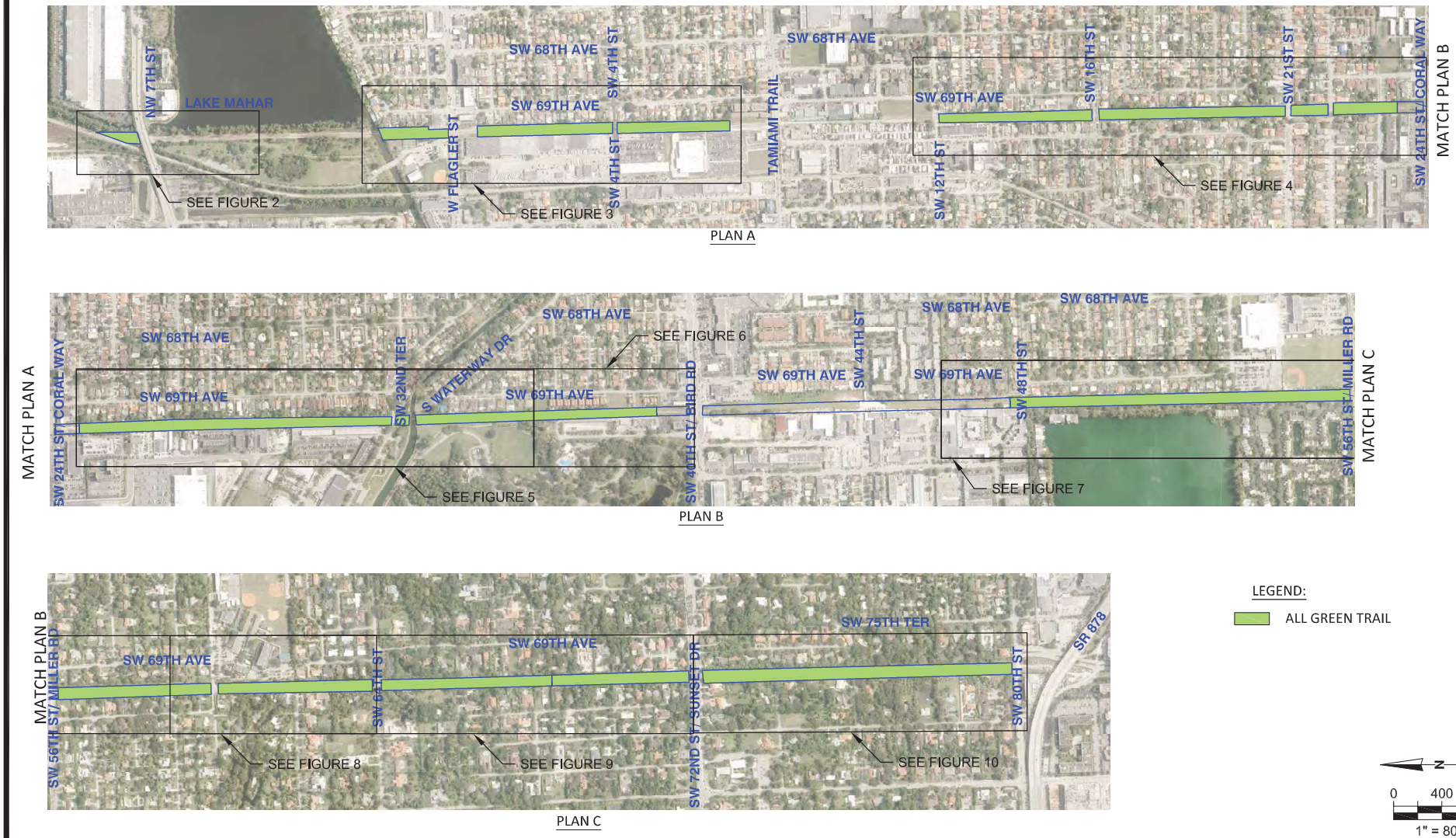

FIGURE 1. SITE LOCATION PLAN
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-1	09/05/2017	125	5.0 U	

PLAN

NOTES:
1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:
- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

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FIGURE 2. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

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PLAN

		Turbidity	Arsenic	Arsenic, Dissolved
MW-3E	1/18/2018	2.01	2.0	

NOTE: PAHs WERE ANALYZED ON 1/18/18 AT MW-3E. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-7E	1/18/2018	1.40	3.1	

NOTE: PAHs WERE ANALYZED ON 1/18/18 AT MW-7E. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-3	09/01/2017	638	**67.7**	**47.5**
MW-3	10/9/2017	2.87	**24.1**	

NOTE: PAHs WERE ANALYZED ON 1/18/18 AT MW-3. NO EXCEEDANCES OF THE GCTL WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-7	09/01/2017	553	**69.8**	**65.4**
MW-7	10/3/2017	7.37	**34.1**	
	10/9/2017	7.92	**28.1**	

NOTE: PAHs AND PHENOLIC COMPOUNDS WERE ANALYZED ON 1/18/18 AT MW-7. NO DETECTIONS WERE REPORTED

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:

- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

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FIGURE 3. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

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		Turbidity	Arsenic
MW-9	1/18/2018	2.34	100

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/18/18 AT MW-9. NO EXCEEDANCES OF THE GCLT WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-10E	1/18/2018	2.81	0.65 U	

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/18/18 AT MW-10E. NO DETECTIONS WERE REPORTED

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-15. NO EXCEEDANCES OF THE GCTL WERE REPORTED.

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-16	09/05/2017	67	5.0 U	

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-10	09/01/2017	16	**138**	**141**
MW-10	10/2/2017	10.1	**24.3**	
	10/9/2017	8.55	**20.8**	

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/18/18 AT MW-10. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-11	1/18/2018	4.11	10	

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/18/18 AT MW-11. NO DETECTIONS WERE REPORTED

PLAN

		Turbidity	Arsenic	Arsenic, Dissolved	Chloromethane
TWP-12	09/05/2017	42	11.2 J(L1) L5	15.5	3
MW-12	10/2/2017	4.98	10.3		1.9
	10/9/2017	8.57	11.4		
	1/17/2018	2.54	21		

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/17/18 AT MW-12. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-14	09/05/2017	18.6	5.4 I	

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:

- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 150 300

1" = 300'

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FIGURE 4. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

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		Turbidity	Arsenic	Arsenic, Dissolved
TWP-17	09/01/2017	19.6	**26.0**	**29.9**
MW-17	10/2/2017	5.82	8.61	
	10/9/2017	6.07	5 U	

NOTE: PAHs WERE ANALYZED FOR THE SAMPLE COLLECTED ON 1/17/18 AT MW-17. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic
TWP-21	08/31/2017	*	5.0 U

NOTE: PAHs AND LEAD WERE REPORTED BELOW THE GCTL ON 1/17/2018 AT MW-21-2.

		Turbidity	Arsenic	Arsenic, Dissolved	Chloromethane
TWP-23	08/31/2017	171	5.0 U		3.2
MW-23	01/17/2018				2.5 U

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-23. NO DETECTIONS WERE REPORTED

PLAN

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-18	08/31/2017	163	5.0 U	

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-19	08/31/2017	17.7	6.2 I	

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-22. NO EXCEEDANCES OF THE GCTL WERE REPORTED.

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-25	8/30/2017		5.0 U	
MW-25	1/17/2018	4.16	0.65 U	

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-25. NO DETECTIONS WERE REPORTED

NOTES:
1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
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LEGEND:
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N

0 125 250
1" = 250'

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FIGURE 5. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

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		Turbidity	Arsenic	Arsenic, Dissolved
TWP-27	08/31/2017	125	**16.8**	**18.2**
MW-27	10/2/2017	4.89	**19.7**	
	10/9/2017	4.07	5.9 I	
	1/17/2018	1.03	**17**	

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-27. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-26	11/2/2017	6.21	5.0 U	

NOTE: PAHs WERE ANALYZED ON 1/17/18 AT MW-26. NO DETECTIONS WERE REPORTED

PLAN

NOTES:
1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
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N

0 125 250
1" = 250'

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FIGURE 6. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

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		Turbidity	Arsenic	Arsenic, Dissolved
MW-29E	1/19/2018	4.12	0.65 U	

NOTE: PAHs WERE ALSO ANALYZED ON 1/19/18 AT MW-29E. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-30	1/19/2018	4.01	1.1 I	

NOTE: PAHs WERE ALSO ANALYZED ON 1/19/18 AT MW-30. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved	Chloromethane
TWP-31	08/31/2017	41.7	5.0 U		3.2
MW-31	01/19/2018				2.5 U

NOTE: PAHs WERE ALSO ANALYZED ON 1/19/18 AT MW-31. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-33E	1/19/2018	2.51	0.65 U	

NOTE: PAHs WERE ALSO ANALYZED ON 1/19/18 AT MW-33E. NO DETECTIONS WERE REPORTED

PLAN

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-33	08/30/2017	343	155	170
MW-33	10/3/2017	7.25	6.6 I	
	10/9/2017	1.14	25.5	

NOTE: PAHs, AMMONIA, AND PHENOLS WERE ANALYZED ON 1/11/18 AT MW-33. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-29	08/30/2017	10.7	18.9	16.6
MW-29	10/3/2017	6.23	5.7 I	
	10/9/2017	2.58	19	

NOTE: PAHs AND PHENOLS WERE ANALYZED ON 1/11/18 AT MW-29. NO DETECTIONS WERE REPORTED

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
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- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

SCS ENGINEERS

FIGURE 7. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

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		Turbidity	Arsenic	Arsenic, Dissolved
TWP-35	08/31/2017	31.7	5.0 U	
MW-35	11/2/2017	3.39	5.0 U	
MW-35	11/15/2017	0.26	0.65 U	

NOTE: PAHs WERE ALSO ANALYZED FOR THE SAMPLE COLLECTED ON 11/15/17 AND 1/11/2018 AT MW-35. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-36	11/2/2017	6.37	5.0 U	

NOTE: PAHs WERE ANALYZED FOR MW-36 ON 1/11/2018. NO DETECTIONS WERE REPORTED

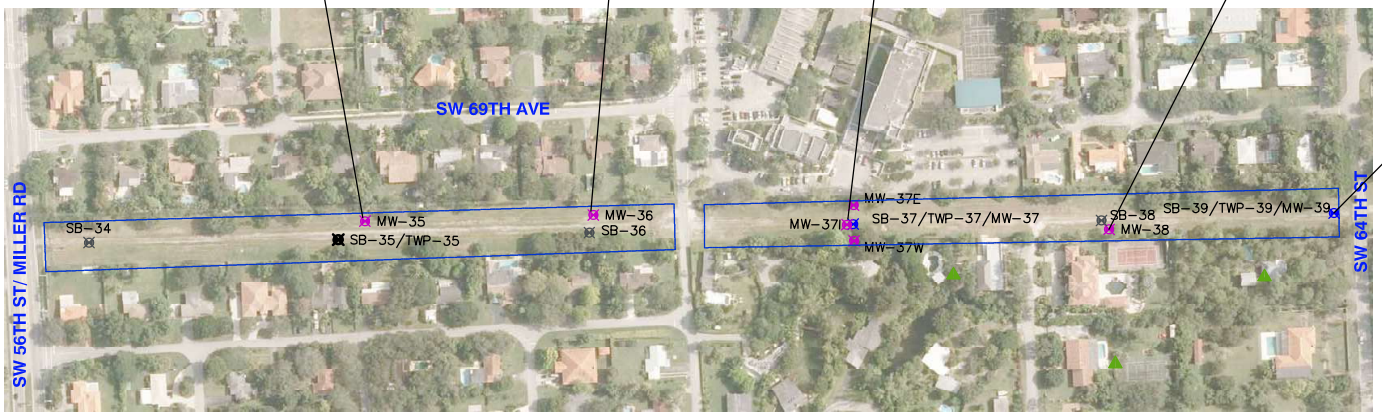
		Turbidity	Arsenic	Arsenic, Dissolved
TWP-37	08/30/2017	351	**192**	**197**
MW-37	10/3/2017	1.63	**78.6**	
MW-37I	1/18/2018	4.23	2.5	
MW-37E	11/2/2017	5.61	5.0 U	
MW-37W	11/2/2017	5.75	5.0 U	

NOTE: PAHs WERE ANALYZED FOR MW-37W AND MW-37E ON 1/11/2018 AND FOR MW-37 ON 1/18/2018. PHENOLIC COMPOUNDS WERE ANALYZED FOR MW-37 ON 1/18/2018. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-38	11/1/2017	5.59	0.50 U	

NOTE: PAHs WERE ANALYZED FOR MW-38 ON 1/11/2018. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-39	08/30/2017	45.3	5.0 U	
MW-39	10/3/2017	3.49	5.0 U	



PLAN

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:

- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

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FIGURE 8. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

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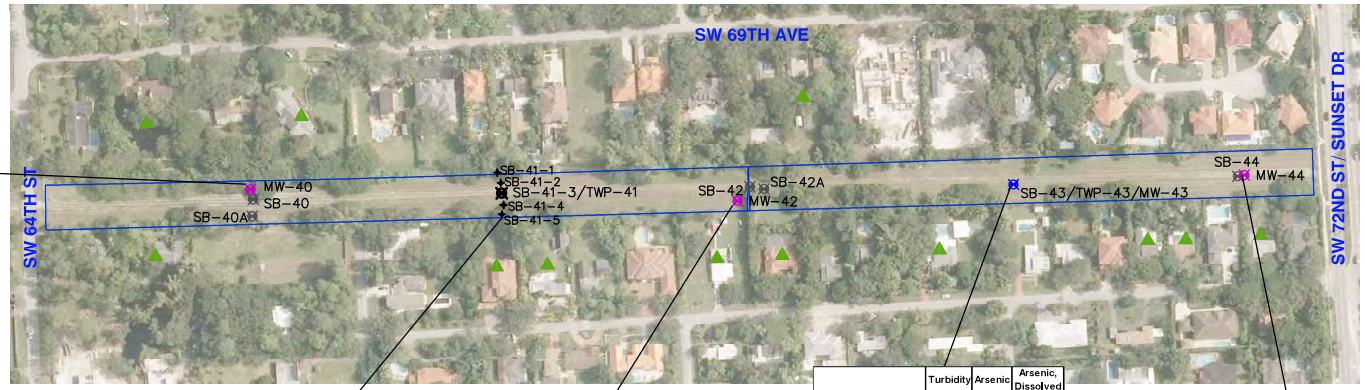

PLAN

		Turbidity	Arsenic
MW-40	11/1/2017	5.33	0.50 U
	11/15/2017	0.68	1.0 I

NOTE: PAHs WERE ANALYZED ON 11/15/17 AND 1/16/18 AT MW-40. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-41	08/30/2017	1.67	5.0 U	

		Turbidity	Arsenic	Arsenic, Dissolved
MW-42	11/1/2017	2.91	0.50 U	

NOTE: PAHs WERE ANALYZED ON 1/16/18 AT MW-42. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-43	08/30/2017	11.3	77.1	
MW-43	10/3/2017	5.54	5.0 U	
	10/9/2017	1.3	5.0 U	

NOTE: PAHs WERE ANALYZED ON 1/16/18 AT MW-43. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-44	1/18/2018	3.01	2.4	

NOTE: PAHs WERE ALSO ANALYZED ON 1/18/18 AT MW-44. NO DETECTIONS WERE REPORTED

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:

- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

SCS ENGINEERS

FIGURE 9. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

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		Turbidity	Arsenic	Arsenic, Dissolved
TWP-45	08/29/2017	23.8	**21.9**	
MW-45	10/3/2017	4.43	5.0 U	
	10/9/2017	3.31	5.0 U	

NOTE: PAHs WERE ANALYZED ON 1/11/18 AT MW-45. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
MW-46	1/16/2018	3.15	0.65 U	

NOTE: PAHs WERE ALSO ANALYZED ON 1/16/18 AT MW-46. NO DETECTIONS WERE REPORTED

PLAN

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-47	08/29/2017	10.7	5.0 U	
MW-47	1/16/2018	4.19	0.65 U	

		Turbidity	Arsenic	Arsenic, Dissolved
MW-48	11/1/2017	4.93	0.51 I	

NOTE: PAHs WERE ANALYZED ON 1/11/18 AT MW-48. NO DETECTIONS WERE REPORTED

		Turbidity	Arsenic	Arsenic, Dissolved
TWP-49	08/29/2017	30.3	5.0 U	
MW-49-2	1/16/2018	2.03	1.2 I	

NOTES:

1. TURBIDITY IN NTU; ARSENIC CONCENTRATIONS IN GROUNDWATER IN UG/L
2. **BOLD** VALUES EXCEED THE ARSENIC GCTL OF 10 UG/L AND THE CHLOROMETHANE GCTL OF 2.7 UG/L
3. BLANK CELLS INDICATE PARAMETERS WERE NOT ANALYZED.
4. GROUNDWATER SAMPLES AT TEMPORARY WELLPOINTS WERE ANALYZED FOR TRPH, VOCS, PAHS, Cd, As, Cr, Cu, and Pb. ONLY ARSENIC AND CHLOROMETHANE CONCENTRATIONS ARE SHOWN. OTHER PARAMETERS WERE BELOW THE GCTLS
5. I - CONCENTRATION WAS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT
6. U - CONCENTRATION BELOW THE MDL

LEGEND:

- TRAIL LIMITS
- MONITORING WELLS
- POTENTIAL PRIVATE WELLS
- SOIL BORING/PERMANENT MONITORING WELL
- SOIL BORING LOCATION
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION
- STEP-OUT SOIL BORINGS
- SOIL BORING/GROUNDWATER TEMPORARY WELL LOCATION/PERMANENT WELL

N

0 125 250

1" = 250'

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FIGURE 10. GROUNDWATER ANALYTICAL DATA
LUDLAM TRAIL CORRIDOR, MIAMI-DADE COUNTY, FL

09217186.02

TABLES

Table 1a: GPS Coordinates of soil borings
Facility Name: Ludlam Trail, Miami, FL

Boring No.	Latitude (North)	Longitude (West)
SB-1	25.777812	-80.308289
SB-1B	25.777819	-80.308221
SB-1A	25.77781	-80.308156
SB-1C	25.77781	-80.308338
SB-1D	25.777815	-80.308382
SB-2	25.7719202	-80.3082752
SB-3	25.770605	-80.3081852
SB-4	25.7696915	-80.3081567
SB-5	25.7683692	-80.308253
SB-6	25.76692	-80.3080664
SB-7	25.764633	-80.3081159
SB-7R	25.765594	-80.3081898
SB-8	25.7642782	-80.3080769
SB-8A	25.76438542	-80.30804467
SB-9	25.7591726	-80.3079364
SB-10-1	25.7578059	-80.3077735
SB-10-2	25.7578057	-80.3078447
SB-10-3	25.7578017	-80.3078865
SB-10-4	25.7578054	-80.3079206
SB-10-5	25.75781	-80.3079805
SB-11	25.7564227	-80.3078737
SB-12	25.7551095	-80.3078421
SB-12A	25.75501579	-80.30791333
SB-13	25.75367772	-80.30779862
SB-14	25.7521798	-80.3077745
SB-15	25.7509185	-80.3077378
SB-16	25.7496067	-80.3077168
SB-17	25.7472584	-80.3076868
SB-18	25.7460163	-80.3077407

Table 1a: GPS Coordinates of soil borings
Facility Name: Ludlam Trail, Miami, FL

Boring No.	Latitude (North)	Longitude (West)
SB-19	25.7455092	-80.3077123
SB-20	25.7446343	-80.3076061
SB-21-1	25.7433396	-80.3074869
SB-21-2	25.7433326	-80.3075447
SB-21-3	25.7433495	-80.3075744
SB-21-4	25.7433322	-80.3075941
SB-21-5	25.743333	-80.307689
SB-22	25.7417991	-80.3075246
SB-23	25.7403958	-80.307511
SB-24	25.739086	-80.3074908
SB-25	25.7376366	-80.3074449
SB-26	25.73647	-80.3074086
SB-27	25.7349344	-80.3073722
SB-28	25.7260956	-80.3071993
SB-29	25.7246422	-80.3071497
SB-30	25.7232026	-80.3071041
SB-30A	25.72323174	-80.30709224
SB-31	25.7212782	-80.3070629
SB-31E25	25.721275	-80.307007
SB-31E50	25.7212726	-80.3069616
SB-31W25	25.7212874	-80.3071435
SB-31W50	25.7212786	-80.3072392
SB-32	25.7205418	-80.3070572
SB-33-1	25.719092	-80.3069116
SB-33-2	25.71910068	-80.30695638
SB-33-3	25.7190915	-80.3070049
SB-33-4	25.7190919	-80.3070926
SB-33-5	25.7190914	-80.3071402
SB-34	25.7178142	-80.3069901

Table 1a: GPS Coordinates of soil borings
Facility Name: Ludlam Trail, Miami, FL

Boring No.	Latitude (North)	Longitude (West)
SB-35	25.7164178	-80.3069778
SB-36	25.7150424	-80.306951
SB-37	25.7135815	-80.3068995
SB-38	25.7122066	-80.3068844
SB-39	25.7109196	-80.3068469
SB-40	25.7095364	-80.306798
SB-40A	25.70954082	-80.30690063
SB-41-1	25.7081849	-80.3066416
SB-41-2	25.7081644	-80.3067049
SB-41-3	25.7081602	-80.3067674
SB-41-4	25.7081502	-80.306839
SB-41-5	25.7081597	-80.3068966
SB-42	25.7067861	-80.306737
SB-42A	25.70670749	-80.30674959
SB-43	25.7053267	-80.306731
SB-44	25.7040849	-80.3066875
SB-45	25.7028596	-80.3066579
SB-46	25.7014115	-80.3066302
SB-47	25.7000529	-80.3065919
SB-48	25.698663	-80.3065251
SB-48A	25.69820627	-80.30658052
SB-49-1	25.697275	-80.3063921
SB-49-2	25.6972727	-80.3064536
SB-49-3	25.6972642	-80.3065167
SB-49-4	25.6972588	-80.3065702
SB-49-5	25.6972622	-80.3066267

