

# GFA International, INC

A UNIVERSAL ENGINEERING SCIENCES, LLC (UES) COMPANY

## GROUNDWATER MONITORING REPORT

Homerama  
FDEP ID: ERIC\_11281  
3348 South St  
Fort Myers, Lee County, Florida

February 8, 2024  
UES Project 3240.2300001.0000



A Universal  
Engineering  
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## STATEMENT OF PROFESSIONAL PREPARING REPORT

### GROUNDWATER MONITORING REPORT

Homerama  
FDEP ID: ERIC\_11281  
3348 South St  
Fort Myers, Lee County, Florida

February 8, 2024  
UES Project #3240.3200001.0000

I certify that I currently hold an active license in the State of Florida and am competent through education and experience to provide the environmental geologic services contained in this document. I further certify that this document was prepared by me and/or under my responsible charge, pursuant to Chapter 492, Florida Statutes. Furthermore, I certify that the technical documents comply with standard professional practices and meet the requirements of Chapter 62.780, Florida Administrative Code (FAC) and other applicable laws and rules governing the profession. Additionally, I certify that GFA International is licensed by the Florida Department of Professional Regulation, Board of Professional Geologists as a Geology Business (license #GB118).



Scott Alan McManus, P.G.  
Professional Geologist #2651  
State of Florida

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## 1.0 INTRODUCTION

GFA International, Inc. (GFA) is pleased to present this Groundwater Sampling Report summarizing the results and conclusions of groundwater sampling performed December 14, 2023, at the Homerama site located 3348 South Street, Fort Myers, Lee County, Florida 33916. A **Site Location Map** is attached as **Figure 1** of this report.

### 1.1 Background

The site is located in the city block bordered to the north by South Street, to the east by Midway Avenue, to the south by Jeffcott Street and to the west by Henderson Avenue. Figure 1 is a site location map.

The immediate site vicinity was agriculturally developed prior to 1953. Several lots that comprise the site were excavated, likely for borrow pits, prior to 1958. Several borrow pits were located at the site, and immediately north and east of the site. The City of Fort Myers began acquiring onsite lots that had been excavated in 1962 for disposal of lime residual waste generated by the City's water treatment facility. Disposal of lime residual ceased in the late 1960s or early 1970s. The site, including lots not owned by the City, have not been developed.

The presence of arsenic in the lime residual was discovered in 2007. As a result, FDEP requested that potential contamination in groundwater be evaluated. A groundwater quality investigation at the site was performed in early 2008, which included the installation of six shallow monitor wells (MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6). Concentrations of arsenic were detected in two groundwater samples at concentrations that were slightly above the allowable concentration determined by the Environmental Protection Agency (EPA) for safe drinking water. The allowable limit for arsenic in groundwater is the Primary Drinking Water Standard (PDWS) Maximum Contaminant Level (MCL) of 0.010 milligrams per liter (mg/L).

Groundwater monitoring began in August of 2010. Sampling was performed biannually until July 2014. From July 2014 until January 2017, sampling was performed once a year with FDEP approval. Because concentrations of arsenic were below the safe drinking water level since 2012, in January 2017, FDEP issued a letter to the City requesting that sampling be performed every other year.

On February 14, 2018, GFA completed Phase I of the Site Assessment Report (SAR) for soil and groundwater sampling activities performed in October, November and December of 2017. During that time, GFA installed off-site monitor wells MW-7, MW-8, MW-9 and MW-10. The data indicated the following: arsenic was the only contaminant of concern identified in the lime residual deposited at the site, exceeding residential soil cleanup target levels (SCTLs) listed in Chapter 62-777, F.A.C, Table II; arsenic was only detected in one of the ten lime residual samples



tested by the Synthetic Precipitate Leaching Procedure (SPLP), below the laboratory practical quantitation limit at an estimated concentration of 0.00597 mg/L; groundwater was determined to flow from southeast to northwest in the immediate site vicinity; and aluminum, arsenic, iron, manganese, molybdenum, total dissolved solids, and radium 226, 228 were identified in monitor wells onsite and/or in the immediate site vicinity at levels exceeding Groundwater Cleanup Target Levels (GCTLs). GFA provided monthly groundwater monitoring reports to the City of Fort Myers for the subject site between April 2018 and July 2020.

Lime residual removal activities began at the site in October of 2018. Monitor well MW-6 was damaged and removed during lime residual removal activities in November 2018. Monitor wells MW-2, MW-3, MW-4 and MW-5 were damaged and removed during lime residual removal activities in December 2018 and January 2019. Monitor well MW-1R was damaged and removed in February 2019. In April 2019 the City completed the lime residual removal voluntary cleanup. On June 28, 2019, the City submitted a Site Assessment Addendum, which included summaries of groundwater monitoring, soil sampling results, and surface water monitoring completed for the site. On July 22, 2019, three replacement monitor wells, MWR-1, MWR-5, and MWR-6, were installed at the approximate locations of the former monitor wells MW-1/1R, MW-5 and MW-6, and GFA officially began PARM reporting for the City. On October 18, 2019, an additional monitor well, MW-12, was installed on the subject site property to further evaluate the arsenic groundwater contamination observed north of the subject site. The City completed monthly PARM with the submission of *Post Active Remediation Monitoring Report, #12*, dated July 13, 2020.

In November of 2023 the Florida Department of Environmental Protection (FDEP) correspondence with the City suggested obtaining updated groundwater samples to determine current site conditions and pathway towards site closure. Based on the November 6<sup>th</sup> email correspondence groundwater sampling for contaminants of concern (COC) was determined necessary as follows:

<b>COC</b>	<b>MONITORING WELL</b>
Arsenic	MWR-1, MWR-5, MW-10, MW-12
Iron	MWR-1, MWR-5, MWR-6, MW-7, MW-8, MW-9, MW-10, MW-12
Manganese	MWR-5, MWR-6, MW-12
Total Dissolve Solids (TDS)	MWR-1, MWR-5, MW-10, MW-12
Gross Alpha	MWR-1, MWR-6
Radium	MW-8
Uranium	MWR-1, MWR-5, MWR-6



## 1.2 Quality Assurance

Field work and sample collection activities were conducted in accordance with the FDEP (SOP-001/01) for Field Sample Collection. Sample collection supplies were dedicated to each sample and equipment and tooling used were properly decontaminated between sampling to prevent possible introduction of contaminants into the subsurface during the sampling activities.

## 2.0 FIELD WORK

### 2.1 Groundwater Elevation Data and Hydraulic Gradient

GFA mobilized personnel to the site on December 14, 2023 in order to initiate groundwater sampling activities. On that day GFA recorded depth to groundwater measurements from the top of casings (TOC) for groundwater monitoring wells MWR-1, MWR-5, MWR-6, MW-7, MW-8, MW-9, MW-10, and MW-12. Groundwater depths were measured to one-hundredth of a foot using a Geoprobe Water Level Meter, capable of measuring levels to 0.01 feet. Depths to groundwater and groundwater level elevations are included in **Table 1**.

### 2.2 Groundwater Sampling and Analysis

On December 14, 2023, GFA collected groundwater samples from MWR-1, MWR-5, MWR-6, MW-7, MW-8, MW-9, MW-10, and MW-12. Groundwater sampling logs are provided in **Appendix A**. Groundwater was purged from the monitoring wells using a low flow peristaltic pump, until monitoring parameters were within stabilization tolerances prior to sample collection. All groundwater samples were immediately placed in a chest on wet ice and subsequently submitted to a NELAC-accredited laboratory for analysis of the metals following EPA Method 6010, TDS following SM 2540, and radiochemistry for Gross Alpha following EPA Method 900.0, Radium 226/228 following EPA Methods 903.1/904.0, respectively, and Uranium following ASTM D5174-97.

## 3.0 RESULTS

### 3.1 Groundwater Elevation Data and Direction of Groundwater Flow

The interpretation of groundwater elevation data collected December 14, 2023, indicated that the shallow groundwater in the immediate vicinity of the Site was moving onto the site from the south/southeast and away from the site to the west/northwest, as depicted in **Figure 2**.



### 3.2 Groundwater Analytical Results

The laboratory analytical report for the December 14, 2023, groundwater monitoring event is provided in **Appendix B**. A comprehensive summary of groundwater sampling results of analyses including the December 2023 sampling event are provided in **Table 2**.

Arsenic concentrations were reported at estimated concentrations below the Primary Drinking Water Standard (PDWS) Maximum Contaminant Level (MCL) of 0.010 mg/L in groundwater samples collected from onsite monitoring wells MWR-1 (0.0099 mg/L) and MWR-5 (0.0041 mg/L). Arsenic was not detected above the method detection level (MDL) at onsite monitoring well MW-12 ( $\leq 0.0034$  mg/L). Arsenic was detected above the PDWS MDL of 0.010 mg/L at off-site monitoring well MW-10 (0.0922 mg/L). COC concentrations in groundwater are depicted in **Figure 3**.