Table 1b: GPS Coordinates of Monitoring Wells and Temporary Wells
Facility Name: Ludlam Trail, Miami, FL

Sample ID	Latitude (North)	Longitude (West)
TWP-1	25.777812	-80.308289
TWP-3/MW-3	25.770605	-80.3081852
MW-3E	25.77061	-80.30812
TWP-7/MW-7	25.764633	-80.3081159
MW-7E	25.76456	-80.30795
MW-9	25.7591726	-80.3079364
TWP-10/MW-10	25.7578017	-80.3078865
MW-10E	25.7578	-80.30778
MW-11	25.7564227	-80.3078737
TWP-12/MW-12	25.7551095	-80.3078421
TWP-14	25.7521798	-80.3077745
MW-15	25.7509185	-80.3077378
TWP-16	25.7496067	-80.3077168
TWP-17/MW-17	25.7472584	-80.3076868
TWP-18	25.7460163	-80.3077407
TWP-19	25.7455092	-80.3077123
TWP-20	25.7446343	-80.3076061
TWP-21	25.7433495	-80.3075744
MW-21-2	25.7433420	-80.3075510
MW-22	25.7417810	-80.3075230
TWP-23	25.7403958	-80.307511
MW-23	25.7404580	-80.3074940
TWP-25	25.7376366	-80.3074449
MW-25	25.7376220	-80.3073890
MW-26	25.736385	-80.307446
TWP-27/MW-27	25.7349344	-80.3073722
TWP-29/MW-29	25.7246422	-80.3071497
MW-29E	25.72464	-80.30703
MW-30	25.7232026	-80.3071041
TWP-31/MW-31	25.7212782	-80.3070629
TWP-33/MW-33	25.7190915	-80.3070049
MW-33E	25.71909	-80.30689
TWP-35	25.7164178	-80.3069778
MW-35	25.716284	-80.306866
MW-36	25.71502	-80.306835
TWP-37/MW-37	25.7135815	-80.3068995
MW-37I	25.71359	-80.30688

Table 1b: GPS Coordinates of Monitoring Wells and Temporary Wells
Facility Name: Ludlam Trail, Miami, FL

Sample ID	Latitude (North)	Longitude (West)
MW-37E	25.713695	-80.306832
MW-37W	25.713694	-80.306946
MW-38	25.712165	-80.306939
TWP-39	25.7109196	-80.3068469
MW-40	25.709551	-80.306736
TWP-41	25.7081602	-80.3067674
MW-42	25.706855	-80.306822
TWP-43/MW-43	25.7053267	-80.306731
MW-44	25.704053	-80.306678
TWP-45/MW-45	25.702860	-80.306658
MW-46	25.701283	-80.306642
TWP-47	25.700053	-80.306592
MW-47	25.700114	-80.306586
MW-48	25.698778	-80.306452
MW-49-2	25.697144	-80.306450
TWP-49	25.6972642	-80.3065167

Notes:
1. The coordinates for TWP-21, TWP-33, and TWP-49 correlate with the coordinates for SB-21-3, SB-33-3, and SB-49-3.

Table 2: Groundwater and Soil sampling matrix
Facility Name: Ludlam Trail

Proposed wells	As	Pb	PAHs	Ammonia	Chloromethane	Cresols, Phenol, Pentachlorophenol	SPLP Pentachlorophenol	SPLP Pb	Cd	Cr	Cu	TRPH	VOC 8260 LL
MW-3E	X		X										
MW-7E	X		X										
MW-9	X		X										
MW-10E	X		X										
MW-11	X		X										
MW-23			X		X								
MW-25	X		X										
MW-29E	X		X										
MW-30	X		X										
MW-31			X		X								
MW-33E	X		X										
MW-44	X		X										
MW-46	X		X										
DERM proposed													
MW-49-2	X												
MW-47	X												
MW-15			X										
MW-21-2		X	X										
MW-22			X										
MW-37I*	X												
Existing Wells													
MW-3			X										
MW-7			X			X							
MW-10			X										
MW-12	X		X										
MW-17			X										
MW-26			X										
MW-27	X		X										
MW-29			X			X							
MW-33			X	X		X							
MW-35			X										
MW-36			X										
MW-37			X			X							
MW-37E			X										
MW-37W			X										
MW-38			X										
MW-39			X										
MW-40			X										
MW-42			X										
MW-43			X										
MW-45			X										
MW-48			X										
Soil Borings													
SB-7R (0-0.5)	X	X	X						X	X	X	X	X
SB-7R (0.5-2)	X	X	X					X	X	X	X	X	X
SB-8A (0-0.5)						X							
SB-8A (0.5-2)						X							
SB-12A (0-0.5)						X							
SB-12A (0.5-2)						X							
SB-30A (0-0.5)						X							
SB-30A (0.5-2)						X	X						
SB-40A (0-0.5)						X							
SB-40A (0.5-2)						X							
SB-42A (0-0.5)						X							
SB-42A (0.5-2)						X							
SB-48A (0-0.5)						X							
SB-48A (0.5-2)						X							

Notes:
1. Additional groundwater sampling may be required based on the results for pentachlorophenol, phenol, and cresols at SB-8, -12, -30, -40, -42, and -48
2. * - MW-37I installed immediately adjacent to MW-37 and installed at 22-27 feet below ground surface

Table 3: Soil Analytical Summary
Facility Name: Ludlam Trail

Sample Location	Table II, Ch. 62-777 FAC Soil Cleanup Target Levels					SB-7R (0-0.5)	SB-7R (0.5-2)	SB-8A (0-0.5)	SB-8A (0.5-2)	SB-12A (0-0.5)	SB-12A (0.5-2)	SB-30A (0-0.5)
	Leachability Based on Groundwater Criteria	Direct Exposure Residential	Direct Exposure Commercial / Industrial	Groundwater Cleanup Target Levels	Units	1/16/2018	1/16/2018	12/08/2017	12/08/2017	12/08/2017	12/08/2017	12/08/2017
Soil Intervals					ft bgs	0-0.5	0.5-2	0-0.5	0.5-2	0-0.5	0.5-2	0-0.5
EPA 6010												
Chromium	38	210	470		mg/kg	8.5	3.2					
Copper	***	150	89000		mg/kg	7.8	11					
Arsenic	***	2.1	12		mg/kg	1.4	1.9					
Cadmium	7.5	82	1700		mg/kg	0.0950 U	0.120 U					
Lead	***	400	1400		mg/kg	14	64					
SPLP Lead				0.015	mg/L		0.0095					
EPA 8270												
1-Methylnaphthalene	3.1	200	1800		mg/kg	0.120 U	0.230 U					
2-Methylnaphthalene	8.5	210	2100		mg/kg	0.120 U	0.230 U					
Acenaphthene	2.1	2400	20000		mg/kg	0.0600 U	0.115 U					
Acenaphthylene	27	1800	20000		mg/kg	0.0600 U	0.115 U					
Anthracene	2500	21000	300000		mg/kg	0.0600 U	0.115 U					
Benzo(a)anthracene	0.8	1.3	6.6		mg/kg	0.156	0.0690 U					
Benzo(a)pyrene	8	0.1	0.7		mg/kg	**0.144**	0.0420 U					
Benzo(b)fluoranthene	2.4	1.3	6.5		mg/kg	0.231	0.0600 U					
Benzo(g,h,i)perylene	32000	2500	52000		mg/kg	0.132 i	0.0690 U					
Benzo(k)fluoranthene	24	13	66		mg/kg	0.0810 i	0.0690 U					
Chrysene	77	130	640		mg/kg	0.143 i	0.0690 U					
Dibenz(a,h)anthracene	0.7	0.1	0.7		mg/kg	0.0220 i	0.0170 U					
Fluoranthene	1200	3200	59000		mg/kg	0.159 i	0.115 U					
Fluorene	160	2600	33000		mg/kg	0.0600 U	0.115 U					
Indeno(1,2,3-cd)pyrene	6.6	1.3	6.6		mg/kg	0.189	0.0690 U					
Naphthalene	1.2	55	300		mg/kg	0.120 U	0.230 U					
Phenanthrene	250	2200	36000		mg/kg	0.0600 U	0.115 U					
Pyrene	880	2400	45000		mg/kg	0.234 I	0.115 U					
Benzo(a)pyrene Equivalents		0.1	0.7		mg/kg	**0.2**	0.0					
FL-PRO												
Florida Pro Total	340	460	2,700		mg/kg	45.7 I	11.5 U					
EPA 8260												
1,1,1,2-Tetrachloroethane	0.01	2.9	4.3		mg/kg	0.000460 U	0.000560 U					
1,1,1-Trichloroethane	1.9	730	3900		mg/kg	0.000430 U	0.000510 U					
1,1,2,2-Tetrachloroethane	0.001	0.7	1.2		mg/kg	0.000370 U	0.000450 U					
1,1,2-Trichloroethane	0.03	1.4	2		mg/kg	0.000390 U	0.000480 U					
1,1-Dichloroethane	0.4	390	2100		mg/kg	0.000600 U	0.000730 U					
1,1-Dichloroethene	0.06	95	510		mg/kg	0.000700 U	0.000840 U					
1,1-Dichloropropene					mg/kg	0.000360 U	0.000440 U					
1,2,3-Trichlorobenzene	4.6	650	8200		mg/kg	0.000110 U	0.000130 U					
1,2,3-Trichloropropane	0.0001	0.06	0.1		mg/kg	0.000930 U	0.00110 U					
1,2,4-Trichlorobenzene	5.3	660	8500		mg/kg	0.000170 U	0.000210 U					
1,2,4-Trimethylbenzene	0.3	18	95		mg/kg	0.000580 U	0.000700 U					
1,2-DBCP	0.001	0.7	3.8		mg/kg	0.000160 U	0.000200 U					
1,2-Dibromoethane (EDB)	0.0001	0.1	0.2		mg/kg	0.000370 U	0.000450 U					
1,2-Dichlorobenzene	17	880	5000		mg/kg	0.000220 U	0.000270 U					
1,2-Dichloroethane	0.01	0.5	0.7		mg/kg	0.000650 U	0.000780 U					
1,2-Dichloropropane	0.03	0.6	0.9		mg/kg	0.000460 U	0.000560 U					
1,3,5-Trimethylbenzene	0.3	15	80		mg/kg	0.000160 U	0.000200 U					
1,3-Dichlorobenzene	7	380	2200		mg/kg	0.000240 U	0.000290 U					
1,3-Dichloropropane					mg/kg	0.000350 U	0.000420 U					
1,4-Dichlorobenzene	2.2	6.4	9.9		mg/kg	0.000260 U	0.000320 U					
2,2-Dichloropropane					mg/kg	0.000410 U	0.000500 U					
2-Chlorotoluene	2.8	200	1200		mg/kg	0.000290 U	0.000350 U					
2-Hexanone	1.4	24	130		mg/kg	0.000890 U	0.00110 U					
4-Chlorotoluene	2.5	170	990		mg/kg	0.000250 U	0.000300 U					
4-Isopropyltoluene			5600		mg/kg	0.000190 U	0.000220 U					
4-methyl-2-pentanone	2.6	4300	44000		mg/kg	0.000420 U	0.000500 U					
Acetone	25	11000	68000		mg/kg	0.00240 U	0.00290 U					
Acrolein	0.01	0.05	0.3		mg/kg	0.00360 U	0.00440 U					
Acrylonitrile	0.0003	0.3	0.6		mg/kg	0.00580 U	0.00700 U					
Benzene	0.007	1.2	1.7		mg/kg	0.000360 U	0.000430 U					
Bromobenzene					mg/kg	0.000290 U	0.000350 U					
Bromochloromethane	0.6	95	530		mg/kg	0.000860 U	0.00100 U					
Bromodichloromethane	0.004	1.5	2.2		mg/kg	0.000280 U	0.000340 U					
Bromoform	0.03	48	93		mg/kg	0.000580 U	0.000700 U					
Bromomethane	0.05	3.1	16		mg/kg	0.00120 U	0.00140 U					
Carbon disulfide	5.6	270	1500		mg/kg	0.000560 U	0.000670 U					
Carbon tetrachloride	0.04	0.5	0.7		mg/kg	0.000420 U	0.000500 U					
Chlorobenzene	1.3	120	650		mg/kg	0.000330 U	0.000400 U					
Chloroethane	0.06	3.9	5.4		mg/kg	0.000450 U	0.000540 U					
Chloroform	0.4	0.4	0.6		mg/kg	0.00510 U	0.00620 U					
Chloromethane	0.01	4	5.7		mg/kg	0.000530 U	0.000640 U					
cis-1,2-Dichloroethene	0.4	33	180		mg/kg	0.000340 U	0.000410 U					
cis-1,3-Dichloropropene					mg/kg	0.000430 U	0.000520 U					
cis-1,4-Dichloro-2-butene					mg/kg	0.000720 U	0.000870 U					
Dibromochloromethane	0.003	1.5	2.3		mg/kg	0.000440 U	0.000530 U					
Dibromomethane	0.3	96	550		mg/kg	0.000880 U	0.00110 U					
Dichlorodifluoromethane	44	77	410		mg/kg	0.000290 U	0.000350 U					
Ethyl methacrylate	3.5	630	3500		mg/kg	0.000280 U	0.000340 U					
Ethylbenzene	0.6	1500	9200		mg/kg	0.000260 U	0.000310 U					
Hexachlorobutadiene	1	6.2	13		mg/kg	0.000170 U	0.000210 U					
Iodomethane					mg/kg	0.000330 U	0.000400 U					
Isopropylbenzene (Cumene)	0.2	220	1200		mg/kg	0.000260 U	0.000310 U					
Methyl ethyl ketone (MEK)	17	16000	110000		mg/kg	0.00110 U	0.00140 U					
Methylene chloride	0.02	17	26		mg/kg	0.00390 U	0.00470 U					
Naphthalene	1.2	55	300		mg/kg	0.00390 U	0.0047 U					
n-Butylbenzene					mg/kg	0.000200 U	0.000240 U					
n-propylbenzene					mg/kg	0.000230 U	0.000280 U					
sec-Butylbenzene					mg/kg	0.000180 U	0.000210 U					
Styrene	3.6	3600	23000		mg/kg	0.000240 U	0.000290 U					
t-1,4-Dichloro-2-butene					mg/kg	0.00550 U	0.00660 U					
tert-Butyl methyl ether (MTBE)	0.09	4400	24000		mg/kg	0.000860 U	0.00100 U					
tert-Butylbenzene					mg/kg	0.000220 U	0.000270 U					
Tetrachloroethene	0.03	8.8	18		mg/kg	0.000350 U	0.000420 U					
Toluene	0.5	7500	60000		mg/kg	0.000310 U	0.000370 U					
trans-1,2-Dichloroethene	0.7	53	290		mg/kg	0.000690 U	0.000830 U					
trans-1,3-Dichloropropene					mg/kg	0.000340 U	0.000410 U					
Trichloroethene	0.03	6.4	9.3		mg/kg	0.000600 U	0.000730 U					
Trichlorofluoromethane	33	270	1500		mg/kg	0.000580 U	0.000700 U					
Vinyl acetate	0.4	320	1700		mg/kg	0.000630 U	0.000770 U					
Vinyl chloride	0.007	0.2	0.8		mg/kg	0.000760 U	0.000920 U					
Xylenes- Total	0.2	130	700		mg/kg	0.000770 U	0.000920 U					
Phenolic Compounds												
2-Methylphenol(o-Cresol)	0.3	2,900	31,000		mg/kg			0.025 U P3	0.025 U P3	0.27 U P1 P3	0.075 U P1 P3	0.025 U
3&4-Methylphenol(m&p Cresol)	0.03/0.3***	300/2,900*	3,400/33,000#		mg/kg			0.051 U P3	0.051 U P3	0.56 U P1 P3	0.15 U P1 P3	0.052 U
Pentachlorophenol	0.03	7.2	28		mg/kg			0.022 U P3	0.022 U P3	0.24 U P1 P3	0.065 U P1 P3	0.022 U
SPLP Pentachlorophenol				1	µg/L							
Phenol	0.05	500	220,000		mg/kg			0.032 U P3	0.032 U P3	0.35 U P1 P3	0.095 U P1 P3	0.032 U

Notes:

- {BOLDED CONCENTRATION} exceeds its residential direct exposure limit established in Table 2 of Chapter 62-777, FAC.
- {BOLDED ITALICIZED CONCENTRATION} exceeds its commercial direct exposure limit established in Table 2 of Chapter 62-777, FAC.
- {BOLDED ITALICIZED CONCENTRATION} with an ** beside it exceeds its leachability limit established in Table 2 of Chapter 62-777, FAC.
- "U" flag indicates concentration was below the method detection limit (MDL).
- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).
- Benzo(a)pyrene equivalent is calculated using FDEP calculator. For those samples where all carcinogenic compounds are not detected, the equivalent was not calculated, but zero was input.

- * 300 mg/kg for p-cresol and 2,900 mg/kg for m-cresol
- # 3,400 mg/kg for p-cresol and 33,000 mg/kg for m-cresol
- *** 0.03 mg/kg for p-cresol and 0.3 mg/kg for m-cresol
- Blank space indicates that the compound was not analyzed at the well location
- "1p" indicates that a matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume
- "P1" indicates that routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits
- "P3" indicates that the sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

Table 3: Soil Analytical Summary
Facility Name: Ludlam Trail

Sample Location	Table II, Ch. 62-777 FAC Soil Cleanup Target Levels					SB-30A (0.5-2)	SB-40A (0-0.5)	SB-40A (0.5-2)	SB-42A (0-0.5)	SB-42A (0.5-2)	SB-48A (0-0.5)	SB-48A (0.5-2)
	Leachability Based on Groundwater Criteria	Direct Exposure Residential	Direct Exposure Commercial / Industrial	Groundwater Cleanup Target Levels	Units	12/08/2017	12/08/2017	12/08/2017	12/08/2017	12/08/2017	12/08/2017	12/08/2017
Soil Intervals					ft bgs	0.5-2	0-0.5	0.5-2	0-0.5	0.5-2	0-0.5	0.5-2
EPA 6010												
Chromium	38	210	470		mg/kg							
Copper	***	150	89000		mg/kg							
Arsenic	***	2.1	12		mg/kg							
Cadmium	7.5	82	1700		mg/kg							
Lead	***	400	1400		mg/kg							
SPLP Lead				0.015	mg/L							
EPA 8270												
1-Methylnaphthalene	3.1	200	1800		mg/kg							
2-Methylnaphthalene	8.5	210	2100		mg/kg							
Acenaphthene	2.1	2400	20000		mg/kg							
Acenaphthylene	27	1800	20000		mg/kg							
Anthracene	2500	21000	300000		mg/kg							
Benzo(a)anthracene	0.8	1.3	6.6		mg/kg							
Benzo(a)pyrene	8	0.1	0.7		mg/kg							
Benzo(b)fluoranthene	2.4	1.3	6.5		mg/kg							
Benzo(g,h,i)perylene	32000	2500	52000		mg/kg							
Benzo(k)fluoranthene	24	13	66		mg/kg							
Chrysene	77	130	640		mg/kg							
Dibenz(a,h)anthracene	0.7	0.1	0.7		mg/kg							
Fluoranthene	1200	3200	59000		mg/kg							
Fluorene	160	2600	33000		mg/kg							
Indeno(1,2,3-cd)pyrene	6.6	1.3	6.6		mg/kg							
Naphthalene	1.2	55	300		mg/kg							
Phenanthrene	250	2200	36000		mg/kg							
Pyrene	880	2400	45000		mg/kg							
Benzo(a)pyrene Equivalents		0.1	0.7		mg/kg							
FL-PRO												
Florida Pro Total	340	460	2,700		mg/kg							
EPA 8260												
1,1,1,2-Tetrachloroethane	0.01	2.9	4.3		mg/kg							
1,1,1-Trichloroethane	1.9	730	3900		mg/kg							
1,1,2,2-Tetrachloroethane	0.001	0.7	1.2		mg/kg							
1,1,2-Trichloroethane	0.03	1.4	2		mg/kg							
1,1-Dichloroethane	0.4	390	2100		mg/kg							
1,1-Dichloroethene	0.06	95	510		mg/kg							
1,1-Dichloropropene					mg/kg							
1,2,3-Trichlorobenzene	4.6	650	8200		mg/kg							
1,2,3-Trichloropropane	0.0001	0.06	0.1		mg/kg							
1,2,4-Trichlorobenzene	5.3	660	8500		mg/kg							
1,2,4-Trimethylbenzene	0.3	18	95		mg/kg							
1,2-DBCP	0.001	0.7	3.8		mg/kg							
1,2-Dibromoethane (EDB)	0.0001	0.1	0.2		mg/kg							
1,2-Dichlorobenzene	17	880	5000		mg/kg							
1,2-Dichloroethane	0.01	0.5	0.7		mg/kg							
1,2-Dichloropropane	0.03	0.6	0.9		mg/kg							
1,3,5-Trimethylbenzene	0.3	15	80		mg/kg							
1,3-Dichlorobenzene	7	380	2200		mg/kg							
1,3-Dichloropropane					mg/kg							
1,4-Dichlorobenzene	2.2	6.4	9.9		mg/kg							
2,2-Dichloropropane					mg/kg							
2-Chlorotoluene	2.8	200	1200		mg/kg							
2-Hexanone	1.4	24	130		mg/kg							
4-Chlorotoluene	2.5	170	990		mg/kg							
4-Isopropyltoluene			5600		mg/kg							
4-methyl-2-pentanone	2.6	4300	44000		mg/kg							
Acetone	25	11000	68000		mg/kg							
Acrolein	0.01	0.05	0.3		mg/kg							
Acrylonitrile	0.0003	0.3	0.6		mg/kg							
Benzene	0.007	1.2	1.7		mg/kg							
Bromobenzene					mg/kg							
Bromochloromethane	0.6	95	530		mg/kg							
Bromodichloromethane	0.004	1.5	2.2		mg/kg							
Bromoform	0.03	48	93		mg/kg							
Bromomethane	0.05	3.1	16		mg/kg							
Carbon disulfide	5.6	270	1500		mg/kg							
Carbon tetrachloride	0.04	0.5	0.7		mg/kg							
Chlorobenzene	1.3	120	650		mg/kg							
Chloroethane	0.06	3.9	5.4		mg/kg							
Chloroform	0.4	0.4	0.6		mg/kg							
Chloromethane	0.01	4	5.7		mg/kg							
cis-1,2-Dichloroethene	0.4	33	180		mg/kg							
cis-1,3-Dichloropropene					mg/kg							
cis-1,4-Dichloro-2-butene					mg/kg							
Dibromochloromethane	0.003	1.5	2.3		mg/kg							
Dibromomethane	0.3	96	550		mg/kg							
Dichlorodifluoromethane	44	77	410		mg/kg							
Ethyl methacrylate	3.5	630	3500		mg/kg							
Ethylbenzene	0.6	1500	9200		mg/kg							
Hexachlorobutadiene	1	6.2	13		mg/kg							
Iodomethane					mg/kg							
Isopropylbenzene (Cumene)	0.2	220	1200		mg/kg							
Methyl ethyl ketone (MEK)	17	16000	110000		mg/kg							
Methylene chloride	0.02	17	26		mg/kg							
Naphthalene	1.2	55	300		mg/kg							
n-Butylbenzene					mg/kg							
n-propylbenzene					mg/kg							
sec-Butylbenzene					mg/kg							
Styrene	3.6	3600	23000		mg/kg							
t-1,4-Dichloro-2-butene					mg/kg							
tert-Butyl methyl ether (MTBE)	0.09	4400	24000		mg/kg							
tert-Butylbenzene					mg/kg							
Tetrachloroethene	0.03	8.8	18		mg/kg							
Toluene	0.5	7500	60000		mg/kg							
trans-1,2-Dichloroethene	0.7	53	290		mg/kg							
trans-1,3-Dichloropropene					mg/kg							
Trichloroethene	0.03	6.4	9.3		mg/kg							
Trichlorofluoromethane	33	270	1500		mg/kg							
Vinyl acetate	0.4	320	1700		mg/kg							
Vinyl chloride	0.007	0.2	0.8		mg/kg							
Xylenes- Total	0.2	130	700		mg/kg							
Phenolic Compounds												
2-Methylphenol(o-Cresol)	0.3	2,900	31,000		mg/kg	0.025 U	0.026 U	0.027 U	0.025 U	0.027 U	0.025 U	0.026 U
3&4-Methylphenol(m&p Cresol)	0.03/0.3***	300/2,900*	3,400/33,000#		mg/kg	0.052 U	0.053 U	0.056 U	0.052 U	0.055 U	0.051 U	0.053 U
Pentachlorophenol	0.03	7.2	28		mg/kg	***0.23 I****	0.022 U	0.023 U	0.022 U	0.023 U	0.022 U	0.022 U
SPLP Pentachlorophenol				1	µg/L	0.66 U 1p						
Phenol	0.05	500	220,000		mg/kg	0.032 U	0.033 U	0.034 U	0.032 U	0.034 U	0.032 U	0.033 U

Notes:

- {BOLDED CONCENTRATION} exceeds its residential direct exposure limit established in Table 2 of Chapter 62-777, FAC.
- {BOLDED ITALICIZED CONCENTRATION} exceeds its commercial direct exposure limit established in Table 2 of Chapter 62-777, FAC.
- {BOLDED ITALICIZED CONCENTRATION} with an ** beside it exceeds its leachability limit established in Table 2 of Chapter 62-777, FAC.
- "U" flag indicates concentration was below the method detection limit (MDL).
- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).
- Benzo(a)pyrene equivalent is calculated using FDEP calculator. For those samples where all carcinogenic compounds are not detected, the equivalent was not calculated, but zero was input.

- * 300 mg/kg for p-cresol and 2,900 mg/kg for m-cresol
- # 3,400 mg/kg for p-cresol and 33,000 mg/kg for m-cresol
- *** 0.03 mg/kg for p-cresol and 0.3 mg/kg for m-cresol
- Blank space indicates that the compound was not analyzed at the well location
- "1p" indicates that a matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume
- "P1" indicates that routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits
- "P3" indictes that the sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

Table 4: Groundwater Analytical Summary - Arsenic
Facility Name: Ludlam Trail

		Groundwater Arsenic		
		Turbidity	**Arsenic**	**Arsenic, Dissolved**
Units		NTU	µg/L	µg/L
CTL			10	10
TWP-1	09/05/2017	125	5.0 U J(L1) L5	
TWP-3	09/01/2017	638	**67.7**	**47.5**
MW-3	10/9/2017	2.87	**24.1**	
MW-3E	1/18/2018	2.01	2.0	
TWP-7	09/01/2017	553	**69.8**	**65.4**
MW-7	10/3/2017	7.37	**34.1**	
	10/9/2017	7.92	**28.1**	
MW-7E	1/18/2018	1.40	3.1	
MW-9	1/18/2018	2.34	**100**	
TWP-10	09/01/2017	16	**138**	**141**
MW-10	10/2/2017	10.1	**24.3**	
	10/9/2017	8.55	**20.8**	
MW-10E	1/18/2018	2.81	0.65 U	
MW-11	1/18/2018	4.11	10	
TWP-12	09/05/2017	42	**11.2 J(L1) L5**	**15.5**
MW-12	10/2/2017	4.68	**10.3**	
	10/9/2017	8.67	**11.4**	
	1/17/2018	2.54	**21**	
TWP-14	09/05/2017	18.6	5.4 I J(L1) L5	
TWP-16	09/05/2017	67	5.0 U J(L1) L5	
TWP-17	09/01/2017	19.6	**26.0**	**29.9**
MW-17	10/2/2017	5.82	8.6 I	
	10/9/2017	6.07	5 U	
TWP-18	08/31/2017	163	5.0 U	
TWP-19	08/31/2017	17.7	6.2 I	
TWP-21	08/31/2017		5.0 U	
TWP-23	08/31/2017	171	5.0 U	
TWP-25	8/30/2017		5.0 U	
MW-25	1/17/2018	4.16	0.65 U	
MW-26	11/2/2017	6.21	5.0 U	
TWP-27	08/31/2017	125	**16.8**	**18.2**
MW-27	10/2/2017	4.89	**19.7**	
	10/9/2017	4.07	5.9 I	
	1/17/2018	1.03	**17**	
TWP-29	08/30/2017	10.7	**18.9**	**16.6**
MW-29	10/3/2017	6.23	5.7 I	
	10/9/2017	2.58	**19**	
MW-29E	1/19/2018	4.12	0.65 U	
MW-30	1/19/2018	4.01	1.1 I	
TWP-31	08/31/2017	41.7	5.0 U	
TWP-33	08/30/2017	343	**155**	**170**
MW-33	10/3/2017	7.25	6.6 I	
	10/9/2017	1.14	**25.5**	
MW-33E	1/19/2018	2.51	0.65 U	
TWP-35	08/31/2017	31.7	5.0 U	
MW-35	11/2/2017	3.39	5.0 U	
MW-35	11/15/2017	0.26	0.65 U	
MW-36	11/2/2017	6.37	5.0 U	
TWP-37	08/30/2017	351	**192**	**197**
MW-37	10/9/2017	1.63	**78.6**	
MW-37I	1/19/2018	4.23	2.5	
MW-37E	11/2/2017	5.61	5.0 U	
MW-37W	11/2/2017	5.75	5.0 U	
TWP-39	08/30/2017	45.3	5.0 U	
MW-38	11/1/2017	5.59	0.50 U	
MW-40	11/1/2017	5.33	0.50 U	
	11/15/2017	0.68	1.0 I	
TWP-41	08/30/2017	1.67	5.0 U	
MW-42	11/1/2017	2.91	0.50 U	
TWP-43	08/30/2017	11.3	**77.1**	
MW-43	10/3/2017	5.54	5.0 U	
	10/9/2017	1.3	5.0 U	
MW-44	1/18/2018	3.01	2.4	
TWP-45	08/29/2017	23.8	**21.9**	
MW-45	10/3/2017	4.43	5.0 U	
	10/9/2017	3.31	5.0 U	
MW-46	1/16/2018	3.15	0.65 U	
TWP-47	08/29/2017	10.7	5.0 U	
MW-47	1/16/2018	4.19	0.65 U	
MW-48	11/1/2017	4.93	0.51 I	
TWP-49	08/29/2017	30.3	5.0 U	
MW-49-2	1/16/2018	2.03	1.2 I	

Notes:

- {BOLDED CONCENTRATION} exceeds its Groundwater Cleanup Target Level (GCTL).
- "U" flag indicates concentration was below the method detection
- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).
- "J(L1)" Estimated value. Analyte Analyte recovery in the laboratory control sample(LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- "L5" flag indicates LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

Table 5: Groundwater Analytical Summary
Facility Name: Ludlam Trail

Location				MW-3	MW-3E	MW-7	MW-7E	MW-9	MW-10	MW-10E	MW-11	MW-12	MW-15	MW-17	MW-21-2	MW-22	MW-23	MW-25	MW-26	MW-27	MW-29	MW-29E	MW-30
Sample	**Date**	**GCTLs**	**NADCs**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/18/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/17/2018**	**1/11/2018**	**1/19/2018**	**1/19/2018**
6020 Metals																							
Lead	µg/L	15	150												0.45 I								
8270																							
1-Methylnaphthalene	µg/L	28	280	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.058 I	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
2-Methylnaphthalene	µg/L	28	280	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.051 I	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
Acenaphthene	µg/L	20	200	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Acenaphthylene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Anthracene	µg/L	2100	21000	0.0330 i	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Benzo(a)anthracene	µg/L	0.05	5	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Benzo(a)pyrene	µg/L	0.2	20	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(b)fluoranthene	µg/L	0.05	5	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0300 i	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(g,h,i)perylene	µg/L	210	2100	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(k)fluoranthene	µg/L	0.5	50	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Chrysene	µg/L	4.8	480	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0260 i	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Dibenz(a,h)anthracene	µg/L	0.005	0.5	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U
Fluoranthene	µg/L	280	2800	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0450 i	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.039 I	0.0230 U	0.0360 i	0.077	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Fluorene	µg/L	280	2800	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Indeno(1,2,3-cd)pyrene	µg/L	0.05	5	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Naphthalene	µg/L	14	140	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.158	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
Phenanthrene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.048	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
Pyrene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.055	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.057	0.0230 U	0.0240 i	0.0430 i	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U
8260																							
Chloromethane	µg/L	2.7	270														2.50 U						
Ammonia 350.1																							
Ammonia (N)	mg/L	2.8	28																				
SVOCs																							
Di-n-octylphthalate	µg/L	140	1400			0.86 U																	
2-Methylphenol(o-Cresol)	µg/L	35	350			0.70 U															1.1 U, 1p, P1		
3&4-Methylphenol(m&p Cresol)	µg/L	3.5/35*	35/350**			0.63 U															0.96 U, 1p, P1		
Pentachlorophenol	µg/L	1	100			0.63 U															0.96 U, 1p, P1		
Phenol	µg/L	10	100			0.52 U															0.79 U, 1p, P1, J(L1)		

Notes:

- {BOLDED CONCENTRATION} exceeds its Groundwater Cleanup Target Level (GCTL)

- {BOLDED ITALICIZED CONCENTRATION} exceeds its Natural Attenuation Default Concentration.

- "U" flag indicates concentration was below the method detection limit (MDL).

- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).

- Blank space indicates that the compound was not analyzed at the well location

- "1p" flag indicates a matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume

- "J(L1) flag indicates an estimated value. Analyte recovery in the laboratory control samples was above QC limits. Results for this analyte in associated samples may be biased high.

- "P1" flag indicates that the routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.

- * 3.5 µg/L for p-cresol and 35 µg/L for m-cresol

- ** 35 µg/L for p-cresol and 350 µg/L for m-cresol

Table 5: Groundwater Analytical Summary
Facility Name: Ludlam Trail

Location				MW-31	MW-33E	MW-33	MW-35	MW-36	MW-37	MW-37E	MW-37W	MW-38	MW-40	MW-42	MW-43	MW-44	MW-45	MW-46	MW-48
Sample	**Date**	**GCTLs**	**NADCs**	**1/19/2018**	**1/19/2018**	**1/11/2018**	**1/11/2018**	**1/11/2018**	**1/18/2018**	**1/11/2018**	**1/11/2018**	**1/11/2018**	**1/16/2018**	**1/16/2018**	**1/16/2018**	**1/18/2018**	**1/11/2018**	**1/16/2018**	**1/11/2018**
6020 Metals																			
Lead	µg/L	15	150																
8270																			
1-Methylnaphthalene	µg/L	28	280	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
2-Methylnaphthalene	µg/L	28	280	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
Acenaphthene	µg/L	20	200	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Acenaphthylene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Anthracene	µg/L	2100	21000	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Benzo(a)anthracene	µg/L	0.05	5	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Benzo(a)pyrene	µg/L	0.2	20	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(b)fluoranthene	µg/L	0.05	5	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(g,h,i)perylene	µg/L	210	2100	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Benzo(k)fluoranthene	µg/L	0.5	50	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Chrysene	µg/L	4.8	480	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Dibenz(a,h)anthracene	µg/L	0.005	0.5	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U	0.00480 U
Fluoranthene	µg/L	280	2800	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Fluorene	µg/L	280	2800	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Indeno(1,2,3-cd)pyrene	µg/L	0.05	5	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U	0.0140 U
Naphthalene	µg/L	14	140	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U	0.0470 U
Phenanthrene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
Pyrene	µg/L	210	2100	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U	0.0230 U	0.0240 U	0.0230 U
8260																			
Chloromethane	µg/L	2.7	270	2.50U															
Ammonia 350.1																			
Ammonia (N)	mg/L	2.8	28			0.0500 U													
SVOCs																			
Di-n-octylphthalate	µg/L	140	1400						0.87 U										
2-Methylphenol(o-Cresol)	µg/L	35	350			0.78 U, 1p			0.70 U										
3&4-Methylphenol(m&p Cresol)	µg/L	3.5/35*	35/350**			0.71 U, 1p			0.63 U										
Pentachlorophenol	µg/L	1	100			0.71 U, 1p			0.63 U										
Phenol	µg/L	10	100			0.58 U, 1p, J(L1)			0.52 U										

Notes:

- {BOLDED CONCENTRATION} exceeds its Groundwater Cleanup Target Level (GCTL)

- {BOLDED ITALICIZED CONCENTRATION} exceeds its Natural Attenuation Default Concentration.

- "U" flag indicates concentration was below the method detection limit (MDL).

- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).

- Blank space indicates that the compound was not analyzed at the well location

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- "P1" flag indicates that the routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.

- * 3.5 µg/L for p-cresol and 35 µg/L for m-cresol

- ** 35 µg/L for p-cresol and 350 µg/L for m-cresol

ATTACHMENT A

DERM CORRESPONDENCES

Zhang, Fangmei

From: Varley, Becky (RER) <Becky.Varley@miamidade.gov>
Sent: Wednesday, December 6, 2017 12:22 PM
To: Zhang, Fangmei; DERM PCD (RER)
Cc: Mayorga, Wilbur (RER); Bucknor, Lorna (RER); Rezola, Sandra (RER); Wright, Caroline (RER); Howard Nelson; Gonzalez, Jose; Speed, Robert; Smith, Lisa; Smith, Eddy
Subject: RE: Notification for Soil Sampling at Ludlam (HWR-836)

Categories: Filed by Newforma

Hi
Thanks for the notification. The DERM respectfully requests that you add SB-8 in addition to proposed sampling at SB-12, SB-30, SB-40, SB-42 and SB-48.
Thank you.

Rebecca S. Varley, Hydrogeologist 3
Department of Regulatory and Economic Resources
Division of Environmental Resources Management (DERM)
701 NW 1st Court ◦ 4th Floor ◦ Miami, Florida 33136
305-372-6824 Phone 305-372-6982 Fax

From: Zhang, Fangmei [mailto:FZhang@scsengineers.com]
Sent: Tuesday, December 05, 2017 11:45 AM
To: DERM PCD (RER)
Cc: Mayorga, Wilbur (RER); Varley, Becky (RER); Bucknor, Lorna (RER); Rezola, Sandra (RER); Wright, Caroline (RER); Howard Nelson; Gonzalez, Jose; Speed, Robert; Smith, Lisa; Smith, Eddy
Subject: Notification for Soil Sampling at Ludlam (HWR-836)

Good morning all.

By this email I am notifying DERM that we plan to conduct soil sampling at Ludlam Corridor Properties on December 8, 2017 in response to Comment 2.c in DERM's October 31, 2017 correspondence.

We are planning to advance five soil borings at the former locations of SB-12, SB-30, SB-40, SB-42 and SB-48, and collect soil samples from the 0-6" and 6"-2 ft depth at each location. The 10 soil samples will be analyzed for cresols, pentachlorophenol and phenol. Please provide your concurrence, and feel free to call me if you have any questions or need additional information.

Thank you. Have a great day!

Fangmei Zhang, PhD, P.E.
Sr. Project Manager
SCS Engineers
7700 N Kendall Drive, Suite 300
Miami, FL 33156
(305) 412-8185 x 2053 (W)
(786) 792-5364 (D)
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Ownership Makes a Difference!

MIAMI-DADE COUNTY
Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources
Environmental Resources Management
701 NW 1st Court, 4th Floor
Miami, Florida 33136-3912
T 305-372-6700 F 305-372-6982

miamidade.gov

October 31, 2017

Kolleen Cobb
Flagler Global Logistics LLC
2855 LeJeune Rd, 4th Floor
Coral Gables, FL 33134

CERTIFIED MAIL NO. 7014 1200 0002 0821 5357
RETURN RECEIPT REQUESTED

RE: Phase II Environmental Site Assessment Report dated October 18, 2017 submitted by SCS Engineers for the Ludlam Corridor ("the Site") (HWR-836), located between NW 7 Street and SW 80 Street and between 69 Avenue and 70 Avenue (folio numbers: 30-3052-000-0020, 30-4002-000-0111, 30-4011-018-0040, 30-4011-018-0080, 30-4011-000-0050, 30-4011-019-0690, 30-4014-000-0070, 30-4023-000-0500, 30-4026-000-0190, 30-4035-000-0210, 3040-110-19-1100, 30-403-5000-1330, 30-4035-000-1440, and 30-4035-000-1280), Miami-Dade County, Florida.

Dear Ms. Cobb:

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has reviewed the above-referenced document received October 18, 2017. The levels of Arsenic, Total Recoverable Petroleum Hydrocarbons (TRPH) and Polycyclic Aromatic Hydrocarbons (PAHs) in the soil and Arsenic and Chloromethane in the groundwater constitute violations of Chapter 24, Code of Miami-Dade County (the Code), specifically, Sections 24-44, 24-27, 24-28, and 24-29 of the Code. Therefore, pursuant to Sections 24-7(15), 24-7(26), and 24-44(2)(g) of the Code, a Site Assessment Report (SAR) is required. The following shall be addressed:

1. Based on the magnitude and extent of Arsenic and PAH soil contamination within the corridor, temporary measures to restrict public access (e.g. fencing, etc.) shall be implemented in areas accessible to the public, such as open residential lots and public recreation areas (e.g., no private fencing, etc.) and roadway entrance points. Documentation shall be provided to DERM within fifteen (15) days of receipt of this letter confirming the implementation of access restrictions in all applicable areas.