Iron was reported above the Secondary Drinking Water Standard (SDWS) MCL of 0.3 mg/L in all groundwater samples collected, with the exception of onsite monitoring wells MWR-6 (0.0987 mg/L) and MW-12 (0.0848 mg/L). Iron was reported at onsite well MWR-5 at 3.25 mg/L, above Natural Attenuation Default Source Criteria (NADSC) of 3 mg/L.

Manganese was reported above the SDWS MCL of 0.05 mg/L for groundwater sample MWR-5 (0.0576 mg/L). Manganese concentrations were reported below the SDWS MCL in monitoring wells MWR-6 (0.0072 mg/L) and MW-12 (0.0319 mg/L).

TDS concentrations was reported above the SDWS MCL of 500 mg/L in groundwater samples collected from MWR-1 (602 mg/L), MWR-10 (710 mg/L) and MW-12 (926 mg/L). TDS concentration was reported below the SDWS MCL in groundwater collected from monitoring well MWR-5 (489 mg/L).

Gross alpha activity was reported above the PDWS MCL of 15 picocuries per liter (pCi/L) in groundwater from onsite monitor well MWR-1 (17.5 pCi/L). Gross alpha activity was reported below the PDWS MCL for groundwater collected from onsite monitor well MWR-6 (13.9 pCi/L).

Radium 226+228 was reported at 3.35 (+/-) pCi/L in off-site monitoring well MW-8, below the PDWS of 5 pCi/L.

Uranium was reported above the GCTL of 21 pCi/L but below the PDWS of 30 pCi/L in monitoring well MWR-6 (25.2 pCi/L), and was below the GCTL at MWR-5 (15.0 pCi/L).

### 4.0 CONCLUSIONS

The following are conclusions based on the laboratory analytical results for this sampling event and information available from previous assessment reports:



1. The elevation of the shallow groundwater table was on average 0.74-ft. higher in elevation than that measured in December of 2019, for the project site vicinity.
2. December 14, 2023 groundwater elevation measurements indicate groundwater movement to the site from the south/southeast/east, and away from the site to the west/northwest.
3. Iron was reported above the SDWS MCL of 0.3 mg/L in all groundwater samples collected, except for onsite monitoring wells MWR-6 (0.0987 mg/L) and MW-12 (0.0848 mg/L).
4. Manganese was reported above the SDWS MCL (0.05 mg/L) for onsite monitoring well MWR-5 (0.0576 mg/L).
5. TDS concentrations were reported above the SDWS MCL (500 mg/L) in groundwater samples collected from MWR-1 (602 mg/L), MWR-10 (710 mg/L) and MW-12 (926 mg/L).
6. Gross alpha activity was reported above the PDWS MCL of 15 pCi/L in groundwater from onsite monitor well MWR-1 (17.5 pCi/L).
7. Uranium was reported above the GCTL (21 pCi/L) in monitoring wells MWR-1 (25.4 pCi/L) and MWR-6 (25.2 pCi/L).
8. Arsenic concentrations were reported above the PDWS MCL of 0.010 mg/L only at off-site monitoring well MW-10 (0.0922 mg/L). This is the highest concentration of arsenic reported in groundwater since monitoring began, at the project site in March of 2008, and since off-site groundwater monitoring began in December of 2017.
9. The City completed voluntary cleanup by removal and offsite disposal of 29,839.5 tons of lime sludge from November 2018 to June 2019. All six onsite monitor wells were found to be installed within lime sludge deposits to various depths, and were removed from the site during lime sludge excavation, further evidence that the lime sludge is not leachable to groundwater, since all wells were installed through lime sludge deposits, yet only occasional, sporadic or episodic occurrence of arsenic exceedances have been reported in the groundwater.
10. In May 2019 AirQuest Environmental, Inc., completed a subsurface assessment of four residential properties located adjacent north of the site at 3313 and 3325 South Street and 3314 and 3320 Dora Street. The report confirmed the presence of construction and organic debris fill materials and arsenic in unsaturated soils up to 18 mg/kg. Monitoring Well MW-10 is located in the sidewalk near the southeast corner of 3325 South Street.
11. The removal of lime sludge deposits from the site and subsequent construction of onsite ponds has changed the local groundwater movement, creating a hydraulic sump/depression onsite during dry-season, which may causes groundwater from the north to move toward the site.
12. The 95% Upper Confidence Limit (UCL) suggested when using the EPA's ProUCL 5.2 tool is 1.286 mg/L for all forty-seven (47) reported iron results for Background monitoring wells MW-7 and MW-9, with an average mean of 1.006 mg/L.
13. Background data for Iron indicate that the surficial aquifer in the site vicinity is *poor quality*.





- a. *“Poor quality” means groundwater within the affected monitoring zone with background concentrations, as defined in subsection 62-780.200(3), F.A.C., that exceed any of Florida’s Primary or Secondary Drinking Water Standards referenced in chapter 62-550, F.A.C.*
  - b. *Ch. 62-780.680(2) Risk Management Option Level II (c) Alternative groundwater CTLs have been established by the PRSR depending on the current and projected use of groundwater in the vicinity of the site and one or more of the following criteria are met, as applicable: 1. For contamination of groundwater of low yield or poor quality, the CTLs specified in chapter 62-777, F.A.C., Table I groundwater of low yield/poor quality criteria column shall apply to groundwater within the property boundaries, provided that it has been demonstrated to the Department by a minimum of one year of groundwater monitoring data that groundwater contaminant concentrations at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs specified in subparagraph 62-780.680(1)(c)1., F.A.C., and that the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C.*
14. Elevated concentrations of arsenic, iron and TDS have been consistently reported above GCTLs at MWR-1, MW-12 and MW-10, since 2019 PARM. However, for this sampling event, arsenic was reported above the GCTL/PDWS only at off-site monitoring well MW-10. The accumulated data collected for the project site indicate that the occurrence of these constituents in the groundwater locally is not associated with the former lime sludge deposits. Furthermore, the arsenic contamination identified north of the site, and occasionally at the north site perimeter, is most likely the result of uncontrolled dumping and landfill of the city block adjacent north of the site.
15. No particular analyte exceedance in the groundwater has been attributed to the historical deposition of the lime sludge. Elevated levels of arsenic may appear at the north site perimeter during the dry season when the site ponds create a hydraulic depression locally, allowing impacted groundwater from adjacent north to migrate into the project site.

## **5.0 RECOMMENDATIONS**

The City is preparing to construct the park as discussed with the FDEP staff in public meetings in January 2018. Based on the December 14, 2023 groundwater monitoring results, GFA recommends continued monitoring of the groundwater for arsenic, iron, TDS and radionuclides at the project site during the construction of the park.



## **TABLES**



Project: South Street Property FDEP FID: COM\_288039

WELL NO.	MWR-1	MWR-5	MWR-6	MW-7	MW-8	MW-9	MW-10	MW-12
DIAMETER (IN)	2	2	2	2	2	2	2	2
WELL DEPTH (FEET)	12	12	12	12	12	12	12	12
SCREEN INTERVAL (FEET)	2-12	2-12	2-12	2-12	2-12	2-12	2-12	2-12
TOC ELEVATION (FEET)	19.78	19.00	18.92	16.18	16.02	16.11	16.01	19.23