2. Additional soil assessment is required as follows:

    a. Additional soil assessment is required in areas where residential homes have encroached onto the railway corridor or in areas directly adjacent to the corridor that are known to be frequented for recreational use (e.g. vicinity of SB-24 (adjacent to A.D. Barnes Park), SB-29, SB-30, SB-31, SB-42, etc.). Soil shall be assessed at the 0-6" and 6"-2' intervals for Arsenic and PAHs. Intervals below 2' shall be archived and analyzed pending the results. Figures of soil sample locations and tables of assessment results shall be provided. If assessment results are above applicable cleanup target levels (CTLs) or background concentrations, delineate accordingly, including off-site as needed, and provide a plan to address the contamination.

    b. The Phase II states that "based on the consistency of soil data coupled with our knowledge of similar rail sites and proposed redevelopment, further soil sampling within the Site is not warranted". DERM acknowledges that if the responsible party elects a No Further Action with Conditions with institutional and engineering controls in

accordance with the Code and associated guidance documents (e.g., pavement, pavers, 2 feet of clean fill or equivalent), further sampling requirements within the interior of the Site may be limited. However, hot spot areas may require delineation regardless of the closure option elected. Additionally, irrespective of the closure option elected, soils at the property boundary, or boundary of the engineering control, if applicable, shall meet the Direct Exposure Residential Soil CTLs, or applicable background concentrations, and leachability based on groundwater criteria. Further, based on the Phase II analytical results, the consistency of soil data has not been demonstrated. For example, several transects demonstrated a lack of reduction in concentrations with distance from the centerline (e.g., SB-1D(0.5-2') and SB-21-1(0.5-2'), etc.). Therefore, a soil sampling plan shall be provided for hot spot delineation and delineation of the contaminated soil horizontally and vertically up to, or at (as applicable), the property boundaries, and, if necessary, beyond. The soil sampling plan shall also consider and address the above-referenced lack of consistency in soil data and include an analysis of potential gaps in soil assessment. Be advised, Arsenic in soil shall be delineated to the regional background values of 3.5 mg/kg in the 0-6" interval and 2.1 in intervals beneath the 0-6" interval, as referenced in DERM's Anthropogenic Background Study for Miami-Dade County Technical Memorandum dated April 3, 2014.

c. Based on the Phase II Arsenic and PAH results, confirming residual contamination from historic railroad use, in those areas containing the highest concentrations of Arsenic and PAHs, a representative number of delineating and/or confirmation soil samples shall be analyzed for cresols, pentachlorophenol and phenol. Based on the results, additional assessment may be required.

d. The soil boring 7 location should have been located in the vicinity of 883854.1331 520871.9264 feet (NAD 1983 State Plane Florida East). Reinstall a soil boring in this vicinity and collect soil samples at the 0-6" and 6"-2' intervals for VOC (full EPA 8260 scan – low levels), PAH, TRPH, Arsenic, Cadmium, Chromium, Lead, and Copper. Intervals below 2' shall be archived and analyzed pending the results.

e. PAH SPLP testing is required at the following locations: SB-1D (6"-2'), SB-8 (0-6"), SB-10-2 (0-6"), SB-12 (0-6"), SB-16 (0-6"), SB-21-2 (0-6"), SB-34 (6"-2'), SB-38 (6"-2') and SB-41-3 (0-6"). Alternatively, in lieu of the SPLP analysis requested above, pursuant to 24-44(2)(f)(ii)2 of the Code, you have the option of conducting one year of groundwater monitoring in the locations specified to demonstrate that contaminants will not leach into the groundwater at concentrations that exceed the applicable CTLs.

f. It appears that a layer of fill was added to the property between SW 40 St and SW 80 St. (SB-24 through SB-49). However, the soil boring logs in these areas do not indicate any major lithological differences between the upper intervals compared to the same intervals throughout the length of the Site. Therefore, provide clarification if fill was observed in soil borings, and if observed, provide documentation of the source and thickness of the fill as well as the length of time the fill has been in place. Include a discussion on how the sampling was adjusted in these areas or whether the fill was

sampled. Be advised that based on the information provided, additional soil and/or groundwater sampling may be required.

3. Additional groundwater sampling is required. A Groundwater Sampling Plan shall be provided to DERM for review and approval that evaluates and addresses the seeming lack of correlation between soil and groundwater data. For example, the highest groundwater Arsenic concentration was documented at MW-37 (78.7 ug/L), where the Arsenic soil concentration immediately above the water table was below the CTL (SB-37, 2.0 mg/kg at 2-4'). The Groundwater Sampling Plan shall also consider lithologic variations and differences in unsaturated soil depths (e.g., SB-33, etc.), and shall address the following:

    a. Horizontal delineation is required in all directions at each location with results above the applicable groundwater CTL. However, monitoring wells that marginally exceeded the Arsenic groundwater CTL of 10 ug/l (e.g., MW-12, etc.) may be resampled to confirm the result. The results from adjacent monitoring wells to the north and south may serve as the north and south delineation points, however consideration should be given to the need to tighten the delineation in the north/south direction for purposes of potential remediation and/or stormwater drainage design and requirements. Contaminated groundwater shall be delineated laterally, in the east-west direction, to the property boundaries, and beyond, if necessary. Sample results from temporary monitoring wells may only be used for screening purposes; samples from permanent monitoring wells (MWs) are required to demonstrate the contaminant plume(s) have been delineated. Depending on the results, additional horizontal and/or vertical delineation may be required.

    b. Groundwater assessment is required in locations that documented the highest soil Arsenic concentrations where groundwater was not assessed (e.g., SB-30, SB-38, SB-39, SB-40, SB-42, etc.). Additionally, groundwater assessment shall be conducted at those locations where Arsenic was documented at the interval directly above the groundwater interface (SB-9, SB-11, SB-13, SB-28, SB-32, SB-46 and SB-48). Based on the results, additional soil and/or groundwater assessment may be required.

    c. A groundwater sample for ammonia is required from MW-33.

    d. Groundwater samples shall be collected for pentachlorophenol, phenol and cresols at locations MW-37, MW-33, MW-29 and MW-7, and at any soil sample location where these contaminants exceed leachability based on groundwater CTLs, upon addressing comment 2c. above, if applicable.

    e. The analytical results for Chloromethane in the temporary wells exceeded the applicable groundwater criteria at location TWP-12, TWP-23, and TWP-31, however only one permanent well was installed and sampled at location TWP-12. The report states that Chloromethane is not believed to be a potential contaminant of concern in the groundwater. Please provide additional explanation regarding this conclusion.

    f. Based on the soil Arsenic concentrations in the locations of SB-47 and SB-49, and the potential presence of private residential wells in these areas, permanent shallow

monitoring wells shall be installed in these locations. Additionally, based on the Arsenic concentration in MW-37, and it's proximity to residences with potential private wells, a vertical extent well shall be installed immediately adjacent to MW-37. Note that permanent or temporary surface casing should be used to minimize the potential for contaminant drag-down. An evaluation of the need for double-casing of vertical extent wells shall be based on lithology, zone of contamination, and the existence of a confining/retarding unit.

g. Based on the results for TCLP Lead at location SB-21-2(0-6") and SB-21-4 (0-6"), exceeding the groundwater CTL, and total Lead exceeding the Miami-Dade County Lead background concentration in certain locations, the Groundwater Sampling Plan shall propose the sampling of representative monitoring wells for Lead to demonstrate lack of leaching.

h. Based on the SPLP PAH results, the monitoring wells requested in the areas of SB-9, SB-11, SB-13, SB-40, SB-42 and SB-47 for arsenic analysis shall also be sampled for PAHs. Additionally, install a permanent shallow monitoring well for PAH analysis at the following locations: SB-2, SB-15, SB-21-5, SB-22, SB-23, SB-24, SB-25, SB-26, SB-35 and SB-44. However, for those locations that had SPLP PAH results with a qualifier indicating that the sample exceeded holding times, resampling and analysis for SPLP PAH may be conducted to demonstrate compliance with the groundwater CTLs.

i. Be advised that the monitoring wells shall be sampled using the low-flow/low-volume purging and sampling technique to reduce sample turbidity.

4. A well survey shall be conducted that identifies the location of all municipal/public wells and private supply wells (e.g., potable, irrigation, industrial, etc.) identified within ½ mile and ¼ mile, respectively, of the Site. A table summarizing the capacity, use and well construction details of all the water supply wells identified and a well location map shall be provided. Be advised that based on the private well locations and depths, and the results of the additional groundwater assessment, additional vertical extent wells may be required.

5. Provide a scaled site map clearly depicting easements and lease boundaries. Also, provide a site map showing all surface and sub-surface features such as utilities, current and past above and underground structures, current and past storage areas, local drainage features, natural and man-made structures that may influence mounding or plume migration and existing land cover.

6. For those samples that exceeded holding times, resamples shall be collected if the data will be used to demonstrate compliance with the applicable CTLs (e.g., soil Speciation for FL-PRO and SPLP PAH results, etc.) or to delineate the vertical and/or horizontal extent of contamination. The analysis for samples that exceeded holding times with results above the applicable CTL may also be repeated. Be advised, if the resamples meet the applicable criteria, no additional sampling will be required.

7. The soil and groundwater summary tables shall be revised to include the results with the assigned qualifier, as applicable. Also, the report shall include a discussion regarding the

QA/QC issues (qualifiers) and the potential implications with respect to the validity of the sample results.

8. One or more scaled site maps that illustrate the degree and extent of groundwater and soil (for each sampling interval) contamination using sufficient isoconcentration lines, as feasible, shall be provided in the next submittal.

9. The following errors on the summary tables and figures shall be corrected:

    a. SB-32 (0-0.5 and (0.5-2) metals data is not in Table 7.
    b. Revise labels for SB-22 intervals on the tables and maps. Clarify that the results are correct for the intervals provided.
    c. Table 5 SB-46 results entered under the SB-49-1 row shall be revised.
    d. Verify the correct location of SB-13 since the coordinates as plotted indicate the location is approximately 790' south of SB-12 and approximately 275' north of SB-14, not 500' from each. Similarly, the coordinates as plotted for SB-33-2 are approximately 310' north of the SB-33 transect, please verify the correct location.
    e. Verify the correct location of SB-1 and associated transect soil borings since the coordinates as plotted indicate the location of all of the soil borings are on the east side of the railroad track.
    f. Based on the groundwater sampling logs, the sample date for MW-7, MW-33, MW-43, MW-45 and MW-37 was 10/3/17 and not 10/2/17 as indicated in Table 9.

10. Table 3 (MW Construction Details) shall be updated to include the top of casing elevation, depth to groundwater and water table elevations.

11. The dissolved Arsenic laboratory results for TWP-27, 33 and 37 are missing and shall be provided in the next submittal.

12. Chain of custody forms for TWP-21, 19 and 18 are missing and shall be provided in the next submittal.

13. A soil boring log has SB-20 crossed out and replaced by SB-18, and there is an additional log for SB-20. However, there is a missing Chain of Custody form for SB-18. Verify that the lab data for SB-20 is actually for SB-20 and the lab data for SB-18 is actually for SB-18. Provide a table and map depicting the results at each location with the correct sample results and sample dates and corresponding laboratory report ID #.

14. Clarify the discrepancy between MW-37 installed and sampled at location TWP-39 and subsequently placed at TWP-37 location. The report indicates the well ID in sampling logs and the laboratory report was shown as MW-37 at the MW-39 location. Provide a table and map depicting the results at each location with the correct sample results and sample dates and corresponding laboratory report ID #.

15. The report references that monitoring wells were resampled for total Arsenic where low pH values were reported due to equipment failure; however, the calibration logs indicate the equipment on the date of sampling (10/3/17 and 10/2/17) was functioning. Provide an

explanation regarding the equipment failure and how the equipment was repaired and/or an explanation for the low pH values in the groundwater.

16. The tubing material referenced on the groundwater sampling logs is "PE". Please include additional information regarding whether the tubing is low density or high density polyethylene (PE) for the sampling event at MW-12 and in all future groundwater sampling logs.

17. Monitoring well schematics shall be provided for the permanent wells. In the case where the borehole was over drilled by greater than 3' below the depth of the monitoring well, discuss whether the additional borehole depth will create a preferential pathway for contaminants since the borehole appears to have been completely backfilled with the filter pack (30/65 fine grain sand).

18. Provide disposal receipts for the Investigative Derived Waste (IDW) generated from the monitoring well installation and soil and groundwater sampling. Also, please provide any analytical results required by the disposal facility to properly dispose of the soil/groundwater.

19. The report references an average concentration of Benzo(a)pyrene Equivalents of 1.5 mg/kg. Please explain how this average concentration was calculated.

20. Please note that the folio number "30-4035-000-01530", referenced on page 1 of the Phase II, is not a valid folio.

21. Be advised that per the Miami Dade County Parks, Recreation and Open Spaces Department (PROS), site plans or cross sections for the Ludlam Trail have not yet been developed. Therefore, any conceptual corrective action plan and/or engineering control proposal that utilizes elements of the trail design, such as the width of paved areas, requires consultation with and approval by PROS.

22. As discussed in the October 16, 2017 DERM meeting and as stated in the report, a topographic survey shall be completed and submitted in electronic (AutoCAD) format as well as hard copy.

23. Future Development Concerns:

    a. Any proposed development of the Ludlam Trail resulting in greater than 2 acres of impervious surface will require a surface water management General Permit from the DERM, for construction of the required stormwater management system. A Class IV permit in areas of groundwater contamination will also be required. Be advised, additional groundwater assessment will be required in areas of proposed stormwater drainage, unless recent (within 9 months) groundwater data for the contaminants of concern exists for the area in question.

    b. Based on the review of the Phase I received September 14, 2015, additional soil and groundwater sampling pursuant to the letter dated October 29, 2015, will be required within the portions of the Ludlam Trail contemplated to be retained by FECI. Additional assessment may be required based on the results.

c. Once site assessment activities have been completed, and prior to site development and earthwork activities, a site specific Contaminated Soil Management Plan (SMP), Air Monitoring Plan (AMP), Dust Control Plan (DCP), and Health and Safety Plan (HASP), signed by a certified industrial hygienist, shall be provided to the department for review.

Based on the above, and pursuant to Sections 24-7(15), 24-7(26), and 24-44(2)(g) of the Code, you are hereby ordered to submit to this office for review, within ninety (90) days of receipt of this letter, two copies of a Site Assessment Report (SAR), one paper and one electronic PDF on CD, prepared in accordance with Section 24-44(2)(j)(iv) of the Code. A review fee of $1451.25 ($1350 for the review of the SAR and $101.25 for the RER surcharge) shall be included. Specific guidance for the preparation of the SAR may be downloaded from DERM's web page at: www.miamidade.gov/environment/pollution-remediation.asp. Additionally, the documentation of access restriction implementation and the topographic survey shall be provided within fifteen (15) days of receipt of this letter, and the soil and groundwater sampling plan shall be provided within thirty (30) days of receipt of this letter.

Be advised that failure to comply with the above orders may result in enforcement action for this site.

Any person aggrieved by any action or decision of the DERM Director may appeal said action or decision to the Environmental Quality Control Board (EQCB) by filing a written notice of appeal along with submittal of the applicable fee, to the Code Coordination and Public Hearings Section of DERM within fifteen (15) days of the date of the action or decision by DERM.

If you have any questions concerning the above, please contact me at Wilbur.Mayorga@miamidade.gov or (305) 372-6700.

Sincerely,

Wilbur Mayorga, P.E., Chief
Environmental Monitoring & Restoration Division

RSV

ec: Lee N. Hefty, RER Director, Division of Environmental Resources Management
Maria I. Nardi, Director, Parks, Recreation and Open Spaces
Jose M. Gonzalez, FEC Industries, jose.gonzalez@feci.com
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HWR-716

MIAMI-DADE COUNTY
Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources
Environmental Resources Management
701 NW 1st Court, 4th Floor
Miami, Florida 33136-3912
T 305-372-6700 F 305-372-6982
miamidade.gov

December 21, 2017

Kolleen Cobb
LR 13-18 LLC and FECI LT 1 LLC
2855 Le Jeune Rd., 4th Floor
Coral Gables, FL 33134

CERTIFIED MAIL NO. 7014 1200 0002 0821 5456
RETURN RECEIPT REQUESTED

RE: Proposed Groundwater Sampling and Analysis Plan - Ludlam Corridor Properties 'All Green Trail' Former 1-Mile and 5-Mile Railroad Corridors ("the Site"), located in portions between NW 7 Street and SW 80 Street and between 69 Avenue and 70 Avenue, (folio numbers: 30-3052-000-0020, 30-4002-000-0111, 30-4011-018-0040, 30-4011-018-0080, 30-4011-000-0050, 30-4011-019-0690, 30-4014-000-0070, 30-4023-000-0500, 30-4026-000-0190, 30-4035-000-0210, 3040-110-19-1100, 30-403-5000-1330, 30-4035-000-1440, and 30-4035-000-1280), Miami-Dade County, Florida (HWR-836).

Dear Ms. Cobb:

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has reviewed the above-referenced document received December 7, 2017. The Plan is approved with the following modifications:

1. The proposed MWs 3E, 7E, 10E, 29E and 33E on the eastern boundary to be sampled for arsenic are approved. Please be advised that a continuous eastwardly regional flow cannot be presumed for the entire site as local-scale variations in groundwater flow and direction can be caused by spatial variability of hydraulic characteristics, such as nearby pumping wells, surface water bodies (e.g., adjacent to MW-29, etc.), etc. Therefore, the need for additional monitoring wells along the western boundary will be determined based on future soil and groundwater results and observed variations in local-scale groundwater flow directions as indicated from groundwater elevation contour maps.

2. MW-27 shall be resampled for arsenic to confirm contaminant concentrations below the applicable groundwater cleanup target levels (GCTLs).

3. The proposed monitoring wells at SB-9, 11, 25, 30 and 46 are approved; however, a monitoring well shall also be installed at SB-49-2 and SB-47 due to the soil arsenic concentrations and nearby private potable wells.

4. In addition to the proposed groundwater sampling to assess the potential PAH leachability throughout the corridor, DERM requires monitoring wells at SB-15, SB-21-2, and SB-22 to be sampled for PAHs. However, please be advised that you have the option of conducting Synthetic Precipitation Leaching Procedure (SPLP) testing on those soil samples from the above-referenced soil borings (i.e., SB-21-2, etc.) to determine if leachate concentrations exceed the applicable GCTLs.

5. DERM acknowledges that a statistical comparison of on-site lead to the Miami-Dade County lead background data set identified statistically similar concentrations. However, the statistical comparison did not address the fact that lead results for soil samples SB-21-2 and SB-21-4 (0-6") are outliers within the Ludlam data set and not consistent with Miami-

Dade County's background distribution. Therefore, based on the above, and the Toxicity Characterization Leaching Procedure (TCLP) values for lead (above the groundwater CTL), the requested monitoring well at SB-21-2 shall also be sampled for lead. Alternatively, you have the option of conducting SPLP analysis on SB-21-2 (0-6") and SB-21-4 (0-6") to determine the need for lead groundwater assessment in this area. Please be advised that based on the results, additional soil and/or groundwater assessment may be required.

6. Additional groundwater sampling may be required based on the results for pentachlorophenol, phenol and cresols at SB-8, 12, 30, 40, 42, 48.

7. As previously requested, a vertical extent well shall be installed immediately adjacent to MW-37. Note that permanent or temporary surface casing should be used to minimize the potential for contaminant drag-down. An evaluation of the need for double-casing of vertical extent wells shall be based on lithology, zone of contamination, and the existence of a confining/retarding unit.

8. Based on the sampling notification dated November 10, 2017, SCS planned to sample 9 monitoring wells on November 15, 2017; however, the results for that sampling event were not provided (except MW-35 and MW-40). Please provide the results for the remaining seven MWs.

9. The monitoring well construction data for MW-26, 37W, 37E, 35 and 36 indicate that the borehole above the grout was backfilled with drill cuttings up to 6' above the grout in some cases. Provide an explanation for this practice at these monitoring wells and evaluate and discuss if the material used will prevent surface water run-off from migrating down the outside of the well casing or the borehole.

Be advised that the vertical and horizontal extent of the contaminant plume(s) shall be fully delineated. DERM has the option to split any samples deemed necessary with the consultant or laboratory at the subject site. The consultant collecting the samples shall perform field sampling work in accordance with the Standard Operating Procedures provided in Chapter 62-160, Florida Administrative Code (FAC), as amended. The laboratory analyzing the samples shall perform laboratory analyses pursuant to the National Environmental Laboratory Accreditation Program (NELAP) certification requirements. If the data submitted exhibits a substantial variance from DERM split sample analysis, a complete resampling using two independent certified laboratories will be required.

DERM shall be notified in writing a minimum of three (3) working days prior to the implementation of any sampling or field activities. Email notifications shall be directed to DERMPCD@miamidade.gov. Please include the DERM file number on all correspondence.

Based on the above, and pursuant to Sections 24-7(15), 24-7(26), and 24-44(2)(g) of the Code, you are hereby ordered to submit to this office for review, within forty-five (45) days of receipt of this letter, two copies of a Site Assessment Report (SAR), one paper and one electronic PDF on CD, prepared in accordance with Section 24-44(2)(j)(iv) of the Code. A review fee of $1451.25 ($1350 for the review of the SAR and $101.25 for the RER surcharge) shall be included. Specific guidance for the

preparation of the SAR may be downloaded from DERM's web page at: www.miamidade.gov/environment/pollution-remediation.asp.

Be advised, failure to adhere to the items and timeframes stipulated above may result in enforcement action for this site.

Any person aggrieved by any action or decision of the DERM Director may appeal said action or decision to the Environmental Quality Control Board (EQCB) by filing a written notice of appeal along with submittal of the applicable fee, to the Code Coordination and Public Hearings Section of DERM within fifteen (15) days of the date of the action or decision by DERM.

If you have any questions concerning the above, please contact me at Wilbur.Mayorga@miamidade.gov or (305) 372-6700.

Sincerely,

Wilbur Mayorga, P.E., Chief
Environmental Monitoring & Restoration Division

RSV
ec: Lee N. Hefty, RER Assistant Director, Division of Environmental Resources Management
Maria I. Nardi, Director, Parks, Recreation and Open Spaces
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HWR-716

ATTACHMENT B

SOIL BORING LOGS

SOIL BORING LOG

Site Name:	Boring ID:	Folio/Permit Number:
Ludlam Corridor	SB-12A	N/A
Site Address:	**Geologist's Name:**	**Environmental Technician's Name:**
N/A	Maria Giudici	John Marra

Environmental Contractor:	Borehole Start Date: 8-Dec-2017	Borehole Start Time: 1325 ☐ AM ☐ PM
SCS Engineers	End Date: 8-Dec-2017	End Time: 1330 ☐ AM ☐ PM

Drilling contractor:	Borehole Depth (feet):	Borehole Diameter (inches):	Apparent Borehole DTW (feet):
JAEE	7	2	7

Drilling Method(s):	Pavement Thickness (inches):	Deposition of Drill Cuttings:	Borehole Completion:
Direct Push	N/A	Backfill	Backfill

Sample Type	Sample Depth Interval (feet)	Depth (feet)	Sample Description (include grain size based, odors, staining, and other remarks)	Lab Soil Sample/ Collection Time
DP	0-0.5	0.5	0-0.5' Dark brown silty topsoil	SB-12A (0-0.5) 1345
DP	0.5-2	1.0	0.5-7' Dark brown sandy topsoil with sand	SB-12A (0.5-2) 1347
		2.0		
DP	2-4	3.0		SB-12A (2-4) 1348
		4.0		
DP	4-6	5.0		SB-12A (4-6) 1349
		6.0		
DP	6-7	7.0		SB-12A (6-7) 1350
		8.0		
		9.0		
		10.0		

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

SOIL BORING LOG

Site Name:	Boring ID:	Folio/Permit Number:
Ludlam Corridor	SB-8A	N/A
Site Address:	**Geologist's Name:**	**Environmental Technician's Name:**
N/A	Maria Giudici	John Marra

Environmental Contractor:	Borehole Start Date:	Borehole Start Time:
SCS Engineers	8-Dec-2017	1415 ☐ AM ☐ PM
	End Date: 8-Dec-2017	End Time: 1420 ☐ AM ☐ PM

Drilling contractor:	Borehole Depth (feet):	Borehole Diameter (inches):	Apparent Borehole DTW (feet):
JAEE	8	2	6

Drilling Method(s):	Pavement Thickness (inches):	Deposition of Drill Cuttings:	Borehole Completion:
Direct Push	N/A	Backfill	Backfill

Sample Type	Sample Depth Interval (feet)	Depth (feet)	Sample Description (include grain size based, odors, staining, and other remarks)	Lab Soil Sample/ Collection Time
DP	0-0.5	0.5	0-0.5' Dark brown silty topsoil	SB-8A (0-0.5) 1440
DP	0.5-2	1.0 2.0	0.5-2' Dark brown fine grained sand	SB-8A (0.5-2) 1441
DP	2-4	3.0 4.0	2-5' Tan fine grained sand	SB-8A (2-4) 1443
DP	4-6	5.0 6.0	5-8' Tan limestone	SB-8A (4-6) 1444
		7.0 8.0		
		9.0		
		10.0		

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Boring/Well Number: SB-30A	Permit Number:		FDEP Facility Identification Number:
Site Name: Ludlum Trail	Borehole Start Date: 12/8/2017 End Date: 12/8/2017	Borehole Start Time: ☑ AM ☐ PM End Time: ☐ AM ☐ PM	
Environmental Contractor: SCS Engineers	Geologist's Name: Maria Giudici		Environmental Technician's Name: Karinne Bodosky.
Drilling Company: JAKE	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2.5	Borehole Depth (feet): 8
Drilling Method(s): Direct Push.	Apparent Borehole DTW (in feet from soil moisture content):	Measured Well DTW (in feet after water recharges in well): N/A.	OVA (list model and check type): N/A. ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☑ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☐ Backfill ☑ Other (describe) fine grain Sand

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0-0.5			N/A			1	0-0.5 off white crushed limerock fill.			SB-30A (0-0.5)
	0.5-2						2	0.5-1.5 Dark Brown silty topsoil with small to medium limestone fragments with some igneous rock fragments			SB-30A (0.5-2)
	2-4						3				SB-30A (2-4)
	4-6						4	1.5-4 Dark orange silt with small limestone fragments.			SB-30A (4-6).
							5				
							6	4-8 tan to orange limestone			
							7				
							8				
							9	Soil Boring terminated @ 4 ft BGS			
							10				
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Page 1 of 1

Boring/Well Number: SB-40A	Permit Number:	FDEP Facility Identification Number:
Site Name: Ludlum Trail	Borehole Start Date: 12/8/2017 End Date: 12/8/2017	Borehole Start Time: ☐ AM ☐ PM End Time: ☐ AM ☐ PM
Environmental Contractor: SCS Engineers	Geologist's Name: Marra Giudici	Environmental Technician's Name: Karinne Bedosky.
Drilling Company: JAEE	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2.5
Borehole Depth (feet): 8		
Drilling Method(s): Direct Push	Apparent Borehole DTW (in feet from soil moisture content): ~6	Measured Well DTW (in feet after water recharges in well): N/A
OVA (list model and check type): N/A ☐ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☑ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☐ Backfill ☑ Other (describe) fine grain sand

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0-0.5 0.5-2 2-4 4-6			N/A			1 2 3 4 5 6 7 8 9 10 11 12	0-0.5 offwhite crushed limerock fill 0.5-2.5 Dark Brown to offwhite limerock fill. 2.5-4 tan to orange limerock fill 4-8 tan to offwhite limestone. Soil Boring Terminated @ 8 feet BGS.			SB-40A (0-0.5) SB-40A (0.5-2) SB-40A (2-4) SB-40A 4-6.

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Page 1 of _____

Boring/Well Number: SB-42A	Permit Number:		FDEP Facility Identification Number:
Site Name: Ludlum Trail	Borehole Start Date: 12/8/2017 End Date: 12/8/2017	Borehole Start Time: ☑ AM ☐ PM End Time: ☑ AM ☐ PM	
Environmental Contractor: SCS Engineers	Geologist's Name: Maria Giudici		Environmental Technician's Name: Karinne Bedosky.
Drilling Company: JACE	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2.5	Borehole Depth (feet): 8
Drilling Method(s): Direct Push	Apparent Borehole DTW (in feet from soil moisture content): ~6	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): N/A ☐ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☑ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☑ Backfill ☑ Other (describe) fine grain Sand

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0-0.5 0.5-2 2-4 4-6			N/A			1 2 3 4 5 6 7 8	0-1 Offsite crushed limerock fill 1-2.5 Dark Brown silty topsoil with small to medium limestone fragments. 2.5-2.75 orange silt. 2.75-4 tan to orange limestone 4-8 Tan to offwhite limestone			SB-42A (0-0.5) SB-48A (0.5-2) SB-48A (2-4) SB-48A (4-6)
							9 10 11 12	Soil Boring terminated @ 8ft BGS.			

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Boring/Well Number: SB-48A	Permit Number:	FDEP Facility Identification Number:
Site Name: Ludlum Trail	Borehole Start Date: 12/8/2017 End Date: 12/8/2017	Borehole Start Time: 0900 ☑ AM ☐ PM End Time: 0905 ☑ AM ☐ PM
Environmental Contractor: SCS Engineers.	Geologist's Name: Maria Giudici	Environmental Technician's Name: Karinne Bedosky
Drilling Company: JAEE	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2.5
Borehole Depth (feet): 8		
Drilling Method(s): Direct Push	Apparent Borehole DTW (in feet from soil moisture content): ~7	Measured Well DTW (in feet after water recharges in well): ~7 MG
OVA (list model and check type): N/A. ☐ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☑ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☑ Backfill ☑ Other (describe) fine grain Sand

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0-0.5 0.5-2 2-4 4-6 6-7			N/A.			1 2 3 4 5 6 7 8 9 10 11 12	0-0.5 Tan to offwhite crushed limerock fill 0.5-2.5 Brown medium to fine grain sand with medium to large limestone fragments 2.5-6 Tan to orange limestone 6-8 offwhite limestone Soil Boring terminated @ 8 feet BGS.			SB-48A (0-0.5) SB-48A (0.5-2) SB-48A (2-4) SB-48A (4-6) SB-48A (6-7)

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

SOIL BORING LOG

Site Name:	Boring ID:	Folio/Permit Number:
Ludlam Corridor	SB-7R	N/A
Site Address:	**Geologist's Name:**	**Environmental Technician's Name:**
N/A	Anthony Pezzotti	N/A

Environmental Contractor:	Borehole Start Date:	Borehole Start Time:	
SCS Engineers	16-Jan-2018	10:40	☑ AM ☐ PM
	End Date: 16-Jan-2018	End Time: 10:42	☑ AM ☐ PM

Drilling contractor:	Borehole Depth (feet):	Borehole Diameter (inches):	Apparent Borehole DTW (feet):
JAEE	10	2.25	6

Drilling Method(s):	Pavement Thickness (inches):	Deposition of Drill Cuttings:	Borehole Completion:
Direct Push	3	Backfill	Backfill

Sample Type	Sample Depth Interval (feet)	Depth (feet)	Sample Description (include grain size based, odors, staining, and other remarks)	Lab Soil Sample/ Collection Time
DP	0-0.5	0.5	0-1' Light grey to medium brown fine sand with gravel	SB-7R (0-0.5) 10:45
DP	0.5-2	1.0		SB-7R (0.5-2) 10:50
		2.0	1'-3' Medium brown fine sand	
DP	2-4	3.0		SB-7R (2-4) 10:55
		4.0	3'-7' Medium brown to tan fine sand	
DP	4-6	5.0		SB-7R (4-6) 11:00
		6.0		
		7.0		
		8.0	7'-10' Light grey limestone	
		9.0		
		10.0		

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

ATTACHMENT C

WELL INSTALLATION DOCUMENTATION

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-3E	Ludlam corridor	N/A	January 16, 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface: 0

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15.2	15.2	4.5	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2" SCH 40 PVC	[X] Flush-Threaded [ ] Other (describe)	5.2 feet from 0 feet to 5.2 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" slotted SCH 40 PVC	0.01	10 feet from 5.2 feet to 15.2 feet

1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 Fine Sand	[ ] Yes [X] No	12 feet from 3.2 feet to 15.2 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Fine Sand	2 feet from 1.2 feet to 3.2 feet

Surface Seal Material:	Surface Seal Length:
Grout	1.2 feet from 0 feet to 1.2 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
1/16/18	[X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	7.22

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
0.92	NM	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	55	60	[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
white, none	clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-33E	Site Name: Ludlam	FDEP Facility I.D. Number:	Well Install Date(s): 11/12/2018

Well Location and Type (check appropriate boxes): [X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property [ ] Above Grade (AG) [X] Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose: [ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Manhole Diameter (inches)	Well Pad Size
17.3	17.3	4.5	6	2 feet by 2 feet

Riser Diameter and Material	Riser/Screen Connections	Riser Length
2" Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	7.3 feet from 0 feet to 7.3 feet

Screen Diameter and Material	Screen Slot Size	Screen Length
2" Sch 40 PVC slotted	0.01"	10 feet from 7.3 feet to 17.3 feet

1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size	Prepacked Filter Around Screen (check one)	Filter Pack Length
6/20 Sand	[ ] Yes [X] No	12 feet from 5.3 feet to 17.3 feet

Filter Pack Seal Material and Size	Filter Pack Seal Length
30/65 Sand	2 feet from 3.3 feet to 5.3 feet

Surface Seal Material	Surface Seal Length
Grout	3.3 feet from 0 feet to 3.3 feet

WELL DEVELOPMENT DATA

Well Development Date: 11/2/18	Well Development Method (check one): [X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	
Development Pump Type (check): [X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)		Depth to Groundwater (before developing in feet): 9.41'
Pumping Rate (gallons per minute): 0.92	Maximum Drawdown of Groundwater During Development (feet): N/A	Well Purged Dry (check one): [ ] Yes [X] No
Pumping Condition (check one): [X] Continuous [ ] Intermittent	Total Development Water Removed (gallons): 55	Development Duration (minutes): 60
Development Water Drummed (check one): [X] Yes [ ] No		
Water Appearance (color and odor) At Start of Development: White, clear		Water Appearance (color and odor) At End of Development: Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-31	Site Name: LUDLAM	FDEP Facility I.D. Number:	Well Install Date(s): 1/12/18

Well Location and Type (check appropriate boxes): [X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property [ ] Above Grade (AG) [X] Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose: [ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
17.5	17.5	4	6	2 feet by 2 feet

Riser Diameter and Material: 2" sch 40 PVC	Riser/Screen Connections: [X] Flush-Threaded [ ] Other (describe)	Riser Length: 7.5 feet; from 0 feet to 7.5 feet
Screen Diameter and Material: 2" slotted sch 40 PVC	Screen Slot Size: 0.01"	Screen Length: 10 feet; from 7.5 feet to 17.5 feet
1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet; from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet; from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet; from ____ feet to ____ feet
Filter Pack Material and Size: 6/20 sand	Prepacked Filter Around Screen (check one): [ ] Yes [X] No	Filter Pack Length: 12 feet; from 5.5 feet to 17.5 feet
Filter Pack Seal Material and Size: 30/65 sand		Filter Pack Seal Length: 1 feet; from 4.5 feet to 5.5 feet
Surface Seal Material: Fine grout		Surface Seal Length: 4.5 feet; from 0 feet to 4.5 feet

WELL DEVELOPMENT DATA

Well Development Date: 1/12/18	Well Development Method (check one): [X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	
Development Pump Type (check): [X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)		Depth to Groundwater (before developing in feet): 10.06
Pumping Rate (gallons per minute): 0.92	Maximum Drawdown of Groundwater During Development (feet): 14.5	Well Purged Dry (check one): [ ] Yes [X] No
Pumping Condition (check one): [ ] Continuous [ ] Intermittent	Total Development Water Removed (gallons): 55	Development Duration (minutes): 60
Development Water Drummed (check one): [X] Yes [ ] No		
Water Appearance (color and odor) At Start of Development: White, none		Water Appearance (color and odor) At End of Development: Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-30	Site Name: Ludlam	FDEP Facility I.D. Number:	Well Install Date(s): 1/12/18

Well Location and Type (check appropriate boxes): ☒ On-Site ☐ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☒ Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose: ☐ Perched Monitoring ☒ Shallow (Water-Table) Monitoring ☐ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet): 17.5	Well Depth (feet): 17.5	Borehole Diameter (inches): 4.5	Manhole Diameter (inches): 6

Well Pad Size: 2 feet by 2 feet

Riser Diameter and Material: 2" Sch 40 PVC

Riser/Screen Connections: ☒ Flush-Threaded ☐ Other (describe)

Riser Length: 7.5 feet from 0 feet to 7.5 feet

Screen Diameter and Material: 2" Slotted Sch 40 PVC

Screen Slot Size: 0.01"

Screen Length: 10 feet from 7.5 feet to 17.5 feet

1st Surface Casing Material: also check: ☐ Permanent ☐ Temporary

1st Surface Casing I.D. (inches): N/A

1st Surface Casing Length: ____ feet from ____ feet to ____ feet

2nd Surface Casing Material: also check: ☐ Permanent ☐ Temporary

2nd Surface Casing I.D. (inches): N/A

2nd Surface Casing Length: ____ feet from ____ feet to ____ feet

3rd Surface Casing Material: also check: ☐ Permanent ☐ Temporary

3rd Surface Casing I.D. (inches): N/A

3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size: 6/20 Sand

Prepacked Filter Around Screen (check one): ☐ Yes ☒ No

Filter Pack Length: 12.5 feet from 5 feet to 17.5 feet

Filter Pack Seal Material and Size: 30/65 Fine Sand

Filter Pack Seal Length: 2 feet from 3 feet to 5 feet

Surface Seal Material: Fine grout

Surface Seal Length: 3 feet from 0 feet to 3 feet

WELL DEVELOPMENT DATA

Well Development Date: 1/12/18

Well Development Method (check one): ☒ Surge/Pump ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check): ☒ Centrifugal ☐ Peristaltic ☐ Submersible ☐ Other (describe)

Depth to Groundwater (before developing in feet): 9.92

Pumping Rate (gallons per minute): 0.92

Maximum Drawdown of Groundwater During Development (feet): 10.12

Well Purged Dry (check one): ☐ Yes ☒ No

Pumping Condition (check one): ☒ Continuous ☐ Intermittent

Total Development Water Removed (gallons): 55

Development Duration (minutes): 60

Development Water Drummed (check one): ☒ Yes ☐ No

Water Appearance (color and odor) At Start of Development: White, none

Water Appearance (color and odor) At End of Development: Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-29E	Ludlam Corridor Properties 'All Green Trail'	N/A	Jan 12, 2018

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [x] Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):
17.3	17.3	4.5	6

Well Pad Size: 2 feet by 2 feet

Riser Diameter and Material: 2" Sch 40 PVC

Riser/Screen Connections:
- [x] Flush-Threaded
- [ ] Other (describe)

Riser Length: 7.3 feet from 0 feet to 7.3 feet

Screen Diameter and Material: Slotted 2" Sch 40 PVC

Screen Slot Size: 0.01

Screen Length: 10 feet from 7.3 feet to 17.3 feet

1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary

1st Surface Casing I.D. (inches): N/A

1st Surface Casing Length: ____ feet from ____ feet to ____ feet

2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary

2nd Surface Casing I.D. (inches): N/A

2nd Surface Casing Length: ____ feet from ____ feet to ____ feet

3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary

3rd Surface Casing I.D. (inches): N/A

3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size: 6/20 fine sand

Prepacked Filter Around Screen (check one):
- [ ] Yes
- [x] No

Filter Pack Length: 12 feet from 5.3 feet to 17.3 feet

Filter Pack Seal Material and Size: 30/65 fine sand

Filter Pack Seal Length: 2 feet from 3.3 feet to 5.3 feet

Surface Seal Material: fine grout

Surface Seal Length: 3.3 feet from 0 feet to 3.3 feet

WELL DEVELOPMENT DATA

Well Development Date: Jan 12, 2018

Well Development Method (check one):
- [x] Surge/Pu
- [ ] Pump
- [ ] Compressed Air
- [ ] Other (describe)

Development Pump Type (check):
- [x] Centrifugal
- [ ] Peristaltic
- [ ] Submersible
- [ ] Other (describe)

Depth to Groundwater (before developing in feet): 8.09

Pumping Rate (gallons per minute): 1

Maximum Drawdown of Groundwater During Development (feet): 9.70

Well Purged Dry (check one):
- [ ] Yes
- [x] No

Pumping Condition (check one):
- [x] Continuous
- [ ] Intermittent

Total Development Water Removed (gallons): 55

Development Duration (minutes): 55

Development Water Drummed (check one):
- [x] Yes
- [ ] No

Water Appearance (color and odor) At Start of Development: White, none

Water Appearance (color and odor) At End of Development: Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-15	Site Name: Ludlam	FDEP Facility I.D. Number:	Well Install Date(s): Jan 15, 2018

Well Location and Type (check appropriate boxes): [X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property [ ] Above Grade (AG) [X] Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose: [ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15.2	15.2	4	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
Sch 40 2" PVC	[X] Flush-Threaded [ ] Other (describe)	5.2 feet from 0 feet to 5.2 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
Sch 40 2" Slotted PVC	0.01	10 feet from 5.2 feet to 15.2 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	____ feet from ____ feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	____ feet from ____ feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	____ feet from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 Sand	[ ] Yes [X] No	12 feet from 3.2 feet to 15.2 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Sand	2 feet from 1.2 feet to 3.2 feet

Surface Seal Material:	Surface Seal Length:
Grout	1.2 feet from 0 feet to 1.2 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):	
Jan 15, 2018	[X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	7.33

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
0.92	8.62	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	55	60	[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
White, none	Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-11	Ludlam Corridor Properties 'All Green Trail'	N/A	Jan 15, 2018

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [x] Flush-to-Grade

If AG, list feet of riser above land surface: N/A

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15	15	4.5	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2" Sch 40 PVC	[x] Flush-Threaded [ ] Other (describe)	5 feet from 0 feet to 15 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
Slotted 2" Sch 40 PVC	0.01	10 feet from 5 feet to 15 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	feet from feet to feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	feet from feet to feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary	N/A	feet from feet to feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 fine sand	[ ] Yes [x] No	12 feet from 3 feet to 15 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 fine sand	2 feet from 1 feet to 3 feet

Surface Seal Material:	Surface Seal Length:
fine grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
1/15/18	[x] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[x] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	6.88

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
0.92	N/A	[ ] Yes [x] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[x] Continuous [ ] Intermittent	55	60	[x] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy, none	Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-10E	Site Name: Ludlam	FDEP Facility I.D. Number:	Well Install Date(s): Jan 15, 2018

Well Location and Type (check appropriate boxes): [X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property [ ] Above Grade (AG) [X] Flush-to-Grade
If AG, list feet of riser above land surface: N/A

Well Purpose: [ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15.2	15.2	4.5	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2" SCH 40 PVC	[X] Flush-Threaded [ ] Other (describe)	5.2 feet from 0 feet to 5.2 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Slotted SCH 40 PVC	0.01	10 feet from 5.2 feet to 15.2 feet

1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 Sand	[ ] Yes [X] No	12.2 feet from 3 feet to 15.2 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Sand	2 feet from 1 feet to 3 feet

Surface Seal Material:	Surface Seal Length:
Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date: Jan 15, 2018	Well Development Method (check one): [X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	
Development Pump Type (check): [X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)		Depth to Groundwater (before developing in feet): 6.83
Pumping Rate (gallons per minute): 0.92	Maximum Drawdown of Groundwater During Development (feet): >.19	Well Purged Dry (check one): [ ] Yes [X] No
Pumping Condition (check one): [ ] Continuous [ ] Intermittent	Total Development Water Removed (gallons): 55	Development Duration (minutes): 60
Development Water Drummed (check one): [X] Yes [ ] No		
Water Appearance (color and odor) At Start of Development: white, none		Water Appearance (color and odor) At End of Development: Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-9	Site Name: Ludlam	FDEP Facility I.D. Number:	Well Install Date(s): Jan 15, 2018

Well Location and Type (check appropriate boxes): [X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property [ ] Above Grade (AG) [X] Flush-to-Grade
If AG, list feet of riser above land surface: N/A

Well Purpose: [ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15	15	4.5	6	2 feet by 2 feet