DATE	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW
12/4/2017	--	--	--	--	--	--	13.20	2.98	13.16	2.86	13.36	2.75	13.03	2.98	--	--
4/25/2018	--	--	--	--	--	--	11.30	4.88	11.24	4.78	11.49	4.62	11.06	4.95	--	--
6/19/2018	--	--	--	--	--	--	14.12	2.06	14.05	1.97	14.29	1.82	13.88	2.13	--	--
7/17/2018	--	--	--	--	--	--	14.84	1.34	14.74	1.28	14.97	1.14	14.51	1.50	--	--
8/20/2018	--	--	--	--	--	--	15.63	0.55	15.46	0.56	15.43	0.68	15.31	0.70	--	--
9/17/2018	--	--	--	--	--	--	14.41	1.77	14.32	1.70	14.52	1.59	14.11	1.90	--	--
10/15/2018	--	--	--	--	--	--	14.76	1.42	14.71	1.31	14.91	1.20	14.57	1.44	--	--
11/14/2018	--	--	--	--	--	--	12.90	3.28	12.85	3.17	13.00	3.11	12.70	3.31	--	--
12/17/2018	--	--	--	--	--	--	12.29	3.89	12.22	3.80	12.46	3.65	12.01	4.00	--	--
1/14/2019	--	--	--	--	--	--	12.34	3.84	12.39	3.63	11.74	4.37	12.18	3.83	--	--
2/14/2019	--	--	--	--	--	--	13.24	2.94	13.25	2.77	13.34	2.77	13.13	2.88	--	--
3/18/2019	--	--	--	--	--	--	12.83	3.35	12.78	3.24	12.93	3.18	12.70	3.31	--	--
4/15/2019	--	--	--	--	--	--	12.88	3.30	12.66	3.36	12.98	3.13	12.43	3.58	--	--
5/20/2019	--	--	--	--	--	--	13.58	2.60	13.57	2.45	13.72	2.39	13.42	2.59	--	--
6/21/2019	--	--	--	--	--	--	14.47	1.71	14.39	1.63	14.61	1.50	14.23	1.78	--	--
7/24/2019	14.99	4.79	15.06	3.94	15.13	3.79	15.29	0.89	15.24	0.78	15.33	0.78	15.08	0.93	--	--
8/15/2019	15.05	4.73	15.30	3.70	15.51	3.41	15.30	0.88	15.21	0.81	15.29	0.82	15.09	0.92	--	--
9/18/2019	14.09	5.69	14.33	4.67	14.50	4.42	14.41	1.77	14.31	1.71	14.46	1.65	14.18	1.83	--	--
10/21/2019	13.85	5.93	13.89	5.11	13.96	4.96	14.20	1.98	14.15	1.87	14.42	1.69	13.99	2.02	13.94	5.29
11/18/2019	12.75	7.03	12.98	6.02	13.16	5.76	13.10	3.08	13.01	3.01	13.18	2.93	12.89	3.12	12.89	6.34
12/13/2019	12.31	7.47	12.53	6.47	12.68	6.24	12.72	3.46	12.64	3.38	12.89	3.22	12.45	3.56	12.47	6.76
1/16/2020	12.68	7.10	12.90	6.10	13.03	5.89	12.98	3.20	12.88	3.14	13.10	3.01	12.78	3.23	12.80	6.43
2/19/2020	12.60	7.18	12.79	6.21	12.89	6.03	12.87	3.31	12.79	3.23	12.97	3.14	12.70	3.31	12.71	6.52
3/18/2020	11.93	7.85	12.13	6.87	12.24	6.68	12.23	3.95	12.17	3.85	12.35	3.76	12.04	3.97	12.04	7.19
4/15/2020	11.36	8.42	11.50	7.50	11.62	7.30	11.62	4.56	11.56	4.46	11.74	4.37	11.46	4.55	11.45	7.78
5/15/2020	10.89	8.89	11.03	7.97	11.11	7.81	11.16	5.02	11.08	4.94	11.27	4.84	11.00	5.01	10.98	8.25
6/16/2020	14.52	5.26	14.41	4.59	14.37	4.55	14.90	1.28	14.78	1.24	15.07	1.04	14.61	1.40	14.45	4.78
12/14/2023	13.11	6.67	13.32	5.68	13.51	5.41	13.42	2.76	13.33	2.69	13.49	2.62	13.22	2.79	13.23	6.00

NOTES:

ELEV = Static groundwater elevation reported in NAVD88

DTW = Measured depth to static groundwater elevation from top of casing (TOC)

All measurements recorded in feet

All DTW measurements reported prior to 10/18/2017 were not performed by GFA.

Historic elevations were determined based on the assumption that the top of monitor well casings have not changed since original construction.

Elevation vertical datum is the North American Vertical Datum (NAVD) of 1988.



TABLE 2 - Groundwater Analytical Summary

Homerama - South Street Property

Project No: 3240.2300001.0000

FDEP ID: ERIC\_11281

Sample ID		Parameter									
Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Iron (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Total Dissolved Solids (mg/L)	Gross Alpha (pCi/L)	Adjusted Gross Alpha <sup>1</sup> (pCi/L)	Combined Radium 226, 228 (pCi/L)	Uranium (µg/L)
FL GCTL - 62-777		0.2	0.010	0.3	0.05	0.035	500	*	*	*	21
PDWS MCL - 62-550		NA	0.010	NA	NA	NA	NA	***	15	5	30
SDWS MCL - 62-550		0.2	NA	0.3	0.05	NA	500	NA	NA	NA	NA
MW-1R	10/18/17	0.310	0.00169	0.581	0.0154	0.0086	1060	23.5	13.7	4.3	14.5
	12/4/17	0.206	0.00148	0.708	0.0205	NA	888	NA	NA	NA	NA
	4/25/18	0.148 I	0.00200 I	0.698	0.0224	0.0026	978	NA	NA	3.3	NA
	6/20/18	0.107 I	0.00836 I	0.715	0.0564	0.0395	1100	NA	NA	NA	NA
	7/17/18	0.116 I	0.0106	1.43	0.0236	0.0341	962	NA	NA	NA	NA
	8/20/18	0.252	0.0108	2.22	0.0252	0.0333	1070	36.1	NA	NA	NA
	9/17/18	0.0904 I	0.00579 I	1.52	0.0136	0.0154	936	NA	NA	NA	NA
	10/15/18	0.0789 I	0.0124	2.05	0.0233	0.0179	1070	NA	NA	NA	NA
	11/14/18	0.0918 I	0.00986 I	2.15	0.0248	0.0119 I	1160	23.7	14.5	2.7	13.7
	12/17/18	0.0930 I	0.00624 I	1.50	0.0306	0.0111 I	1150	NA	NA	NA	NA
1/15/19	0.0716 I	0.00347 I	1.63	0.0286	0.026	1180	NA	NA	NA	NA	
MWR-1	7/24/19	0.223	0.00206 I	1.71	0.0322	0.0198	710	25.7	6.2	2.2	28.9
	8/15/19	0.0515 I	0.00754 I	0.102	0.0174	0.201	606	NA	NA	NA	NA
	9/18/19	0.0756 I	0.0106	1.74	0.0364	0.115	762	NA	NA	NA	NA
	10/21/19	0.0850 I	0.00405 I	0.192 I	0.0164	0.0236	840	29.5	17.9	1.8	16.4
	11/18/19	NA	0.0156	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.0314	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.0895 I	0.0157	0.251	0.00831	0.0346	812	64.3	14.8	0.7	73.8
	2/19/20	NA	0.0133	NA	NA	NA	NA	NA	NA	NA	11.6
	3/18/20	NA	0.0145	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0758 I	0.0215	0.784	0.00839	0.0167	592	15.5	0	3.3	23.5
	5/15/20	NA	0.0275	1.1	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00346 I	0.102 I	NA	NA	NA	NA	NA	NA	NA
12/14/23	NA	0.0099 I	1.700	NA	NA	602	17.5	NA	NA	25.4	
MW-5	10/19/17	0.0500 U	0.0138	1.15	0.0278	0.00591	746	26.3	0.9	1.5	37.6
	12/4/17	0.0240 U	0.0312	2.32	0.0461	NA	700	NA	NA	NA	NA
	4/26/18	0.0500 U	0.00605 I	1.97	0.0506	0.00960 I	750	NA	NA	2.3	NA
	6/20/18	0.0500 U	0.00449 I	1.52	0.0307	0.00762 I	724	NA	NA	NA	NA
	7/17/18	0.0500 U	0.00972 I	1.64	0.0299	0.00846 I	758	NA	NA	NA	NA
	8/20/18	0.0610 U	0.0610 I	0.491	0.0151	0.00712 I	586	28.3	NA	NA	NA
	9/17/18	0.0500 U	0.0120	1.68	0.0507	0.0108 I	678	NA	NA	NA	NA
	10/15/18	0.0500 U	0.0140	5.52	0.0689	0.00683 I	706	NA	NA	NA	NA
	11/14/18	0.0500 U	0.0127	3.76	0.0751	0.0104 I	763	11.0	3.5	2.4	11.2
12/17/18	0.0500 U	0.00290 I	0.807	0.0466	0.00953 I	624	NA	NA	NA	NA	
MWR-5	7/24/19	0.353	0.00185 U	5.48	0.11	0.0225	592	7.7	4.9	2.0	4.2
	8/15/19	0.250	0.00620 U	0.224	0.0351	0.0998	508	NA	NA	NA	NA
	9/18/19	0.121 I	0.00776 I	1.26	0.0972	0.0157	628	NA	NA	NA	NA
	10/21/19	0.0500 U	0.00308 I	0.287	0.0469	0.0463	506	27.5	5.1	1.9	32.9
	11/18/19	NA	0.00362 I	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.00272 I	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.318	0.00343 I	0.338	0.0420	0.0455	680	42.5	12.6	2.0	44.6
	2/19/20	NA	0.00277 I	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.00273 I	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0964 I	0.00428 I	0.604	0.0851	0.0244	732	14.7	0	3.4	23.2
	5/15/20	NA	0.00863 I	NA	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00470 I	NA	NA	NA	NA	NA	NA	NA	NA
	12/14/23	NA	0.0041 I	3.25	0.0576	NA	489	NA	NA	NA	15.0