Riser Diameter and Material: 2" Sch 40 PVC	Riser/Screen Connections: [X] Flush-Threaded [ ] Other (describe)	Riser Length: 5 feet from 0 feet to 5 feet
Screen Diameter and Material: 2" slotted Sch 40 PVC	Screen Slot Size: 0.01	Screen Length: 10 feet from 5 feet to 15 feet
1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet from ____ feet to ____ feet
Filter Pack Material and Size: 6/20 sand	Prepacked Filter Around Screen (check one): [ ] Yes [X] No	Filter Pack Length: 12 feet from 3 feet to 15 feet
Filter Pack Seal Material and Size: 30/65 sand		Filter Pack Seal Length: 2 feet from 1 feet to 3 feet
Surface Seal Material: Grout		Surface Seal Length: 1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date: Jan 15, 2018	Well Development Method (check one): [X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	
Development Pump Type (check): [X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	Depth to Groundwater (before developing in feet): 6.90	
Pumping Rate (gallons per minute): 1	Maximum Drawdown of Groundwater During Development (feet): 2.34	Well Purged Dry (check one): [ ] Yes [X] No
Pumping Condition (check one): [ ] Continuous [ ] Intermittent	Total Development Water Removed (gallons): 55	Development Duration (minutes): 55
Development Water Drummed (check one): [X] Yes [ ] No		
Water Appearance (color and odor) At Start of Development: White, none	Water Appearance (color and odor) At End of Development: clear, none	

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-7E	Ludlam Corridor Properties 'All Green Trail'	N/A	Jan 15, 2018

Well Location and Type (check appropriate boxes):
- [x] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [x] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [x] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: N/A

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15	15	4.5	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2" Sch 40 PVC	[x] Flush-Threaded [ ] Other (describe)	5 feet from 0 feet to 5 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
Slotted 2" Sch 40 PVC	0.01	10 feet from 5 feet to 15 feet

1st Surface Casing Material: also check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet from ____ feet to ____ feet
2nd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet from ____ feet to ____ feet
3rd Surface Casing Material: also check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 fine sand	[ ] Yes [x] No	12 feet from 3 feet to 15 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 fine sand	2 feet from 1 feet to 3 feet

Surface Seal Material:	Surface Seal Length:
fine grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
Jan 15, 2018	[x] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[x] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	6.88

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1	7.08	[ ] Yes [x] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[x] Continuous [ ] Intermittent	55	55	[x] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
White, none	Clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-37I	Ludlam corridor		1/16/18 and 1/17/18

Well Location and Type (check appropriate boxes): ☒ On-Site ☐ Right-of-Way ☐ Off-Site Private Property ☐ Above Grade (AG) ☒ Flush-to-Grade
If AG, list feet of riser above land surface: N/A

Well Purpose: ☐ Perched Monitoring ☐ Shallow (Water-Table) Monitoring ☒ Intermediate or Deep Monitoring ☐ Remediation or Other (describe)

Well Install Method: AP ~~Hollowstem Auger~~ Direct Push

Surface Casing Install Method: Hollowstem Auger

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
27	27	6.5	6	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
1.5" Sch40 PVC	☒ Flush-Threaded ☐ Other (describe)	22 feet from 0 feet to 22 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
1.5" Slotted Sch40 PVC	0.01"	5 feet from 22 feet to 27 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: ☒ Permanent ☐ Temporary	4	20 feet from 0 feet to 20 feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary	N/A	____ feet from ____ feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: ☐ Permanent ☐ Temporary	N/A	____ feet from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
6/20 Sand	☐ Yes ☒ No	7 feet from 20 feet to 27 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
30/65 Sand	2 feet from 18 feet to 20 feet

Surface Seal Material:	Surface Seal Length:
Fine grout	18 feet from 0 feet to 18 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):	
Jan 17, 2018	☒ Surge/Pump ☐ Pump ☐ Compressed Air ☐ Other (describe)	

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☒ Centrifugal ☐ Peristaltic ☐ Submersible ☐ Other (describe)	N/A

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
0.92	N/A	☐ Yes ☒ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☒ Continuous ☐ Intermittent	55	60	☒ Yes ☐ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
White, ~~clear~~ AP none	clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-44	Ludlam Trail	N/A	15 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
17	17	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	7 feet from 0 feet to 7 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 7 feet to 17 feet

1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	[ ] Yes [X] No	13 feet from 17 feet to 4 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 1 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):	
15-January-2018	[X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)	

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	9.5

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	60	60	[ ] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
@ 1600-1700 Cloudy, NO odor	Clear, NO odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number: MW-21-2	Site Name: Sudlam Trail	FDEP Facility I.D. Number: N/A	Well Install Date(s): 15 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet): 18	Well Depth (feet): 18	Borehole Diameter (inches): 8	Manhole Diameter (inches): 8	Well Pad Size: 2 feet by 2 feet

Riser Diameter and Material: 2 " Sch 40 PVC	Riser/Screen Connections: [X] Flush-Threaded [ ] Other (describe)	Riser Length: 8 feet from 0 feet to 8 feet
Screen Diameter and Material: 2" Sch 40 Slotted PVC	Screen Slot Size: 0.010"	Screen Length: ____ feet from ____ feet to ____ feet
1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
Filter Pack Material and Size: 60-20 Silica Sand	Prepacked Filter Around Screen (check one): [ ] Yes [X] No	Filter Pack Length: 14 feet from 18 feet to 4 feet
Filter Pack Seal Material and Size: 35-65 Fine Grain sand		Filter Pack Seal Length: 3 feet from 4 feet to 1 feet
Surface Seal Material: Fine Grout		Surface Seal Length: 1 feet from 1 feet to 0 feet

WELL DEVELOPMENT DATA

Well Development Date: 15 - January - 2018	Well Development Method (check one): [X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)	
Development Pump Type (check): [X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	Depth to Groundwater (before developing in feet): 10.18	
Pumping Rate (gallons per minute): 1 GPM	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one): [ ] Yes [X] No
Pumping Condition (check one): [ ] Continuous [ ] Intermittent	Total Development Water Removed (gallons): 60	Development Duration (minutes): 60
Development Water Drummed (check one): [X] Yes [ ] No		
Water Appearance (color and odor) At Start of Development: Tan, no odor	Water Appearance (color and odor) At End of Development: Clear No odor	

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-22	Ludlam Trail	N/A	15 - January - 2018

Well Location and Type (check appropriate boxes):
☐ On-Site ☐ Right-of-Way
☐ Off-Site Private Property
☐ Above Grade (AG) ☒ Flush-to-Grade
If AG, list feet of riser above land surface:

Well Purpose:
☐ Perched Monitoring
☒ Shallow (Water-Table) Monitoring
☐ Intermediate or Deep Monitoring
☐ Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	21	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	☐ Flush-Threaded ☐ Other (describe)	11 feet from 0 feet to 11 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 11 feet to 21 feet

1st Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	☐ Yes ☒ No	17 feet from 21 feet to 4 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 4 feet to 1 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
JAN-15-2018	☒ Surge/Pu ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☒ Centrifugal ☐ Peristaltic ☐ Submersible ☐ Other (describe)	12.5

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		☐ Yes ☒ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☐ Continuous ☐ Intermittent	60	60	☒ Yes ☐ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy @1200 no odor	Clear, no odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-23	Ludlam Trail	NA	15 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
21	21	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	11 feet from 0 feet to 11 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 11 feet to 21 feet

1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	[ ] Yes [X] No	17 feet from 4 feet to 21 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 1 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
15 - January - 2018	[X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	13.11

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	60	60	[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy, no odor	Clear, None

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-25	Ludlam Trail	N/A	12 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
20'	20'	8"	8"	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	10 feet from ~~20~~ 0 feet to 10 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 10 feet to 20 feet

1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	[ ] Yes [X] No	16 feet from 20 feet to 4 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 1 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
12 - Jan - 2018	[X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	12.50

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	60	60	[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy no odor Developed 1600 - 1700	Clear, no odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-46	Ludlam Trail	N/A	12 - January - 2018

Well Location and Type (check appropriate boxes):
- ☐ On-Site
- ☐ Right-of-Way
- ☐ Off-Site Private Property
- ☐ Above Grade (AG)
- ☑ Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- ☐ Perched Monitoring
- ☒ Shallow (Water-Table) Monitoring
- ☐ Intermediate or Deep Monitoring
- ☐ Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
18	18	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	☐ Flush-Threaded ☐ Other (describe)	____ feet from ____ feet to ____ feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	____ feet from ____ feet to ____ feet

1st Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: ☐ Permanent ☐ Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	☐ Yes ☒ No	14 feet from 18 feet to 4 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 1 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
12-January-2018	☒ Surge/Pu ☐ Pump ☐ Compressed Air ☐ Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
☒ Centrifugal ☐ Peristaltic ☐ Submersible ☐ Other (describe)	9.78

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		☐ Yes ☒ No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
☐ Continuous ☐ Intermittent	60	60	☒ Yes ☐ No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Developed from 1300-1400 Milky, NO odor	Clear, NO odor

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-47	Ludlam Trail	N/A	12 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
18	18	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	8 feet from 0 feet to 8 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 8 feet to 18 feet

1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	[ ] Yes [X] No	14 ~~10~~ feet (JM) from 4 feet to 18 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
35-65 Fine Grain sand	3 feet from 1 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
Fine Grout	1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
12 - January - 2018	[X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	9.91 ft

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1 GPM		[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent			[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Milky, No odor 1200-1300	clear, none 1.51 NTU

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

Drum from MW-49-2 placed by well

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
MW-49-2	Ludlam Trail	N/A	12 - January - 2018

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [ ] Above Grade (AG)
- [X] Flush-to-Grade

If AG, list feet of riser above land surface:

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: Hollow Stem Auger

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
16	16	8	8	2 feet by 2 feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
2 " Sch 40 PVC	[X] Flush-Threaded [ ] Other (describe)	6 feet from 0 feet to 6 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
2" Sch 40 Slotted PVC	0.010"	10 feet from 6 feet to 16 feet

1st Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	1st Surface Casing I.D. (inches): N/A	1st Surface Casing Length: ____ feet NA from ____ feet to ____ feet
2nd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	2nd Surface Casing I.D. (inches): N/A	2nd Surface Casing Length: ____ feet NA from ____ feet to ____ feet
3rd Surface Casing Material: N/A check: [ ] Permanent [ ] Temporary	3rd Surface Casing I.D. (inches): N/A	3rd Surface Casing Length: ____ feet NA from ____ feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
60-20 Silica Sand	[ ] Yes [X] No	14 feet from 2 feet to 16 feet

Filter Pack Seal Material and Size: 35-65 Fine Grain sand	Filter Pack Seal Length: 1 feet from 1 feet to 2 feet
Surface Seal Material: Fine Grout	Surface Seal Length: 1 feet from 0 feet to 1 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
12 - January - 2018	[X] Surge/Pu [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[X] Centrifugal [ ] Peristaltic [ ] Submersible [ ] Other (describe)	8.0 feet

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
1	N/A	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	60	60	[X] Yes [ ] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy, none	Clear 1.27 Ntu, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Soil and Water Drummed

ATTACHMENT D

GROUNDWATER SAMPLING LOGS AND ASSOCIATED CALIBRATION LOGS

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-45	SAMPLE ID: MW-45	DATE: January 11, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.75 feet to 15.75 feet	STATIC DEPTH TO WATER (feet): 9.77	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)
= (15.75 feet – 9.77 feet) X 0.16 gallons/foot = 0.96 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): 10.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5	PURGING INITIATED AT: 1056	PURGING ENDED AT: 1144	TOTAL VOLUME PURGED (gallons): 5.44

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)
1140	5.0	5.0	0.11	9.82	7.03	25.97	617	2.41/27.7%	7.41	clear	none
1142	0.22	5.22	0.11	9.82	7.04	26.06	617	2.26/28%	6.47	clear	none
1144	0.22	5.44	0.11	9.82	7.04	26.11	618	2.30/28.5%	6.10	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1146	SAMPLING ENDED AT: 1151
PUMP OR TUBING DEPTH IN WELL (feet): 10.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: N.A. µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-45	1	AG	1000mL	Ice	—	7.04	PAHs	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-38	SAMPLE ID: MW-38	DATE: Jan 11, 2018

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): 11.61	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 – 11.61 feet) X 0.16 gallons/foot = 1.02 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): 12.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12.5	PURGING INITIATED AT: 1234	PURGING ENDED AT: 1302	TOTAL VOLUME PURGED (gallons): 2.32

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)
1258	2.0	2.0	0.08	11.72	6.89	26.73	671	1.37/17.2%	9.52	clear	none
1300	0.16	2.16	0.08	11.72	6.89	26.81	671	1.36/17.0%	8.38	↓	↓
1302	0.16	2.32	0.08	11.72	6.89	26.87	673	1.34/16.9%	7.60		

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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1304	SAMPLING ENDED AT: 1309
PUMP OR TUBING DEPTH IN WELL (feet): 12.5	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y ~~N~~ (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-38	1	AG	1000 mL	Ice	—	~~2.6~~ AP 6.89	PAH	APP	200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-36	SAMPLE ID: MW-36	DATE: Jan 11, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 9.75 feet to 19.75 feet	STATIC DEPTH TO WATER (feet): 12.62	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)
= (19.75 feet – 12.62 feet) X 0.16 gallons/foot = 1.14 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): 13.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.5	PURGING INITIATED AT: 1350	PURGING ENDED AT: 1420	TOTAL VOLUME PURGED (gallons): 2.61

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)
1416	2.25	2.25	0.09	12.69	7.05	26.76	444	2.81/35.3%	5.87	clear	none
1410	0.18	2.43	0.09	12.69	7.06	26.84	442	2.79/35%	5.13	clear	none
1420	0.18	2.61	0.09	12.69	7.07	26.91	442	2.87/35.4%	4.79	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: Anthony Pezzotti/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1422	SAMPLING ENDED AT: 1427
PUMP OR TUBING DEPTH IN WELL (feet): 13.5	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-36	1	AG	1000mL	Ice	—	7.07	PAH	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-33	SAMPLE ID: MW-33	DATE: Jan 11, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 68 feet to 168 feet	STATIC DEPTH TO WATER (feet): 11.08	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)
= (16.8 feet – 11.08 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): 12	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12	PURGING INITIATED AT: 1605	PURGING ENDED AT: 1629	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 µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1625	2.0	2.0	0.1	11.12	7.20	26.57	411	3.41/42.5%	4.91	clear	none
1627	0.2	2.2	0.1	11.12	7.21	26.60	407	3.49/43.2%	4.01	clear	none
1629	0.2	2.4	0.1	11.12	7.21	26.62	404	3.59/44.8%	3.84	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: Anthony Pezzotti: ISCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1631	SAMPLING ENDED AT: 1642
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: HDPE + S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-33	1	AG	1000 mL	Ice	—	7.21	PAH	APP	~200
↓	1	PE	250 mL	H_2SO_4	—	<2	Ammonia	↓	↓
↓	1	AG	1000 mL	Ice	—	7.21	Phenols	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-3E	SAMPLE ID: MW-3E	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.2 feet to 15.2 feet	STATIC DEPTH TO WATER (feet): 7.09	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)
= (15.2 feet – 7.09 feet) X 0.16 gallons/foot = 1.30 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): 8.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.0	PURGING INITIATED AT: 1050	PURGING ENDED AT: 1124	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)
1120	3.0	3.0	0.1	7.21	7.27	26.18	514	1.21/14.9%	2.38	clear	none
1122	0.2	3.2	0.1	7.21	7.27	26.10	511	1.19/14.7%	2.03	↓	↓
1124	0.2	3.4	0.1	7.21	7.28	26.08	512	1.17/14.6%	2.01	↓	↓

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: Anthony Pezzatti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1127	SAMPLING ENDED AT: 1133

PUMP OR TUBING DEPTH IN WELL (feet): 8.0	TUBING MATERIAL CODE: HDPE + S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-3E	1	AG	1000 mL	Ice	—	7.28	PAH	APP	200
↓	1	PE	250 mL	HNO_3	—	<2	As	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-17	SAMPLE ID: MW-17	DATE: Jan 17, 2018

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): 6.51	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)
= (12 feet – 6.51 feet) X 0.16 gallons/foot = 0.88 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): 7.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5	PURGING INITIATED AT: 1414	PURGING ENDED AT: 1438	TOTAL VOLUME PURGED (gallons): 2.11

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)
1434	1.75	1.75	0.09	6.62	7.40	25.35	459	1.25/15.3%	16.1	clear	none
1436	~~1.93~~ 0.18	1.93	0.09	6.62	7.40	25.36	460	1.26/15.4%	14.8	↓	↓
1438	0.18	2.11	0.09	6.62	7.40	25.33	460	1.27/15.5%	13.3		

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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1440	SAMPLING ENDED AT: 1445
PUMP OR TUBING DEPTH IN WELL (feet): 7.5	TUBING MATERIAL CODE: HDPE + S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-17	1	AG	1000mL	ICE	—	7.40	PAH	APP	200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-10E	SAMPLE ID: MW-10E	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.2 feet to 15.2 feet	STATIC DEPTH TO WATER (feet): 6.78	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)
= (15.2 feet – 6.78 feet) X 0.16 gallons/foot = 1.35 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): 7.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5	PURGING INITIATED AT: 1626	PURGING ENDED AT: 1648	TOTAL VOLUME PURGED (gallons): 2.15

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)
1644	1.75	1.75	0.1	6.83	7.18	24.49	550	0.25 13.0%	3.82	Clear	none
1646	0.2	1.95	0.1	6.83	7.18	24.50	551	0.28 13.4%	3.24	clear	none
1648	0.2	2.15	0.1	6.83	7.17	24.49	555	0.31 13.8%	2.81	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1651	SAMPLING ENDED AT: 1656
PUMP OR TUBING DEPTH IN WELL (feet): 7.5	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: N/A µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME (mL)	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-10E	1	AG	1000	Ice	–	7.17	PAH	APP	~200
↓	1	PE	250	HNO_3	–	<2	As	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-10	SAMPLE ID: MW-10	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.42	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)
= (14 feet – 7.42 feet) X 0.16 gallons/foot = 1.05 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): 8.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.5	PURGING INITIATED AT: 1511	PURGING ENDED AT: 1607	TOTAL VOLUME PURGED (gallons): 4.86

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)
1603	4.5	4.5	0.09	7.48	7.24	23.79	448	1.55/18.4%	12.4	clear	none
1605	0.18	4.68	0.09	7.48	7.24	23.86	448	1.48/17.5%	12.6	clear	none
1607	0.18	4.86	0.09	7.48	7.24	23.93	449	1.54/18.2%	10.3	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: Anthony Perzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1610	SAMPLING ENDED AT: 1615
PUMP OR TUBING DEPTH IN WELL (feet): 8.5	TUBING MATERIAL CODE: HDPE/S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: N.A. µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y ~~N~~ (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-10	1	AG	1000 mL	Ice	—	7.42	PAH	APP	SA: 200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-9	SAMPLE ID: MW-9	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 6.91	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)
= (15 feet − 6.91 feet) X 0.16 gallons/foot = 1.29 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): 7.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5	PURGING INITIATED AT: 1413	PURGING ENDED AT: 1451	TOTAL VOLUME PURGED (gallons): 2.98

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)
1445	2.5	2.5	0.08	6.97	7.36	24.79	405	2.61/31.5%	2.68	clear	none
1447	0.16	2.66	0.08	6.97	7.36	24.76	404	2.42/29.3%	2.67	clear	none
1449	0.16	2.82	0.08	6.97	7.35	24.75	404	2.43/29.4%	2.62	clear	none
1451	0.16	2.98	0.08	6.97	7.35	24.64	403	2.58/31.1%	2.34	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1454	SAMPLING ENDED AT: 1500
PUMP OR TUBING DEPTH IN WELL (feet): 7.5	TUBING MATERIAL CODE: HDPE/S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: N/A µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-9	1	AG	1000 mL	Ice	—	7.35	PAH	APP	~200
↓	1	PE	250 mL	HNO_3	—	<2	As	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-7E	SAMPLE ID: MW-7E	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 6.78	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)
= (15 feet – 6.78 feet) X 0.16 gallons/foot = 1.32 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): 7.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5	PURGING INITIATED AT: 1308	PURGING ENDED AT: 1329	TOTAL VOLUME PURGED (gallons): 1.86

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)
1325	1.50	1.50	0.09	6.81	7.24	26.47	484	1.14/14.2%	1.81	clear	none
1327	0.18	~~1.68~~ 1.68	0.09	6.81	7.23	26.43	483	1.18/14.7%	1.74	clear	none
1329	0.18	AC 1.86	0.09	6.81	7.23	26.39	485	1.24/16.1%	1.40	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1332	SAMPLING ENDED AT: 1338
PUMP OR TUBING DEPTH IN WELL (feet): 7.5	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-7E	1	AG	1000 mL	ICP	—	7.23	PAH	APP	~200
↓	1	PE	250 mL	HNO_3	—	<2	As	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-7	SAMPLE ID: MW-7	DATE: Jan 18, 2018

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): 7.63	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)
= (12 feet – 7.63 feet) X 0.16 gallons/foot = 0.7 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): 8.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.5	PURGING INITIATED AT: 12:30	PURGING ENDED AT: 1250	TOTAL VOLUME PURGED (gallons): 1.86

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)
1246	1.50	1.50	0.09	7.68	7.23	26.32	544	1.41/17.5%	6.74	clear	none
1248	0.18	1.68	0.09	7.68	7.23	26.32	544	1.37/16.8%	5.06	clear	none
1250	0.18	1.86	0.09	7.68	7.23	26.29	539	1.29/16%	3.61	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1253	SAMPLING ENDED AT: 1303
PUMP OR TUBING DEPTH IN WELL (feet): 8.5	TUBING MATERIAL CODE: HDPE,S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-7	1	AG	1000 mL	Ice	—	7.23	PAH	APP	200
6	1	↓	1000mL	Ice	—	7.23	Phenols	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-3	SAMPLE ID: MW-3	DATE: Jan 18, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7.5 feet to 17.5 feet	STATIC DEPTH TO WATER (feet): 9.71	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)
= (17.5 feet – 9.71 feet) X 0.16 gallons/foot = 1.25 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): 10.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5	PURGING INITIATED AT: 1018	PURGING ENDED AT: 1035	TOTAL VOLUME PURGED (gallons): 1.98

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)
1031	1.50	1.50	0.12	9.83	7.52	25.67	352	1.15/14.1%	1.84	clear	none
1033	0.24	1.74	0.12	9.83	7.52	25.75	352	1.09/13.4%	1.70	clear	none
1035	0.24	1.98	0.12	9.83	7.52	25.78	352	1.02/12.5%	1.48	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: Anthony Pezzotti / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1037	SAMPLING ENDED AT: 1042
PUMP OR TUBING DEPTH IN WELL (feet): 10.5	TUBING MATERIAL CODE: HDPE/S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: N/A µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-3	1	AG	1000ML	Ice	—	7.52	PAH	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-12	SAMPLE ID: MW-12	DATE: Jan 12, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.29	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)

= (14 feet – 7.29 feet) X 0.16 gallons/foot = 1.07 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): 8.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.0	PURGING INITIATED AT: 1555	PURGING ENDED AT: 1617	TOTAL VOLUME PURGED (gallons): 2.15

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)
1613	1.75	1.75	0.1	7.32	6.94	25.13	627	0.60/7.3%	4.60	clear	none
1615	0.2	1.95	0.1	7.32	6.93	25.12	627	0.59/7.2%	3.16	clear	none
1617	0.2	2.15	0.1	7.32	6.93	25.14	628	0.51/6.3%	2.54	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: Anthony Pezzotti/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1620	SAMPLING ENDED AT: 1626
PUMP OR TUBING DEPTH IN WELL (feet): 8.0	TUBING MATERIAL CODE: HDPE,S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
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-12	1	AG	1000 mL	Ice	—	6.93	PAHs	APP	~200
↓	1	PE	250mL	HNO_3	—	<2	Total As	↓	↓

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-15	SAMPLE ID: MW-15	DATE: Jan 17, 2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.2 feet to 15.2 feet	STATIC DEPTH TO WATER (feet): 7.42	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)
= (15.2 feet – 7.42 feet) X 0.16 gallons/foot = 1.25 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): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8	PURGING INITIATED AT: 1512	PURGING ENDED AT: 1530	TOTAL VOLUME PURGED (gallons): 2.25

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)
1526	1.75	1.75	0.125	7.44	7.07	25.10	659	0.21/2.5%	1.04	clear	none
1528	0.25	2.00	0.125	7.44	7.07	25.13	658	0.19/2.3%	0.91	clear	none
1530	0.25	2.25	0.125	7.44	7.07	25.18	658	0.19/2.3%	0.77	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: Anthony Pezzoni/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1532	SAMPLING ENDED AT: 1537
PUMP OR TUBING DEPTH IN WELL (feet): 8	TUBING MATERIAL CODE: HDPE + S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: NA µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y ~~N~~ (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-15	1	AG	1000mL	Ice	—	7.07	PAH	APP	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

Boldly "X" this box if there is qualified data on this page.

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** 11-10-05

Project/Site: Ludlam Date: 1/11/2018 Meter # 2

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book*

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/-0.3mg/l	
CAL ICV CCV		AP	1/11/18	1015			8.46	22.98 AP	~~102.4~~ 99.1	8.578	P F
CAL ICV CCV		AP	1/11/18	1702			8.22	26.15	101.6	8.084	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV CCV		AP	1/11/18	1018	84	Aug/18	76H704			87	P F
CAL ICV CCV		↓	↓	1021	1413	Jul/18	766624			1393	P F
CAL ICV CCV		↓	↓	1707	84	Aug/18	76H704			87	P F
CAL ICV CCV		↓	↓	1710	1413	Jul/18	766624			1405	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV CCV		AP	1/11/18	1024	7.00	2/19	76B009			7.00	P F
CAL ICV CCV		↓	↓	1027	4.00	3/19	76C970			4.16	P F
CAL ICV CCV		↓	↓	1030	10.00	3/19	76C010			9.82	P F
CAL ICV CCV		↓	↓	1715	7.00	2/19	76B009			7.13	P F
CAL ICV CCV		↓	↓	1718	4.00	3/19	76C970			4.18	P F
CAL ICV CCV		↓	↓	1721	10.00	3/19	76C010			9.83	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) HACH 2100Q **INSTRUMENT #** 2

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 0.5 Lot A7314 Nov-19 D 100 Lot

Standard B 10 Lot A7265 Dec-18 E 800 Lot

Standard C 20 Lot A7283 Jan-19

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
18/01/11	1032	~~10~~ A	0.5	0.5	0	NO	CONT	AP
↓	1032	B	10	9.54	4.6	NO	↓	↓
	1033	C	20	19.1	4.5	NO		
	1033	D	100	96.9	3.1	NO		
	1033	E	800	798	0.25	NO		
	1723	A	0.5	0.5	0	NO		
	1723	B	10	9.62	3.8	NO		
	1724	C	20	19.3	3.5	NO		
	1724	D	100	97.2	2.8	NO		
↓	1724	E	800	799	0.125	NO	↓	↓

Boldly "X" this box if there is qualified data on this page.

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** *11-10-05*

Project/Site: Ludlam Date: 1/17/2018 Meter # 031116

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book* _____

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
											Acceptance Criteria:+/-0.3mg/l
CAL ICV ~~CCV~~		AP	1/17/18	1340			8.86	22.22	101.8	8.710	P F
CAL ICV ~~CCV~~		↓	↓	1710			8.75	21.91	100.1	8.761	P F
CAL ICV ~~CCV~~			1/18/18	955			8.86	20.71	99.8	9.056	P F
CAL ICV ~~CCV~~		↓	1/18/18	1505			9.76	17.56	102.4	9.515	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV ~~CCV~~		AP	1/17/18	1344	300	4/18	76D769			309	P F
CAL ICV ~~CCV~~		↓	↓	1347	1413	9/30/18	76I347			1385	P F
CAL ICV ~~CCV~~				1713	300	4/18	76D769			308	P F
CAL ICV ~~CCV~~				1716	1413	9/30/18	76I347			1393	P F
CAL ICV ~~CCV~~		↓	1/18/18	9:58	300	4/18	76D769			293	P F
CAL ICV ~~CCV~~		↓	↓	1001	1413	9/30/18	76I347			1382	P F
CAL ICV CCV											~~P~~ F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV ~~CCV~~		AP	1/17/18	1349	7.0	5/19	76H1000			7.13	P F
CAL ICV ~~CCV~~		↓	↓	1352	4.0	5/19	76I006			4.09	P F
CAL ICV ~~CCV~~				1355	10.0	7/19	76H1128			10.00	P F
CAL ICV ~~CCV~~				1720	7.0	5/19	76H1000			7.03	P F
CAL ICV ~~CCV~~				1723	4.0	5/19	76I006			4.17	P F
CAL ICV ~~CCV~~			↓	1727	10.0	7/19	76H1128			10.05	P F
CAL ICV ~~CCV~~			1/18/18	1003	7.0	5/19	76H1000			7.08	P F
CAL ICV ~~CCV~~				1006	4.0	5/19	76I006			4.07	P F
CAL ICV ~~CCV~~		↓	↓	1008	10.0	7/19	76H1128			10.04	P F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Boldly "X" this box if there is qualified data on this page.

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** *11-10-05*

Project/Site: Lutom Date: 11/9/2018 Meter # 031116

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book* _____

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °c	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/-0.3mg/l	
CAL ICV (CCV)		AP	11/9	9:15			9.31	18.63	99.8	9.352	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV (CCV)		AP	11/9	9:18	300	4/18	7GD769			296	(P) F
CAL ICV (CCV)		↓	↓	9:21	1413	9/30/18	7GI347			1394	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV (CCV)		AP	11/9	9:24	7.0	5/19	7GH1009			7.11	(P) F
CAL ICV (CCV)		↓	↓	9:25	4.0	5/19	7GE006			4.04	(P) F
CAL ICV (CCV)				9:28	10.0	7/19	7GH1128			10.10	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) HACH 2100Q **INSTRUMENT #** 0294179

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 1.0 Lot C691749 Exp 4/18 D 0.5 Lot A7319 NOV-19
Standard B 10 Lot A7265 Exp DEC-18
Standard C 20 Lot A7283 Exp JAN-19

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
18/01/17	1357	D	0.5	0.5	0	NO	CONT	AP
↓	1357	B	10.0	9.61	3.9	NO	↓	↓
↓	1357	C	20.0	19.7	1.5	NO	↓	↓
↓	1730	D	0.5	0.5	0	NO	↓	↓
↓	1730	B	10.0	9.81	1.9	NO	↓	↓
↓	1730	C	20.0	19.5	2.5	NO	↓	↓
18/01/18	1009	A	1.0	1.08	8	NO	↓	↓
↓	1009	B	10.0	9.51	4.9	NO	↓	↓
↓	1009	C	20.0	19.8	1	NO	↓	↓
↓	0910	A	1.0	1.06	6	NO	↓	↓
↓	0910	B	10.0	9.41	5.9	NO	↓	↓
↓	0910	C	20.0	19.8	1	NO	↓	↓
DAP								

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

Jun-16-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-49-2	SAMPLE ID: MW-49-2	DATE: 7/16/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 6 feet to 16 feet	STATIC DEPTH TO WATER (feet): 7.51	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)

= (16 feet – 7.51 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) + 1114 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1114 (JM)	TOTAL VOLUME PURGED (gallons): 2.20

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)
1110	2.0	2.0	0.05	7.51	6.81	26.1	600	2.46/30.5%	2.80	clear	None
1112	0.10	2.10	0.05	7.51	6.81	26.1	600	2.46/30.5%	2.13	clear	None
1114	0.10 (JM)	2.20	0.05	7.51	6.81	26.1	600	2.46/30.5%	2.03	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: John Maua / SES	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1115	SAMPLING ENDED AT: 1117
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: HDPE-TS	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 (including wet ice)					
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-49-2	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	11-Jun-2018 JM
WELL NO: MW-48	SAMPLE ID: MW-48	DATE: 6/11/2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 6 feet to 16 feet	STATIC DEPTH TO WATER (feet): 8.11	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)

= (16 feet – 8.11 feet) X 0.16 gallons/foot = 1.27 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): 10 *	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1050	PURGING ENDED AT: 1134	TOTAL VOLUME PURGED (gallons): 2.20

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	2.0	2.0	0.05	8.11	7.27	25.74	543	0.53/6.5%	3.24	Clear	None
1132	0.10	2.10	0.05	8.11	7.27	25.74	543	0.53/6.5%	2.52	Clear	none
1134	0.10	2.20	0.05	8.11	7.26	25.74	543	0.53/6.5%	3.30	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: John Malla/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1141
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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)
MW48	1	AG	1000ML	—	—	—	PAH	APP	200

REMARKS: * Due to PAH sampling only 2 ft of tubing from PTWT

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

Jan-16-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-47	SAMPLE ID: MW-47	DATE: 1/16/18

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): 9.57	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 – 9.57 feet) X 0.16 gallons/foot = 1.35 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	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1130	PURGING ENDED AT: 1258	TOTAL VOLUME PURGED (gallons): 4.44

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)
1254	3.0	3.0	0.036	9.57	7.02	26.0	581	3.38/41.6%	4.92	Clear	None
1256	0.072	3.072	0.036	9.57	7.02	26.0	581	3.38/41.6%	4.86	Clear	None
1258	0.072	4.44	0.036	9.57	7.02	26.0	581	3.38/41.6%	4.14	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: John Mann / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1259	SAMPLING ENDED AT: 1305
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-47	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

Jan-16-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-46	SAMPLE ID: MW-46	DATE: 1/16/18

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): 9.65	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 – 11.5 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 feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 1310	PURGING ENDED AT: 1354	TOTAL VOLUME PURGED (gallons): 2.20

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	2.0	2.0	0.05	9.65	7.23	25.1	674	3.39/41%	3.82	Clear	None
1352	0.10	2.10	0.05	9.65	7.23	25.1	674	3.39/41%	4.01	Clear	None
1354	0.10	2.20	0.05	9.65	7.23	25.1	674	3.39/41%	3.15	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: John Malla / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1355	SAMPLING ENDED AT: 1403
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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)
MW46	1	AG	1000mL	—	—	7.23	PAH	APP	≈ 200
MW46	1	PP	125mL	HNO3	—	≤2	Total Arsenic	APP	≈ 200

REMARKS: At Rec PAH Guideline ≈ 2ft from DTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	18-January-2018
WELL NO: MW-44	SAMPLE ID: MW-44	DATE: 1/18/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7 feet to 17 feet	STATIC DEPTH TO WATER (feet): 9.69	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)

= (17 feet – 9.69 feet) X 0.16 gallons/foot = 1.17 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): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 900	PURGING ENDED AT: 944	TOTAL VOLUME PURGED (gallons): 2.20

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)
940	2.0	2.0	0.05	9.69	7.23	25.5	465.0	4.47/55%	3.89	Clear	None
942	0.10	2.10	0.05	9.69	7.23	25.5	465.0	4.47/55%	3.21	Clear	None
944	0.10	2.20	0.05	9.69	7.23	25.5	465.0	4.47/55%	3.01	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: John Manna/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 945	SAMPLING ENDED AT: 953
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-44	1	AG	1000ml	—	(1M) 7.23	(2)	PAH	APP	≈200
MW-44	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS: * PAHs – ≤ 2ft tubing from DTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jun-16-2018
WELL NO: MW-43	SAMPLE ID: MW-43	DATE: 4/16/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.5 feet to 15.5 feet	STATIC DEPTH TO WATER (feet): 9.69	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)
= (15.5 feet – 9.69 feet) X 0.16 gallons/foot = 0.93 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): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 1430	PURGING ENDED AT: 1514	TOTAL VOLUME PURGED (gallons): 2.20

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)
1510	2.0	2.0	0.05	9.69	8.30	26.0	600	0.25 / 3.0%	19.10	Clear	None
1512	0.10	2.10	0.05	9.69	8.30	26.0	600	0.25 / 3.0%	19.92	Clear	None
1514	0.10	2.20	0.05	9.69	8.30	26.0	600	0.25 / 3.0%	18.57	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: John Mann / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1515	SAMPLING ENDED AT: 1521
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE TS	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 (including wet ice)					
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)
MW43	1	AG	1000mL	—	—	pH 8.30	PAH	APP	≈200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jan-16-2018
WELL NO: MW-42	SAMPLE ID: MW-42	DATE: 1/16/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 6 feet to 16 feet	STATIC DEPTH TO WATER (feet): 9.57	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)

= (16 feet – 9.57 feet) X 0.16 gallons/foot = 1.03 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): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 1545	PURGING ENDED AT: 1629	TOTAL VOLUME PURGED (gallons): 2.26

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)
1615	2.0	2.0	0.067	9.57	7.88	25.5	601	1.44/17.5%	8.87	Clear	None
1617	0.13	2.13	0.067	9.57	7.88	25.5	601	1.44/17.5%	8.82	Clear	None
1619	0.13	2.26	0.067	9.57	7.88	25.5	601	1.44/17.5%	8.69	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: John Mara/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1620	SAMPLING ENDED AT: 1626
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE-TS	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 (including wet ice)					
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)
MW42	1	AG	1000mL	—	—	7.88	PAH	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jan-16-2018
WELL NO: MW-40	SAMPLE ID: MW-40	DATE: 1/16/18

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 6.5 feet to 16.5 feet	STATIC DEPTH TO WATER (feet): 9.85	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)

= (16.5 feet – 9.85 feet) X 0.16 gallons/foot = 1.07 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: 1640	PURGING ENDED AT: 1724	TOTAL VOLUME PURGED (gallons): 2.20

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)
1720	2.0	2.0	0.05	9.85	6.79	25.6	631	1.59/19.4%	6.43	Clear	None
1722	0.10	2.10	0.05	9.85	6.79	25.6	631	1.59/19.4%	5.82	Clear	None
1724	0.10	2.20	0.05	9.85	6.79	25.6	631	1.59/19.4%	5.61	Clear	None
								~~1.59/19.4%~~	JM		

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: SCS John Maina	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1725	SAMPLING ENDED AT: 1731
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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)
MW40	1	AG	1000mL	—	— ~~6.79~~ 5 JM	6.84	PAH	APP	~200

REMARKS: PAHs - 2ft approx. from DTW per sampling SOP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL 19-Jan-2018
WELL NO: MW-37i	SAMPLE ID: MW-37i
DATE: ~~1/19/18~~ (JM)	

PURGING DATA

WELL DIAMETER (inches): 1.5	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 22 feet to 27 feet	STATIC DEPTH TO WATER (feet): 12.86	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)
= (27.00 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.0026 gallons/foot X 24.5 feet) + 0.09 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24.5	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1454	TOTAL VOLUME PURGED (gallons): 0.20

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)
1450	0.0	0.0	0.05	12.86	9.52	26.9	371	2.64/33%	4.86	clear	none
1452	0.10	0.10	0.05	12.86	9.52	26.9	371	2.64/33%	4.71	clear	none
1454	0.10	0.20	0.05	12.86	9.52	26.9	371	2.64/33%	4.23	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: John Massa/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT: 1457
PUMP OR TUBING DEPTH IN WELL (feet): 24.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-37i	1	pp	125mL	HNO3	—	<2	Total Arsenic	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jun-11-2018
WELL NO: MW-37W	SAMPLE ID: MW-37W	DATE: 6/11/18

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): 13.10	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 – 13.10 feet) X 0.16 gallons/foot = 1.11 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): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1310	TOTAL VOLUME PURGED (gallons): 2.20

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	2.0	2.0	0.05	13.10	7.08	26.20	626	2.53/31.3%	1.07	clear	None
1312	0.10	2.10	0.05	13.10	7.08	26.20	626	2.53/31.3%	0.79	clear	None
1314	0.10	2.20	0.05	13.10	7.08	26.20	626	2.52/31.2%	0.90	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: John Marra/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1315	SAMPLING ENDED AT: 1321
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-37W	1	AG	1000mL	—	—	—	PAH	APP	≈200

REMARKS: * Due to PAH Sample - only 2 ft of tubing from OTW for sample

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	18-Jan-2018
WELL NO: MW-37	SAMPLE ID: MW-37	DATE: ~~1/18/18~~ JM

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7 feet to 17 feet	STATIC DEPTH TO WATER (feet): 12.71	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)
= (17 feet – 12.71 feet) X 0.16 gallons/foot = 0.69 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: 1040	PURGING ENDED AT: 1224	TOTAL VOLUME PURGED (gallons): 5.20

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)
1220	5.0	5.0	0.05	12.71	7.06	23.7	647	4.27/51%	7.14	Clear	None
1222	0.10	5.10	0.05	12.71	7.06	23.7	648	4.27/51%	7.08	Clear	None
1224	0.10	5.20	0.05	12.71	7.06	23.7	648	4.27/51%	7.18	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: John Mara/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1225	SAMPLING ENDED AT: 1237
PUMP OR TUBING DEPTH IN WELL (feet): 14.5	TUBING MATERIAL CODE: HDPE/S	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 (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW37	1	AG	1000	—	—	7.06	PAH	APP	~200
MW37	1	AG	1000	—	—	—	Phenols	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jan-11-2018
WELL NO: MW-37E	SAMPLE ID: MW-37E	DATE: 1/11/18 SM

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 10 feet to 19.8 feet	STATIC DEPTH TO WATER (feet): 12.17	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)
= (19.8 feet – 12.17 feet) X 0.16 gallons/foot = 1.23 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*	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1424	TOTAL VOLUME PURGED (gallons): 2.20

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)
1420	2.0	2.0	0.05	12.17	7.18	26.33	586	2.62/32.5%	1.25	Clear	None
1422	2.10	0.10	0.05	12.17	7.18	26.33	586	2.62/32.5%	0.93	Clear	None
1424	2.20	0.10	0.05	12.17	7.18	26.33	586	2.62/32.5%	0.92	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: John Mann / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1425	SAMPLING ENDED AT: 1431
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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)
MW37E	1	AG	1000mL	—	—	—	PAH	APP	≈200

REMARKS: * Due to PAH Sample only ≈2ft tubing From DTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	Jan-11-2018
WELL NO: MW-35	SAMPLE ID: MW-35	DATE: 1/11/18

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 9 feet to 19 feet	STATIC DEPTH TO WATER (feet): 11.81	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)
= (19 feet – 11.81 feet) X 0.16 gallons/foot = 1.16 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): 13.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.5	PURGING INITIATED AT: 1500	PURGING ENDED AT: 1544	TOTAL VOLUME PURGED (gallons): 2.20

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)
1540	2.0	2.0	0.50	11.81	7.43	26.11	393	5.72 / 70.9%	0.78	Clear	None
1542	0.20	2.10	0.50	11.81	7.43	26.11	393	5.72 / 70.9%	0.55	Clear	None
1544	0.10	2.20	0.50	11.81	7.43	26.11	393	5.72 / 70.9%	0.93	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: John Mana/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1545	SAMPLING ENDED AT: 1551
PUMP OR TUBING DEPTH IN WELL (feet): 13.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-35	1	AG	1000mL	—	—	—	PAH	APP	≈ 200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	19-JAN-2018
WELL NO: MW-33E	SAMPLE ID: MW-33E	DATE: 1/19/17

PURGING DATA

9.45 PW 6M

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7.3 feet to 17.3 feet	STATIC DEPTH TO WATER (feet): 11.19	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)
= (17.3 feet − 9.45 feet) X 0.16 gallons/foot = 1.26 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): 11.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.0	PURGING INITIATED AT: 900	PURGING ENDED AT: 1024	TOTAL VOLUME PURGED (gallons): 2.10

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)
1020	2.0	2.0	0.025	9.45	7.55	25.4	387.6	3.23/39.7%	2.73	Clear	None
1022	0.05	2.05	0.025	9.45	7.55	25.4	387.6	3.23/39.7%	2.83	Clear	None
1024	0.05	2.10	0.025	9.45	7.55	25.4	38.6	3.23/39.7%	2.51	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: John Manas/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1025	SAMPLING ENDED AT: 1033
PUMP OR TUBING DEPTH IN WELL (feet): 11.0	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 (including wet ice)					
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-33E	1	AG	1000	—	—	7.55	PAH	APP	≈200
MW-33E	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS: * PAHs — ≤ 2ft from PTW of tubing