TABLE 2 - Groundwater Analytical Summary

Homerama - South Street Property

Project No: 3240.2300001.0000

FDEP ID: ERIC\_11281

Sample ID		Parameter									
Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Iron (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Total Dissolved Solids (mg/L)	Gross Alpha (pCi/L)	Adjusted Gross Alpha <sup>1</sup> (pCi/L)	Combined Radium 226, 228 (pCi/L)	Uranium (µg/L)
FL GCTL - 62-777		0.2	0.010	0.3	0.05	0.035	500	*	*	*	21
PDWS MCL - 62-550		NA	0.010	NA	NA	NA	NA	***	15	5	30
SDWS MCL - 62-550		0.2	NA	0.3	0.05	NA	500	NA	NA	NA	NA
MW-6	10/19/17	0.0500 U	0.00508	1.21	0.223	0.0241	1490	103.3	0	6.3	200.1
	12/4/17	0.0240 U	0.00426	1.21	0.0849	NA	1160	NA	NA	NA	NA
	4/26/18	0.0500 U	0.00185 U	1.03	0.0737	0.00796 I	1030	NA	NA	6.7	NA
	6/20/18	0.0922 I	0.00274 I	1.98	0.0991	0.00959 I	1580	NA	NA	NA	NA
	7/17/18	0.0500 U	0.00274 I	2.18	0.115	0.0120 I	1540	NA	NA	NA	NA
	8/20/18	0.0874 I	0.00446 I	0.872	0.0715	0.00897 I	882	31.3	NA	NA	NA
	9/17/18	0.0507 I	0.00446 I	5.05	0.201	0.0153	1360	NA	NA	NA	NA
10/15/18	0.0612 I	0.00343 I	3.01	0.136	0.0139 I	1220	NA	NA	NA	NA	
MWR-6	7/24/19	0.191 I	0.00185 U	4.62	0.0475	0.0132 I	406	6.7	3.4	2.2	4.9
	8/15/19	0.150 I	0.00620 U	2.58	0.0443	0.0247	370	NA	NA	NA	NA
	9/18/19	0.106 I	0.00393 I	1.2	0.0271	0.0138 I	388	NA	NA	NA	NA
	10/21/19	0.0667 I	0.00256 I	0.415	0.0175	0.0289	408	12.1	10.5	2.1	11.0
	11/18/19	NA	0.00333 I	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.00218 I	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.0506 I	0.00235 I	0.416	0.00393 I	0.107	382	36.5	0.7	2.3	53.3
	2/19/20	NA	0.00185 U	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.00185 U	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0661 I	0.00292 I	0.272	0.00771	0.0346	384	27.4	17.2	2.4	15.2
	5/15/20	NA	0.00348 I	NA	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00284 I	NA	NA	NA	NA	NA	NA	NA	NA
12/14/23	NA	NA	0.0987	0.0072	NA	NA	13.9	NA	NA	25.2	
MW-7	12/4/17	NA	0.0194	NA	NA	0.0236	574	NA	NA	NA	NA
	4/25/18	0.333	0.0131	8.22	0.123	0.00762 I	604	NA	NA	NA	NA
	6/19/18	0.121 I	0.00800 I	0.493	0.00565	0.0657	216	NA	NA	NA	NA
	7/17/18	0.0500 U	0.00396 I	0.843	0.0432	0.00633 I	246	NA	NA	NA	NA
	8/20/18	0.528	0.00465 I	1.080	0.0358	0.004 U	222	5.0	NA	NA	NA
	9/17/18	0.0500 U	0.0117	1.970	0.0577	0.00438 I	268	NA	NA	NA	NA
	10/15/18	0.0822 I	0.00871 I	1.39	0.0475	0.00400 U	222	NA	NA	NA	NA
	11/14/18	0.0500 U	0.00437 I	0.248	0.0324	0.00712 I	240	5.6	1.7	0.6	5.8
	12/17/18	0.0646 I	0.00868 I	0.957	0.0563	0.0104 I	330	NA	NA	NA	NA
	1/15/19	0.0500 U	0.00639 I	0.906	0.0694	0.00739 I	398	NA	NA	NA	NA
	2/18/19	0.0418 I	0.00620 U	0.216	0.0102	0.0224	304	10.3	0.2	0.5	15.0
	3/18/19	0.0500 U	0.00526 I	0.565	0.0232	0.0215	292	NA	NA	NA	NA
	4/15/19	0.0996 I	0.00774 I	0.492	0.0325	0.00752 I	278	5.7	3.5	0.7	3.2
	5/20/19	0.1161	0.00322 I	0.801	0.0177	0.0295	244	NA	NA	NA	NA
	6/21/19	0.0814 I	0.00212 I	0.123 I	0.00973	0.00263 I	190	NA	NA	NA	NA
	7/24/19	0.0902 I	0.00672 I	2.05	0.00286 I	0.00269 I	230	1.1	1.1	0.3	1.9
	8/15/19	0.0415 I	0.00620 U	1.39	0.0393	0.00467 I	310	NA	NA	NA	NA
	9/18/19	0.0588 I	0.00961 I	2.82	0.0615	0.00372 I	284	NA	NA	NA	NA
	10/21/19	0.0628 I	0.00430 I	0.528	0.0492	0.00279 I	216	1.9	0.4	0.7	2.5
	11/18/19	NA	0.00680 I	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.00634 I	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.0521 I	0.00267 I	0.173 I	0.00734	0.00874 I	250	4.4	0	0.9	6.9
	2/19/20	NA	0.00185 U	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.00288 I	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0500 U	0.00489 I	0.138 I	0.0289	0.00400 U	248	3	0	3.7	4.5
	5/15/20	NA	0.00890 I	0.597	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00185 U	0.208	NA	NA	NA	NA	NA	NA	NA
12/14/23	NA	NA	1.58	NA	NA	NA	NA	NA	NA	NA	



TABLE 2 - Groundwater Analytical Summary

Homerama - South Street Property

Project No: 3240.2300001.0000

FDEP ID: ERIC\_11281

Sample ID		Parameter									
Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Iron (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Total Dissolved Solids (mg/L)	Gross Alpha pCi/L	Adjusted Gross Alpha <sup>1</sup> (pCi/L)	Combined Radium 226, 228 (pCi/L)	Uranium (µg/L)
FL GCTL - 62-777		0.2	0.010	0.3	0.05	0.035	500	*	*	*	21
PDWS MCL - 62-550		NA	0.010	NA	NA	NA	NA	***	15	5	30
SDWS MCL - 62-550		0.2	NA	0.3	0.05	NA	500	NA	NA	NA	NA
MW-8	12/4/17	NA	0.0137	NA	NA	0.0478	514	NA	NA	NA	NA
	4/25/18	0.267	0.00561	1.33	0.0127	0.00600	492	NA	NA	2.2	NA
	6/19/18	0.0985	0.00634	0.388	0.00337	0.0687	474	NA	NA	NA	NA
	7/18/18	0.0635	0.00700	0.755	0.00183	0.0506	470	NA	NA	NA	NA
	8/21/18	0.0531	0.00632	0.0527	0.0161	0.0574	372	24.0	NA	NA	NA
	9/17/18	0.0500	0.00753	0.418	0.0189	0.0322	370	NA	NA	NA	NA
	10/15/18	0.0500	0.0102	0.320	0.0258	0.0141	304	NA	NA	NA	NA
	11/15/18	0.0500	0.0124	0.628	0.0160	0.0109	336	9.9	2.3	1.5	11.3
	12/7/18	0.0563	0.0109	0.643	0.014	0.00907	436	NA	NA	NA	NA
	1/15/19	0.0500	0.00783	0.226	0.0141	0.0117	414	NA	NA	NA	NA
	2/18/19	0.0240	0.00896	0.352	0.013	0.00815	412	9.2	3.4	1.9	8.6
	3/18/19	0.05	0.0123	0.640	0.00927	0.0091	394	NA	NA	NA	NA
	4/15/19	0.0570	0.0108	0.373	0.00921	0.00851	426	9.8	5.8	1.1	6.0
	5/20/19	0.0500	0.0103	0.397	0.00384	0.0158	316	NA	NA	NA	NA
	6/21/19	0.0637	0.00823	0.110	0.00218	0.0124	302	NA	NA	NA	NA
	7/24/19	0.0552	0.00518	0.124	0.00286	0.019	348	10.2	6.3	3.5	5.8
	8/15/19	0.0240	0.00620	0.158	0.00870	0.0296	294	NA	NA	NA	NA
	9/18/19	0.0500	0.00890	0.417	0.0163	0.0215	278	NA	NA	NA	NA
	10/21/19	0.0500	0.00809	0.166	0.00653	0.00748	326	5.3	0	2.5	7.5
	11/18/19	NA	0.00802	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.00786	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.0500	0.00662	0.212	0.00316	0.00810	320	11.4	4.2	1.3	10.7
	2/19/20	NA	0.00558	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.00616	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0500	0.00972	0.411	0.00887	0.00493	342	9.2	3.3	5.3	8.8
	5/15/20	NA	0.00988	0.559	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00625	0.253	NA	NA	NA	NA	NA	NA	NA
	12/14/23	NA	NA	0.647	NA	NA	NA	NA	NA	NA	3.35
MW-9	12/7/17	NA	0.00884	NA	NA	0.0246	482	NA	NA	NA	NA
	4/25/18	0.329	0.00572	1.96	0.0128	0.0172	446	NA	NA	3.9	NA
	6/19/18	2.54	0.00377	0.808	0.00107	0.0236	270	NA	NA	NA	NA
	7/18/18	0.0762	0.00377	0.109	0.00757	0.00799	260	NA	NA	NA	NA
	8/21/18	0.343	0.00647	1.37	0.00897	0.00789	512	19.6	NA	NA	NA
	9/17/18	0.0676	0.0101	2.340	0.0123	0.00796	424	NA	NA	NA	NA
	10/15/18	0.187	0.00804	1.25	0.00751	0.00416	270	NA	NA	NA	NA
	11/15/18	0.198	0.00437	0.569	0.00550	0.00984	248	6.2	4.0	2.9	3.3
	12/7/18	0.109	0.00558	0.49	0.00620	0.0135	294	NA	NA	NA	NA
	1/15/19	0.0791	0.00419	0.951	0.00780	0.00909	412	NA	NA	NA	NA
	2/18/19	0.166	0.00620	0.227	0.00668	0.0117	530	13.9	9.9	4.2	6.0
	3/18/19	0.171	0.00486	0.644	0.00748	0.0114	546	NA	NA	NA	NA
	4/15/19	0.270	0.00300	0.113	0.00100	0.00987	302	6.6	4.2	1.9	3.6
	5/20/19	0.345	0.00382	0.283	0.00301	0.0300	356	NA	NA	NA	NA
	6/21/19	0.310	0.00332	0.125	0.00100	0.00618	210	NA	NA	NA	NA
	7/24/19	1.03	0.00322	0.97	0.00706	0.00991	540	18.5	13.1	8.2	8.0
	8/15/19	0.168	0.00620	1.11	0.00931	0.00560	544	NA	NA	NA	NA
	9/18/19	0.0613	0.00689	1.13	0.00957	0.00499	448	NA	NA	NA	NA
	10/21/19	0.158	0.00367	0.26	0.00228	0.00591	260	4.4	3.5	3.3	1.0
	11/18/19	NA	0.00881	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.00613	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.166	0.00326	0.384	0.00332	0.0113	448	12.9	4.2	4.7	5.8
	2/19/20	NA	0.00304	0.208	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.00200	NA	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.0500	0.00227	0.912	0.00527	0.00754	466	10.2	5.4	4.8	7.9
	5/15/20	NA	0.00533	1.03	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.00243	0.497	NA	NA	NA	NA	NA	NA	NA
	12/14/23	NA	NA	1.77	NA	NA	NA	NA	NA	NA	NA