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

19-Jan-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail' | SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL

WELL NO: MW-31 | SAMPLE ID: MW-31 | DATE: 1/19/18 (AM)

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4	7.5 feet to 17.5 feet	10.10	PP

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

= (feet – feet) X gallons/foot = 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):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
12	12	1100	1144	2.20

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)
1140	2.0	2.0	0.05	10.10	7.35	25.9	457.6	1.16/14.4%	4.06	Clear	None
1142	0.10	2.10	0.05	10.10	7.35	25.9	457.6	1.16/14.4%	3.87	Clear	None
1144	0.10	2.20	0.05	10.10	7.35	25.9	457.6	1.16/14.4%	3.60	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: John Manca/SCS | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1145 | SAMPLING ENDED AT: 1148 (AM) 1153

PUMP OR TUBING DEPTH IN WELL (feet): 12 | TUBING MATERIAL CODE: HDPE+S | 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 (including wet ice)					
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)
MW31	1	AG	1000mL	—	—	7.35	PAH	APP	~200
MW31	3	CG	40mL	HCl	—	<2	Chloromethane	APP	~200
MW31	1	CG	40mL	—	—	—	chloroethane	APP	~200

REMARKS: * PAHs – Tubing ≤ 2ft from PTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

19-JAN-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-30	SAMPLE ID: MW-30	DATE: 1/19/18 (W)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7.5 feet to 17.5 feet	STATIC DEPTH TO WATER (feet): 10.0	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)
= (17.5 feet − 10.0 feet) X 0.16 gallons/foot = 1.20 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): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1254	TOTAL VOLUME PURGED (gallons): 2.20

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)
1250	2.0	2.0	0.05	10.0	7.27	26.3	538	2.60/31.5%	3.87	Clear	None
1252	0.10	2.10	0.05	10.0	7.27	26.3	538	2.60/31.5%	4.12	Clear	None
1254	0.10	2.20	0.05	10.0	7.27	26.3	538	2.60/31.5%	4.01	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: John Mara/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT: 1303
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE-15	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 (including wet ice)					
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-30	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	~200
MW-30	1	AG	1000mL	—	—	7.27	PAH	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

19-Jan-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-29E	SAMPLE ID: MW-29E	DATE: 1/19/18 (SM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7.3 feet to 17.3 feet	STATIC DEPTH TO WATER (feet): 8.30	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)
= (17.3 feet – 8.30 feet) X 0.16 gallons/foot = ~~0.16~~ 1.44 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): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1300	PURGING ENDED AT: 1344	TOTAL VOLUME PURGED (gallons): 2.20

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)
1340	2.0	2.0	0.05	8.30	7.30	25.3	447.5	1.26/15.3%	4.72	clear	None
1342	0.10	2.10	0.05	8.30	7.30	25.3	447.5	1.26/15.3%	3.81	clear	None
1344	0.10	2.20	0.05	8.30	7.30	25.3	447.5	1.25/15.3%	4.12	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: John Mann/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1345	SAMPLING ENDED AT: 1353
PUMP OR TUBING DEPTH IN WELL (feet):	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 (including wet ice)					
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-29E	1	AG	1000mL	—	—	7.30	PAH	APP	~200
MW-29E	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW7th and SW 80th Streets, Miami, FL	
WELL NO: MW-29	SAMPLE ID: MW-29	DATE: 11-Jan-2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5.2 feet to 15.2 feet	STATIC DEPTH TO WATER (feet): 9.57	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)
= (15.2 feet – 9.57 feet) X 0.16 gallons/foot = 0.91 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): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 1630	PURGING ENDED AT: 1714	TOTAL VOLUME PURGED (gallons): 2.20

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)
1710	2.0	2.0	0.05	9.57	7.48	25.71	443	3.78 / 46.3%	1.54	Clear	None
1712	2.10	0.10	0.05	9.57	7.48	25.71	443	3.78 / 46.3%	1.62	Clear	None
1714	2.20	0.10	0.05	9.57	7.48	25.71	443	3.78 / 46.3%	1.70	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: John Marra/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1715	SAMPLING ENDED AT: 1727
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-29	1	AG	1000mL	—	—	7.48	PAH	APP	≈200
MW-29	1	AG	1000mL	—	—	7.48	Phenols 8270	APP	≈200

REMARKS: * PAH within 2ft from DTW of tubing length

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	17-Jan-2018
WELL NO: MW-27	SAMPLE ID: MW-27	DATE: 1/17/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 8.88	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)
= (14 feet – 8.88 feet) X 0.16 gallons/foot = 0.82 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): 11	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11	PURGING INITIATED AT: 1000	PURGING ENDED AT: 1044	TOTAL VOLUME PURGED (gallons): 2.20

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)
1040	2.0	2.0	0.05	8.88	7.73	26.8	430.7	3.45/43.5%	1.83	clear	none
1042	0.10	2.10	0.05	8.88	7.73	26.8	430.7	3.44/43.5%	1.26	clear	none
1044	0.10	2.20	0.05	8.88	7.73	26.8	430.7	3.45/43.5%	1.03	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: John Murray/ECS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1045	SAMPLING ENDED AT: 1053
PUMP OR TUBING DEPTH IN WELL (feet): 11	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-27	1	AG	1000mL	—	—	(JM) 7.73	PAH	APP	~200
MW-27	1	PE	125mL	HNO3	—	<2	Total Arsenic	APP	~200

REMARKS: * PAHs – 2ft from DTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW7th and SW 80th Streets, Miami, FL	
WELL NO: MW-26	SAMPLE ID: MW-26	DATE: 17-Jan-2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 7 feet to 17 feet	STATIC DEPTH TO WATER (feet): 9.98	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)
= (17 feet − 9.98 feet) X 0.16 gallons/foot = 1.12 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): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	PURGING INITIATED AT: 1100	PURGING ENDED AT: 1144	TOTAL VOLUME PURGED (gallons): 2.20

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)
1140	2.0	2.0	0.05	9.98	6.96	26.9	485	2.27/28.0%	0.74	clear	None
1142	0.10	2.10	0.05	9.98	6.96	26.9	485	2.27/28.0%	0.98	clear	None
1144	0.10	2.20	0.05	9.98	6.96	26.9	485	2.27/28.0%	1.02	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: John Marra / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1145	SAMPLING ENDED AT: 11
PUMP OR TUBING DEPTH IN WELL (feet): 11.5	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-26	1	AG	1000 mL	—	—	6.96	PAH	APP	≈ 200

REMARKS: * PAH within 2ft from DTW of tubing length

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	DATE: ~~1/17/18~~ 17-Jan-2018 JM
WELL NO: MW-25	SAMPLE ID: MW-25	

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): 11.78	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 – 11.78 feet) X 0.16 gallons/foot = 1.32 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): 13.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.5	PURGING INITIATED AT: 1200	PURGING ENDED AT: 1244	TOTAL VOLUME PURGED (gallons): 2.20

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)
1240	2.0	2.0	0.05	11.78	7.26	26.8	544	1.82/22.9%	4.82	clear	None
1242	0.10	2.10	0.05	11.78	7.26	26.8	544	1.82/22.9%	4.69	clear	None
1244	0.10	2.20	0.05	11.78	7.26	26.8	544	1.82/22.9%	4.16	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: John Malla/SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1245	SAMPLING ENDED AT: 1253
PUMP OR TUBING DEPTH IN WELL (feet): 13.5	TUBING MATERIAL CODE: HDPE TS	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 (including wet ice)					
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-25	1	AG	1000ml	—	—	7.26	PAH	APP	≈200
MW-25	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS: *PAH's * = ≤ 2 ft tubing from OTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW7th and SW 80th Streets, Miami, FL	
WELL NO: MW-23	SAMPLE ID: MW-23	DATE: 17-Jan-2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 11 feet to 21 feet	STATIC DEPTH TO WATER (feet): 13.65	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)
= (21 feet – 13.65 feet) X 0.16 gallons/foot = 1.18 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): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 1330	PURGING ENDED AT: 1414	TOTAL VOLUME PURGED (gallons): 2.20

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)
1410	2.0	2.0	0.05	13.65	7.23	26.6	548	1.19/14.5%	4.49	Clear	None
1412	0.10	2.10	0.05	13.65	7.23	26.6	548	1.19/14.5%	4.26	Clear	none
1414	0.10	2.20	0.05	13.65	7.23	26.6	548	1.19/14.5%	4.02	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: John Mara / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1415	SAMPLING ENDED AT: 1425
PUMP OR TUBING DEPTH IN WELL (feet): 15	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-23	1	AG	1000 mL	—	—	—	PAHs	APP	≈200
MW-23	3	CG	40 mL	HCL	—	<2	chloromethane	APP	≈200

REMARKS: * PAH within 2 ft from DTW of tubing length

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

17-January-2018

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	
WELL NO: MW-22	SAMPLE ID: MW-22	DATE: 1/17/18 (JM)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 11 feet to 21 feet	STATIC DEPTH TO WATER (feet): 12.40	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)

= (21 feet − 12.40 feet) X 0.16 gallons/foot = 1.38 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	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1440	PURGING ENDED AT: 1524	TOTAL VOLUME PURGED (gallons): 2.20

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)
1510	2.0	2.0	0.05	12.40	7.37	25.7	540	3.00/37.1%	7.10	Clear	None
1522	0.10	2.10	0.05	12.40	7.37	25.7	540	3.00/37.1%	7.02	Clear	None
1524	0.10	2.20	0.05	12.40	7.37	25.7	540	3.00/37.1%	7.15	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: John Marra / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1525	SAMPLING ENDED AT: 1531
PUMP OR TUBING DEPTH IN WELL (feet): 14	TUBING MATERIAL CODE: HDPE-45	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 (including wet ice)					
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-22	1		1000 mL	—	—	7.37	PAH	APP	≈ 200

REMARKS: McSorley Well CAP! Found Replacement

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW7th and SW 80th Streets, Miami, FL	
WELL NO: MW-21-2	SAMPLE ID: MW-21-2	DATE: 17-January-2018

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): 10.02	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)
= (feet – feet) X gallons/foot = 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: 1540	PURGING ENDED AT: 1624	TOTAL VOLUME PURGED (gallons): 2.20

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)
1620	2.0	2.0	0.05	10.02	7.11	25.8	492	1.95/24%	3.87	Clear	None
1622	0.10	2.10	0.05	10.02	7.11	25.8	492	1.95/24%	4.12	Clear	None
1624	0.10	2.20	0.05	10.02	7.11	25.8	492	1.95/24%	3.98	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: John Marra / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1625	SAMPLING ENDED AT: 1633
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)					
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-21-2	1	~~AG~~ AG	1000mL	—	—	7.11	PAH	APP	≈ 200
MW-21-2	1	PP	125mL	HNO3	Total Lead	<2	Total Lead	APP	≈ 200

REMARKS: * PAH – 2 ft tubing from DTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Ludlam Corridor Properties 'All Green Trail'	SITE LOCATION: Between NW 7th and SW 80th Streets, Miami, FL	18 Jan 2018
WELL NO: MW-11	SAMPLE ID: MW-11	DATE: 1/18/18 (M)

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 7.10	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)

= (15 feet – 7.10 feet) X 0.16 gallons/foot = 1.2 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): 9.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.0	PURGING INITIATED AT: 1600	PURGING ENDED AT: 1643	TOTAL VOLUME PURGED (gallons): 2.20

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)
1634	2.0	2.0	0.05	7.10	7.02	24.9	55	0.24/2.9%	4.65	Clear	None
1641	0.10	2.10	0.05	7.10	7.02	24.9	55	0.24/2.9%	4.42	Clear	None
1643	0.10	2.20	0.05	7.10	7.02	24.9	55	0.24/2.9%	4.11	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: John MaRRa / SCS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1644	SAMPLING ENDED AT: 1652
PUMP OR TUBING DEPTH IN WELL (feet): 9.0	TUBING MATERIAL CODE: HDPE+S	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 (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-11	1	AG	1000mL	—	—	7.02	PAH	APP	≈200
MW-11	1	PP	125mL	HNO3	—	<2	Total Arsenic	APP	≈200

REMARKS: # PAHs – ≤2 Ft from PTW

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) 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)

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) Hach 2100Q **INSTRUMENT #** _____

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]*

STD P: 800

Standard A 0.5 NTU Lot: A7319 Exp: Nov-19
Standard B 20 NTU Lot: A7165 Exp: Sept-18
Standard C 100 NTU Lot: A7163 Exp: Sept-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
1/11/18	1030	A	0.5	0.48	4	NO	Cal	JM
	1032	B	20	19.8	1	NO	cal	JM
	1034	C	100	98.7	2.3	NO	Cont	JM
	1036	D	800	791.0	1	NO	cont	JM
1/14/18	1820	A	0.5	0.49	2	No	Cont	JM
	1822	B	20	19.90	0.5	NO	cont	JM
	1824	C	100	98.1	1.9	NO	cont	JM
	1826	D	800	786	0.5	NO	cont	JM
1/16/18	830	A	0.5	0.49	2	NO	Cont	[illegible]
	832	B	20	19.80	1	NO	Cont	JM
	834	C	100	98.20	1.8	NO	cont	JM
	836	D	800	794.5	0.7	NO	cont	JM
	1732	A	0.5	0.48	4	NO	Cont	JM
	1734	B	20	19.9	0.5	NO	Cont	JM
	1736	C	100	99.90	0.9	NO	Cont	JM
	1738	D	800	798.6	0.17	NO	Cont	JM
1/17/18	910	A	0.5	0.49	2	NO	cont	JM
	912	B	20	19.90	0.5	NO	Cont	JM
	914	C	100	99.10	9	NO	cont	JM
	916	D	800	795.0	0.6	NO	cont	JM
1/19/18	820	A	0.5	0.48	4	NO	Cont	JM
	822	B	20	19.90	0.5	NO	Cont	JM
	824	C	100	99.60	0.4	NO	Cont	JM
	1826	D	800	796.0	0.5	NO	cont	JM

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) Hach 2100Q **INSTRUMENT #** _____

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 0.5 ntu Lot: A7319 EXP: NOV-19
Standard B 20.0 ntu Lot: A7165 EXP: Sept-18
Standard C 100.0 ntu Lot: A7163 EXP: Sept-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
1/18/18	800	A	0.5	0.49	2	NO	Cont	JM
	802	B	20	19.8	1	NO	Cont	JM
	804	C	100	98.6	0.4	NO	Cont	JM
	1800	A	0.5	0.48	4	NO	Cont	JM
	1802	B	20	19.9	0.5	NO	Cont	JM
	1804	C	100	99.5	0.5	NO	Cont	JM
1/19/18	0730	A	0.5	0.49	2	NO	Cont	JM
	0732	B	20	19.9	0.5	NO	Cont	JM
	0734	C	100	99.8	0.2	NO	Cont	JM
	1600	A	0.5	0.49	2	NO	Cont	JM
	1602	B	20	19.9	0.5	NO	Cont	JM
	1604	C	100	98.9	1.1	NO	Cont	JM

Boldly "X" this box if there is qualified data on this page.

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** 11-10-05

Project/Site: Cudjoe Date: 1/17/18 - 1/18/18 Meter # YSI 1A

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book*

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/-0.3mg/l	
CAL ICV (CCV)		JM	1/17/18	930			9.01	20.4	100.2	9.074	(P) F
CAL ICV CCV		JM	1/17/18	1650			9.03	21.4	101.3	8.846	(P) F
CAL ICV CCV		JM	1/18/18	830			~~10.79~~	~~12.4~~	~~102.8~~		(P) F
CAL ICV CCV							9.53	17.9	100.5	9.486	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV (CCV)		JM	1/17/18	932	84					87	(P) F
CAL ICV (CCV)		JM	"	934	1413					1402	(P) F
CAL ICV CCV			"	1652	~~1413~~ 84					86	P F
CAL ICV CCV			"	1654	1413					1397	P F
CAL ICV CCV			1/18/18	832	84					86	P F
CAL ICV CCV			1/18/18	834	1413					1401	P F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV (CCV)		JM	1/17/18	936	7.0					6.97	(P) F
CAL ICV (CCV)		JM	"	938	4.0					4.12	(P) F
CAL ICV (CCV)		JM	"	940	10.0					9.90	(P) F
CAL ICV CCV			"	1656	7.0					6.98	(P) F
CAL ICV CCV			"	1658	4.0					4.15	(P) F
CAL ICV CCV			"	1700	10.0					9.83	(P) F
CAL ICV CCV			1/18/18	836	7.0					7.08	(P) F
CAL ICV CCV			"	838	4.0					4.01	(P) F
CAL ICV CCV			"	840	10.0					9.95	(P) F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Boldly "X" this box if there is qualified data on this page

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** 11-10-05

Project/Site: Ludlam Date: 1/18/18 - 1/19/18 Meter # Pine Rental

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book*

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °c	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/-0.3mg/l	
CAL ICV (CCV)		JM	1/18/18	1900			9.53	17.9	100.5	9.486	(P) F
CAL ICV (CCV)		JM	1/19/18	830			10.25	14.7	100.9		P F
CAL ICV (CCV)		JM	1/19/18	1660			8.87	21.8	101.0	8.777	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV (CCV)			1/18/18	1900	84	Oct 18	7GJ960			86	(P) F
CAL ICV (CCV)			1/18/18	1902	1413	July 18	7G-G624			1398	(P) F
CAL ICV CCV			1/19/18	832	84	Oct 18	7GJ960			85	(P) F
CAL ICV CCV			1/19/18	834	1413	July 18	7G-G624			1403	(P) F
CAL ICV CCV			1/19/18	1612	84	Oct 18	7GJ960			87	(P) F
CAL ICV CCV			1/19/18	1614	1413	July 18	7G-G624			1401	(P) F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV (CCV)			1/18/18	1904	7.0	Feb 19	7GB009			6.91	(P) F
CAL ICV (CCV)			1/18/18	1906	4.0	NOV 18	6GK498			4.07	(P) F
CAL ICV (CCV)			1/18/18	1908	10.0	Mar 19	7GC010			10.02	(P) F
CAL ICV (CCV)			1/19/18	836	7.0					6.98	(P) F
CAL ICV (CCV)			1/19/18	838	4.0					4.03	(P) F
CAL ICV (CCV)			1/19/18	840	10.0					9.93	(P) F
CAL ICV CCV			1/19/18	1616	7.0					6.91	(P) F
CAL ICV CCV				1618	4.0					4.04	(P) F
CAL ICV CCV				1620	10.0					9.89	(P) F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Boldly "X" this box if there is qualified data on this page

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** 11-10-05

Project/Site: Cudlam Date: 1/16/18 Meter # ARC Rental

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book*

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/-0.3mg/l	
CAL ICV (CCV)		JM	1/16/18	1000				23.7	99.5	8.42	P F
CAL ICV (CCV)		JM	1	1745				23.3	101.6	8.66	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV CCV			1/16/18	1002	84	Aug 18	76H799			86	P F
CAL ICV CCV				1004	1413	July 18	76G662			1404	P F
CAL ICV CCV				1747	84					87	P F
CAL ICV CCV				1749	1413					1461	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV (CCV)		JM	1/16/18	1006	7.0	Feb 19	76B009			7.05	P F
CAL ICV (CCV)				1008	4.0	GGK498				4.06	P F
CAL ICV (CCV)				1010	10.0	May 19	Nov 18			9.96	P F
CAL ICV (CCV)				1751	7.0		76C010			6.95	P F
CAL ICV (CCV)				1753	4.0					3.98	P F
CAL ICV (CCV)				1755	10.0					9.91	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification

Boldly "X" this box if there is qualified data on this page.

Form FD9000-8 **CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)** 11-10-05

Project/Site: Ludlam Date: 1/11/18 Meter # Rental

Temperature (Quarterly) *For Date of Last Temperature Verification see* _____ *in log book*

Dissolved Oxygen	**DEP SOP FT 1500**	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °c	% DO	Saturation mg/L (from chart)	Pass or Fail
										Acceptance Criteria: +/- 0.3mg/l	
CAL ICV (CCV)		JM	1/11/18	1000			8.78	22.87	102.4	8.545	(P) F
CAL ICV (CCV)		JM		1800			8.89	21.8	101.2	8.777	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	**DEP SOP FT 1200**	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
										Acceptance Criteria: +/- 5%	
CAL ICV (CCV)		JM	1/11/18	1010	84	Aug/18	#764799			87	(P) F
CAL ICV (CCV)		JM	1/11/18	1012	1413	Jul/18	#76G624			1401	(P) F
CAL ICV (CCV)				1802	84					86	P F
CAL ICV (CCV)				1804	1413					1410	P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

pH	**DEP SOP FT 1100**	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
										Acceptance Criteria: +/- 0.2 SU	
CAL ICV (CCV)		JM	1/11/18	1014	7.0	10/19 5/2022	#1600		6.93	6.95	(P) F
CAL ICV (CCV)		JM		1016	4.0	10/19	#76J052			4.04	(P) F
CAL ICV (CCV)		JM		1018	10.0	10/19	#76J353			4.95	(P) F
CAL ICV (CCV)		JM		1806	7.0					7.03	(P) F
CAL ICV (CCV)		JM		1808	4.0					4.02	(P) F
CAL ICV (CCV)		JM		1810	10.0					10.06	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Maintenance: Weekly pH Slope: _____ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode: **CAL** - Calibrate -
Perform only in Run Mode: **ICV** - Initial Calibration Verification
Perform only in Run Mode: **CCV** - Continuing Calibration Verification