TABLE 2 - Groundwater Analytical Summary

Homerama - South Street Property

Project No: 3240.2300001.0000

FDEP ID: ERIC\_11281

Sample ID		Parameter									
Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Iron (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Total Dissolved Solids (mg/L)	Gross Alpha pCi/L	Adjusted Gross Alpha <sup>1</sup> (pCi/L)	Combined Radium 226, 228 (pCi/L)	Uranium (µg/L)
FL GCTL - 62-777		0.2	0.010	0.3	0.05	0.035	500	*	*	*	21
PDWS MCL - 62-550		NA	0.010	NA	NA	NA	NA	***	15	5	30
SDWS MCL - 62-550		0.2	NA	0.3	0.05	NA	500	NA	NA	NA	NA
MW-10	12/4/17	NA	0.0355	NA	NA	0.0897	668	NA	NA	NA	NA
	4/25/18	0.173 I	0.0128	1.21	0.0182	0.0718	590	NA	NA	2.8	NA
	6/19/18	0.0824 I	0.00301 I	1.00	0.00386 I	0.00714 I	688	NA	NA	NA	NA
	7/17/18	0.0730 I	0.00419 I	0.410	0.00373 I	0.0112 I	718	NA	NA	NA	NA
	8/20/18	0.0972 I	0.00438 I	0.209	0.0278	0.0134 I	546	19.5	NA	NA	NA
	9/17/18	0.0500 U	0.0114	0.258	0.0581	0.431	508	NA	NA	NA	NA
	10/15/18	0.0675 I	0.0113	0.530	0.0541	0.417	492	NA	NA	NA	NA
	11/14/18	0.0692 I	0.0161	1.000	0.0496	0.34	540	49.4	0	3.4	83.3
	12/17/18	0.0775 I	0.0214	1.500	0.0438	0.199	610	NA	NA	NA	NA
	1/15/19	0.0500 U	0.0139	0.551	0.0238	0.106	634	NA	NA	NA	NA
	2/18/19	0.0240 U	0.00864 I	0.237	0.0152	0.132	636	41.7	2.8	4.1	58.0
	3/18/19	0.0500 U	0.0145	0.248	0.0141	0.0916	646	NA	NA	NA	NA
	4/15/19	0.0548 I	0.0131	0.371	0.0112 V	0.0401	696	42.4	28.5	3.5	20.7
	5/20/19	0.0500 U	0.00743 I	0.0705 I	0.0176	0.0392	690	NA	NA	NA	NA
	6/21/19	0.0500 U	0.00803 I	0.0541 I	0.00859	0.0295	668	NA	NA	NA	NA
	7/24/19	0.0993 I	0.0149	0.0808 I	0.041	0.0104 I	572	22.8	8.9	3.5	20.7
	8/15/19	0.0326 I	0.00831 I	0.303	0.105	0.00629 I	610	NA	NA	NA	NA
	9/18/19	0.0757 I	0.0215	0.489	0.0797	0.0168	584	NA	NA	NA	NA
	10/21/19	0.135 I	0.0148	0.189 I	0.0154	0.0146 I	568	15.2	5.9	2.5	13.6
	11/18/19	NA	0.0257	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.0282	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.115 I	0.0187	0.422	0.0278	0.00891 I	724	13.2	7.3	4.3	8.8
	2/19/20	NA	0.0233	0.496	NA	NA	NA	NA	NA	NA	NA
	3/18/20	NA	0.0255	0.842	NA	NA	NA	NA	NA	NA	NA
4/15/20	0.0500 U	0.0342	1.08	0.0165	0.00675 I	748	11.8	7.3	4.5	6.7	
5/15/20	NA	0.0485	1.43	NA	NA	NA	NA	NA	NA	NA	
6/16/20	NA	0.0114	0.127 I	NA	NA	NA	NA	NA	NA	NA	
12/14/23	NA	0.0922	2.62	NA	NA	710	NA	NA	NA	NA	
MW-12	10/21/19	0.305	0.0283	6.62	0.0738	0.01223 I	NA	6.5	0	4.8	7.7
	11/18/19	NA	0.00896 I	NA	NA	NA	NA	NA	NA	NA	NA
	12/13/19	NA	0.0105	NA	NA	NA	NA	NA	NA	NA	NA
	1/16/20	0.328	0.0199	3.08	0.0546	0.00843	920	18.2	14.0	2.9	6.3
	2/19/20	0.218	0.0173	3.55	NA	NA	NA	NA	NA	NA	NA
	3/18/20	0.123 I	0.00591 I	1.07	NA	NA	NA	NA	NA	NA	NA
	4/15/20	0.196 I	0.00260 I	0.911	0.0398	0.00561 I	856	4.1	1.9	3	3.3
	5/15/20	NA	0.00379 I	0.715	NA	NA	NA	NA	NA	NA	NA
	6/16/20	NA	0.0144	0.241	NA	NA	NA	NA	NA	NA	NA
	12/14/23	NA	0.0034 U	0.084	0.0319	NA	926	NA	NA	NA	NA

Notes:

- \* - Primary Standard as provided in Chapter 62-550, F.A.C.
- \*\* - Secondary Standard as provided in Chapter 62-550, F.A.C.
- \*\*\*- Primary Standard for gross alpha activity including Radium 226 but excluding radon and uranium MCL is 15 pCi/L as provided in Chapter 62-550, F.A.C.
- <sup>1</sup> - Adjusted gross alpha activity includes Radium 226 but excludes radon and uranium
- mg/l - milligrams per liter
- µg/l - micrograms per liter
- NA - not applicable or not analyzed
- I - The reported estimated value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- U - Indicates that the compound was analyzed for but not detected.
- GCTL - Groundwater Cleanup Target Level (Chapter 62-777 F.A.C.)
- PDWS MCL - Primary Drinking Water Standard Maximum Contaminant Level (Chapter 62-550 F.A.C.)
- SDWS MCL - Secondary Drinking Water Standard Maximum Contaminant Level (Chapter 62-550 F.A.C.)
- (BOLDED CONCENTRATION) exceeds SDWS MCL or GCTL.
- (BOLDED YELLOW HIGHLIGHTED RESULT) exceeds PDWS MCL.



Project: South Street Property

Post Active Remediation Monitoring

Project No: 3240.2300001.0000

FDEP FID: ERIC\_11281

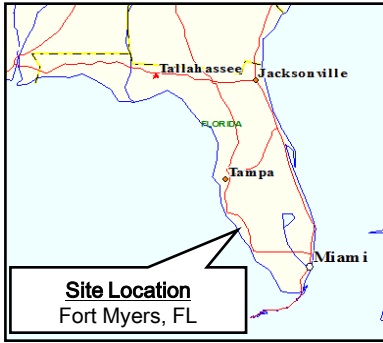
Date Sampled	Arsenic (mg/L)							
	MWR-1	MWR-5	MWR-6	MW-7	MW-8	MW-9	MW-10	MW-12
7/24/2019	0.00206 I	0.00185 U	0.00185 U	0.00672 I	0.00518 I	0.00322 I	<b>0.0149</b>	NA
8/15/2019	0.00754 I	0.00620 U	0.00620 U	0.00620 U	0.00620 U	0.00620 U	0.00831 I	NA
9/18/2019	<b>0.0106</b>	0.00776 I	0.00393 I	0.00961 I	0.00890 I	0.00689 I	<b>0.0215</b>	NA
10/21/2019	0.00405 I	0.00308 I	0.00256 I	0.00430 I	0.00809 I	0.00367 I	<b>0.0148</b>	<b>0.0283</b>
11/18/2019	<b>0.0156</b>	0.00362 I	0.00333 I	0.00680 I	0.00802 I	0.00881 I	<b>0.0257</b>	0.00896 I
12/13/2019	<b>0.0314</b>	0.00272 I	0.00218 I	0.00634 I	0.00786 I	0.00613 I	<b>0.0282</b>	<b>0.0105</b>
1/16/2020	<b>0.0157</b>	0.00343 I	0.00235 I	0.00267 I	0.00662 I	0.00326 I	<b>0.0187</b>	<b>0.0199</b>
2/19/2020	<b>0.0133</b>	0.00277 I	0.00185 U	0.00185 U	0.00558 I	0.00304 I	<b>0.0233</b>	<b>0.0173</b>
3/18/2020	<b>0.0145</b>	0.00273 I	0.00185 U	0.00288 I	0.00616 I	0.00200 I	<b>0.0255</b>	0.00591 I
4/15/2020	<b>0.0215</b>	0.00428 I	0.00292 I	0.00489 I	0.00972 I	0.00227 I	<b>0.0342</b>	0.00260 I
5/15/2020	<b>0.0275</b>	0.00863 I	0.00348 I	0.00890 I	0.00988 I	0.00533 I	<b>0.0485</b>	0.00379 I
6/16/2020	0.00346 I	0.00470 I	0.00284 I	0.00185 U	0.00625 I	0.00243 I	<b>0.0114</b>	<b>0.0144</b>
12/14/2023	0.0099 I	0.0041 I	NA	NA	NA	NA	<b>0.0922</b>	0.0034 U

**Notes:**

- "U" flag indicates concentration was below the method detection limit (MDL).
- "I" flag indicates concentration was between the MDL and practical quantitation limit (PQL).
- NA denotes not analyzed.
- Concentrations reported in milligrams per liter (mg/L)
- {**BOLDED CONCENTRATION**} exceeds primary drinking water maximum contaminant level (MCL) of 0.010 mg/L, as per Ch. 62-550, F.A.C.

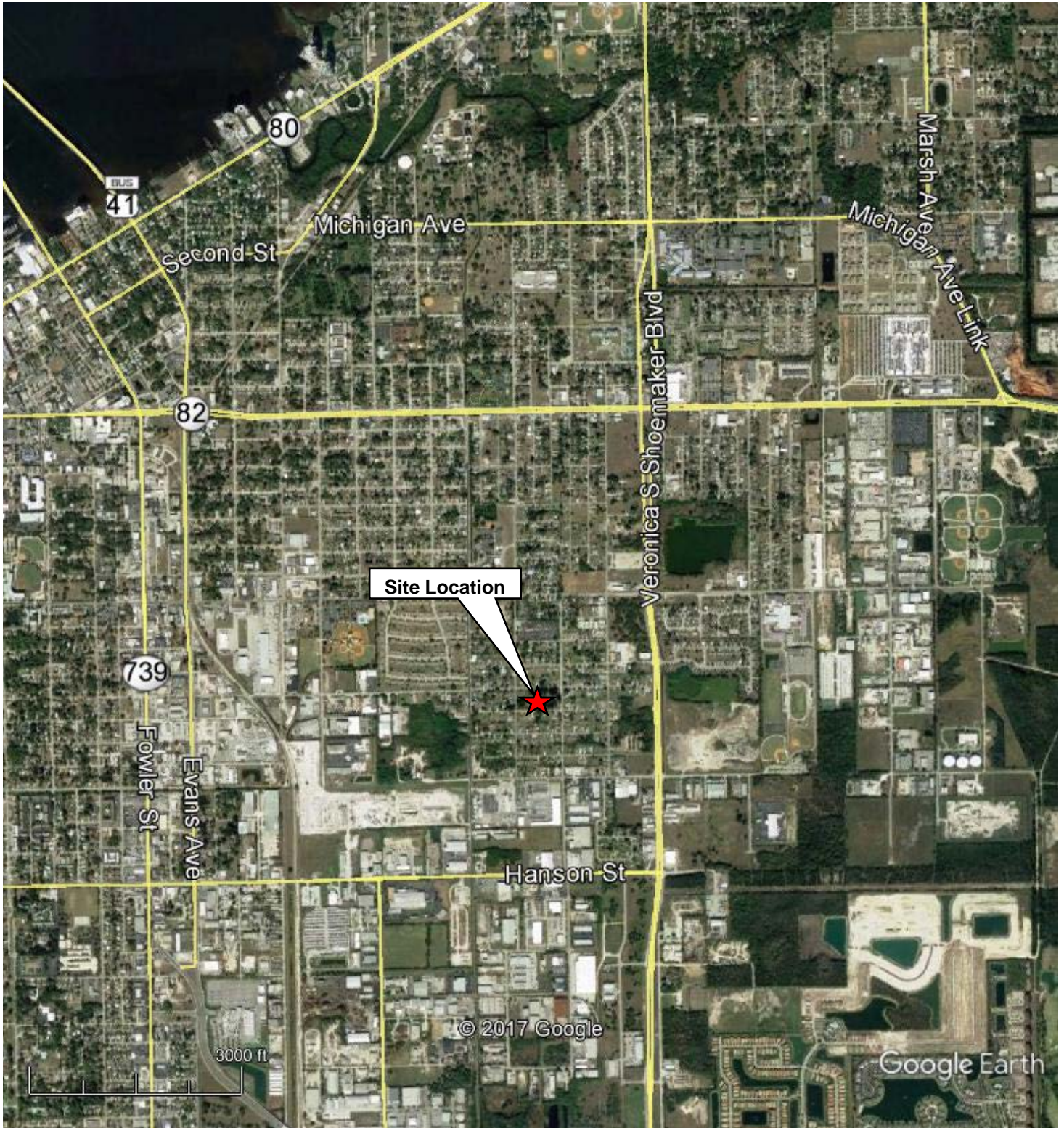
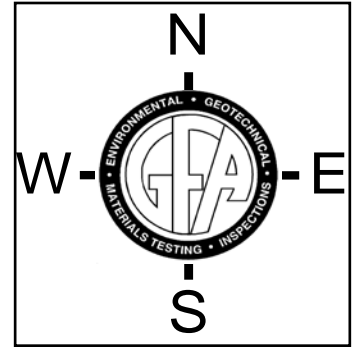


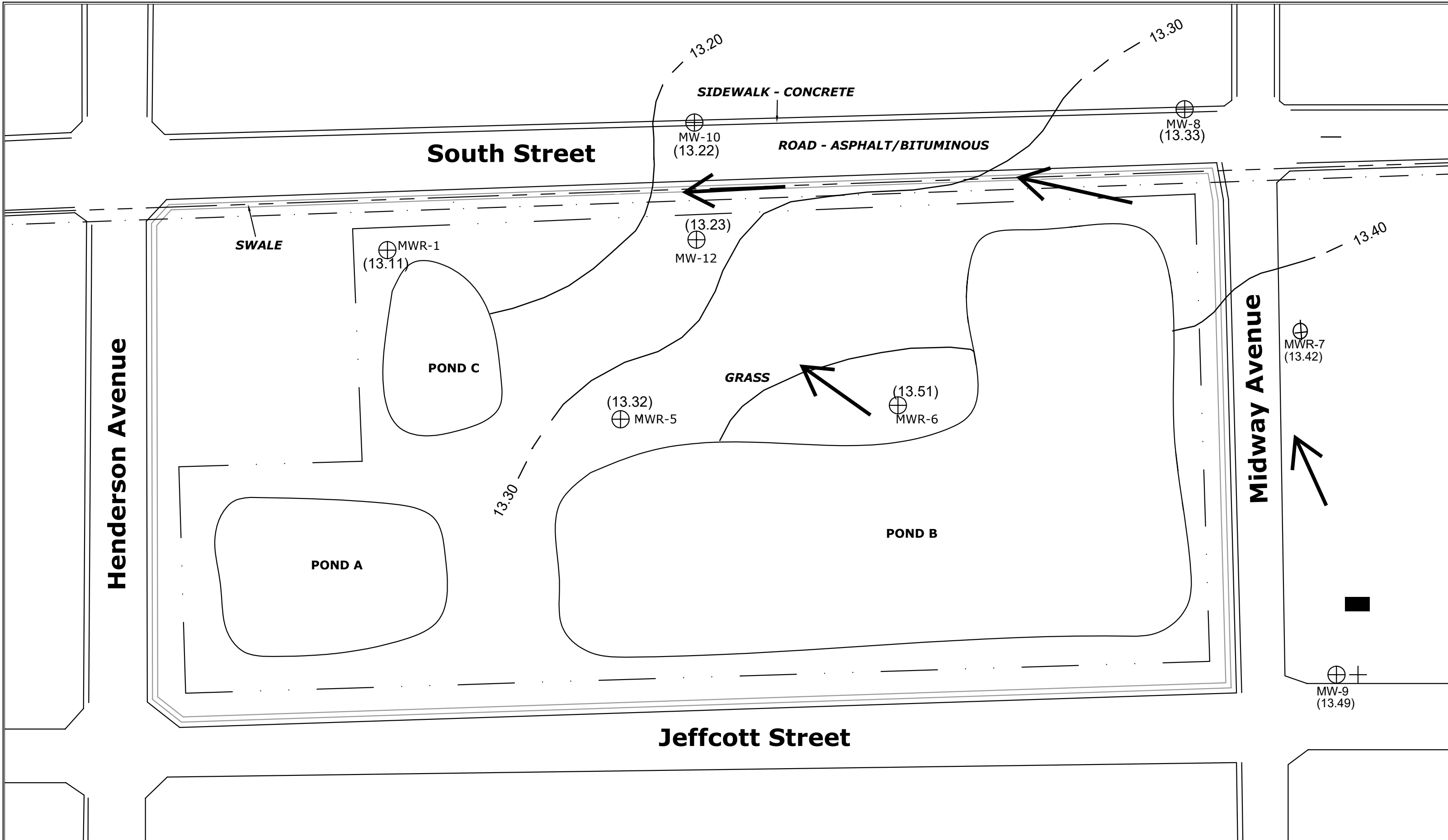
## FIGURES





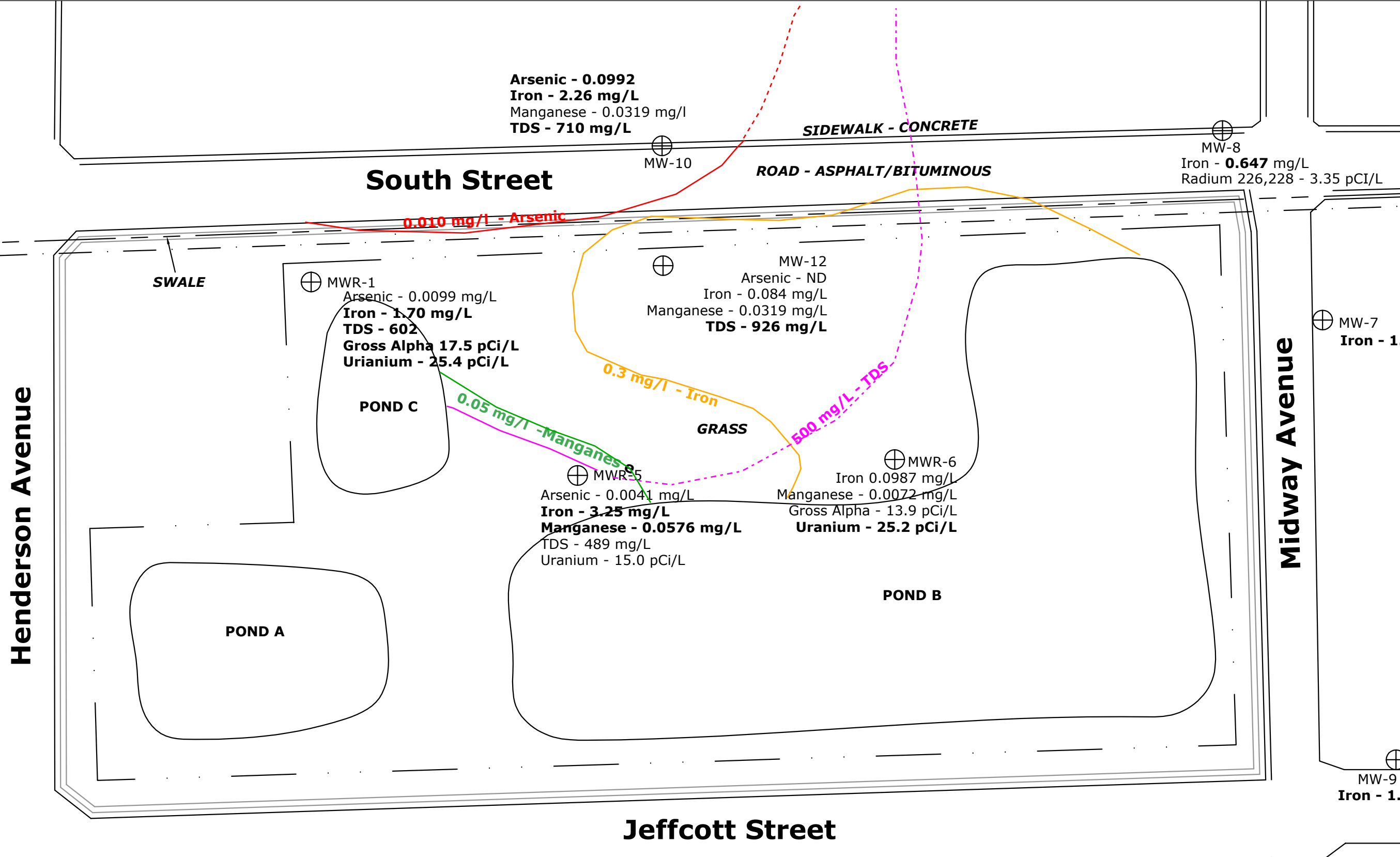
**FIGURE 1: SITE LOCATION MAP**

**Homerama  
3348 South Street  
Fort Myers, Lee County, Florida**





	<p><b>Legend</b></p> <p>--- · · --- - Fence Line</p> <p>----- - Sanitary Sewer Line</p> <p>- · - · - - - - - Tele-communication Line</p> <p>⊕ - Monitoring Well Location</p> <p>--- - Estimated Groundwater Contour Line</p> <p>—— - Groundwater Contour Line</p> <p><small>* Elevations Reported Per (NAVD 88) North American Vertical Datum of 1988</small></p>	<p><b>Approximate Scale:</b></p> <p>1" = 50'</p>		<p>Date: 01/11/24</p>	<p>Project: South Street Site 3348 South Street Fort Myers, FL 33902</p>	<p><b>Figure 2: Groundwater Contour Map</b> <b>December 14, 2023</b></p>
	<p>Job No: 3240.2300001</p> <p>Drawn By: IR</p>					



**Legend**

- Fence Line
  - - - Sanitary Sewer Line
  - · - · Tele-communication Line
  - ⊕ - Monitoring Well Location
  - MW-# - Monitoring Well ID
  - I - Estimated Concentration
  - ND - Not Detected
- Concentrations in (mg/L)

**Approximate Scale:**  
 1" = 50'



Date: 1/19/24  
 Job No.3240.2300001  
 Drawn By: SAM

Project:  
 South Street Site  
 3348 South Street  
 Fort Myers, FL 33902

**Figure 3: Contaminants of Concern in Groundwater December 14, 2023**

# **APPENDIX A**

Groundwater Sampling Logs

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Homerama SITE LOCATION: 3348 South St. FTM  
 WELL NO: MWR-1 SAMPLE ID: MWR-1 DATE: 12/14/23

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): 6.67 PURGE PUMP TYPE OR BAILER:  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 15 feet - 6.67 feet ) X 0.16 gallons/foot = 1.33 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 1.33 gallons + ( 11 feet X 0.16 gallons/foot ) = 2.12 gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
951	1.4	1.4	0.2	6.90	7.07	25.4	769.0	0.16	1.65	Clear	None
954	0.24	1.64	0.08	6.83	7.07	25.5	1022	0.17	2.06	↓	↓
957	0.24	1.88	↓	6.83	7.06	25.5	1023	0.14	1.57	↓	↓
1000	0.24	2.12	↓	6.83	7.06	25.5	1024	0.12	2.65	↓	↓

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: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature]  
 PUMP OR TUBING DEPTH IN WELL (feet): 11 TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE: \_\_\_\_\_  $\mu\text{m}$   
 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			
MWR-1	1	PE	250ML	HNO <sub>3</sub>	—	—	APP	6010 As Fe	200mL
	1		1L	↓	—	—	↓	Bress Alpha	↓
	1		1L	↓	—	—	↓	Uranium	↓
	1		500ML	None	—	—	↓	TDS	↓

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; RFPF = 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:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Hamersmeede SITE LOCATION: 3348 South St. FTM  
 WELL NO: MWR-5 SAMPLE ID: MWR-5 DATE: 12/14/23

PURGING DATA 3' S.U.

WELL DIAMETER (inches): 2 TUBING DIAMETER (inches): 1/4 WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet STATIC DEPTH TO WATER (feet): 5.68 PURGE PUMP TYPE OR BAILER:  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = 10 feet - 5.68 feet X 0.16 gallons/foot = 1.49 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 0.2 gallons + (0.08 gallons/foot X 10.5 feet) + 0 gallons = 0.84 gallons  
 INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5 PURGING INITIATED AT: 1030 PURGING ENDED AT: 1047 TOTAL VOLUME PURGED (gallons): 2.32

WC  
9.32

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1030	1.16	1.16	0.2	5.94	7.03	24.7	899	0.20	1.60	Clear	None
1041	0.24	1.84	0.08	5.82	7.03	24.6	912	0.16	1.67	↓	↓
1044	0.24	2.08	↓	5.82	7.02	24.5	921	0.15	1.29	↓	↓
1047	0.24	2.32	↓	5.82	7.02	24.5	919	0.15	1.39	↓	↓

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 = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1048 SAMPLING ENDED AT: 1055  
 PUMP OR TUBING DEPTH IN WELL (feet): 10.5 TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE:           $\mu\text{m}$   
 FIELD DECONTAMINATION: PUMP Y  N  TUBING Y  N (replaced)  DUCTILE: 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	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MWR-5	1	PE	250mL	HNO3	-	-	6010	APP	280mL
	1	PE	1L	↓	-	-	Uranium	↓	↓
	1	PE	500mL	None	-	-	TDS	↓	↓

 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 = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = 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:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Homerama SITE LOCATION: 3348 South St., FTM  
 WELL NO: MWR-6 SAMPLE ID: MWR-6 DATE: 12/14/23

**PURGING DATA** ≈ 3.5-9.

WELL DIAMETER (inches): 2 TUBING DIAMETER (inches): 1/4 WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet STATIC DEPTH TO WATER (feet): 3.41 PURGE PUMP TYPE OR BAILER:  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 15 feet - 3.41 feet ) X 0.16 gallons/foot = 1.53 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 10.5 gallons + ( 10.5 gallons/foot X 1110 feet ) + 1127 gallons = 2.32 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1118	1.16	1.16	0.2	5.68	7.10	24.5	842	0.39	1.62	Clear	None
1121	0.24	1.84	0.08	5.52	7.09	24.3	845	0.33	1.67	↓	↓
1124	0.24	2.08	↓	5.52	7.09	24.3	844	0.31	1.60	↓	↓
1127	0.24	2.32	↓	5.52	7.08	24.3	845	0.29	1.98	↓	↓

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: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1128 SAMPLING ENDED AT: 1137  
 PUMP OR TUBING DEPTH IN WELL (feet): 10.5 TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE: \_\_\_\_\_  $\mu\text{m}$   
 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			
MWR-6	1	PE	250mL	HNO3	-	-	6010	APP	280
↓	1	1	1L	↓	-	-	Uranium	↓	↓
	1	1	1L	↓	-	-	Gross Alpha	↓	↓

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; RFPF = 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: Homeranuca SITE LOCATION: 3348 South St Arm  
 WELL NO: MW-7 SAMPLE ID: MW-7 DATE: 12/14/23

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): 2.76 PURGE PUMP TYPE OR BAILER:  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 12 feet - 2.76 feet ) X 0.16 gallons/foot = 1.48 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = \_\_\_\_\_ gallons + ( \_\_\_\_\_ gallons/foot X \_\_\_\_\_ feet ) + \_\_\_\_\_ gallons = \_\_\_\_\_ gallons  
 INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 2.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 PURGING INITIATED AT: 1349 PURGING ENDED AT: 1406 TOTAL VOLUME PURGED (gallons): 2.32

WC  
9.24

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)
1357	1.6	1.6	0.2	3.02	7.01	26.2	489	0.78	3.80	Clear	None
1400	0.24	1.84	0.08	2.89	7.02	25.9	487	0.69	2.91	↓	
1403	0.24	2.08	0.08	2.89	7.02	25.9	486	0.64	2.80	↓	
1406	0.24	2.32	0.08	2.89	7.02	25.9	486	0.65	2.92	↓	

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: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1407 SAMPLING ENDED AT: 1408  
 PUMP OR TUBING DEPTH IN WELL (feet): 7.5 TUBING MATERIAL CODE: LOPE FIELD-FILTERED: Y  N  FILTER SIZE: \_\_\_\_\_ μm  
 FIELD DECONTAMINATION PUMP Y  TUBING Y  N (replaced) DPLICATE: 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-7	1	PE	250ml	HNO3	—	—	6010	APP	280

REMARKS:  
 MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LOPE = 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: Homerapca SITE LOCATION: 3348 South St., FOM  
 WELL NO: MW-8 SAMPLE ID: MW-8 DATE: 12/14/23

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): 2.69 PURGE PUMP TYPE OR BAILER: PP  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 12 feet - 2.69 feet ) X 0.16 gallons/foot = 1.49 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 7.5 gallons + ( 0.0006 gallons/foot X 12 feet ) + 0 gallons = 7.57 gallons  
 INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 PURGING INITIATED AT: 1310 PURGING ENDED AT: 1327 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) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1318	1.6	1.6	0.2	2.88	6.93	27.4	566	0.11	4.52	Clear	None
1321	0.24	1.84	0.08	2.79	6.93	27.1	567	0.11	2.22		
1324	0.24	2.08	↓	2.79	6.93	27.2	570	0.11	3.65		
1327	0.24	2.32	↓	2.79	6.93	27.2	571	0.11	2.27		

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 = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Scott McNamara / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1328 SAMPLING ENDED AT: 1338  
 PUMP OR TUBING DEPTH IN WELL (feet): 7.5 TUBING MATERIAL CODE: LOPE FIELD-FILTERED: Y  N  FILTER SIZE: 1  $\mu\text{m}$   
 FIELD DECONTAMINATION: PUMP Y  N  TUBING Y  N (replaced)  DPLICATE: 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-8	1	PE	250ml	HNO3	-	-	6610	APP	280
↓	1	↓	1L	↓	-	-	RAD 226	↓	↓
	1		1L		-	-	RAD 228		

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 = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = 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:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Honolulu SITE LOCATION: 3348 South St. FTM  
 WELL NO: MW-9 SAMPLE ID: MW-9 DATE: 12/14/23

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): 2.62 PURGE PUMP TYPE OR BAILER: PP  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 12 feet - 2.62 feet ) X 0.16 gallons/foot = 1.5 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 1.5 gallons + ( 0.16 gallons/foot X 12 feet ) = 2.32 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 PURGING INITIATED AT: 1421 PURGING ENDED AT: 1432 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) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1429	1.6	1.6	0.12	2.79	7.04	26.3	607	0.14	3.05	Clear	None
1432	0.24	1.84	0.08	2.73	7.04	26.1	609	0.10	3.14		
1435	0.24	2.08	0.08	2.73	7.03	26.0	614	0.10	2.28		
1438	0.24	2.32	0.08	2.73	7.03	26.0	612	0.10	2.14		

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 = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Scott McManis/GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1439 SAMPLING ENDED AT: 1440  
 PUMP OR TUBING DEPTH IN WELL (feet): \_\_\_\_\_ TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE: \_\_\_\_\_  $\mu\text{m}$   
 FIELD DECONTAMINATION: PUMP Y  N  TUBING Y  N (replaced)  DUCTILE IRON Y  N  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-9	1	PE	250mL	HNO <sub>3</sub>	-	-	6010	APP	280

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 = Bailor; 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:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2), optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Homerama SITE LOCATION: 3348 South St. FtM  
 WELL NO: MW-10 SAMPLE ID: MW-10 DATE: 12/14/23

PURGING DATA

WELL DIAMETER (inches): \_\_\_\_\_ TUBING DIAMETER (inches): \_\_\_\_\_ WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet STATIC DEPTH TO WATER (feet): 2.79 PURGE PUMP TYPE OR BAILER: PP  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 12 feet - 2.79 feet ) X 0.16 gallons/foot = 1.47 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = \_\_\_\_\_ gallons + ( \_\_\_\_\_ gallons/foot X \_\_\_\_\_ feet ) + \_\_\_\_\_ gallons = \_\_\_\_\_ gallons  
 INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.5 PURGING INITIATED AT: 1224 PURGING ENDED AT: 1241 TOTAL VOLUME PURGED (gallons): 232

WC  
9.21

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 (S/cm)	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	
1232	1.6	1.6	0.2	3.02	7.01	26.9	1051	0.53	1.9	19.1	Clear	None
1235	0.24	1.84	0.08	2.92	7.01	26.8	1051	0.83	13.7			
1239	0.24	2.08	↓	2.92	7.01	26.8	1051	0.80	15.0			
1241	0.24	2.32	↓	2.92	7.01	26.8	1052	0.85	11.7			

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: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1242 SAMPLING ENDED AT: 1246  
 PUMP OR TUBING DEPTH IN WELL (feet): 7.5 TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE: \_\_\_\_\_ μm  
 FIELD DECONTAMINATION: PUMP Y  N  TUBING Y  N (replaced)  DPLICATE: 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	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-10	1	PE	250ml	HNO3	—	—	6010	APP	280
↓	1	↓	500ml	None	—	—	TDS	↓	↓

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: Homorama SITE LOCATION: 3348 South St., Ft. Mc., FL.  
 WELL NO: MW-12 SAMPLE ID: MW-12 DATE: 12/14/23

**PURGING DATA**

WELL DIAMETER (inches): 2 TUBING DIAMETER (inches): 1/4 WELL SCREEN INTERVAL 3' s.u. STATIC DEPTH TO WATER (feet): 6.00 PURGE PUMP TYPE OR BAILER: PP  
 WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
 = ( 15 feet - 6 feet ) X 0.16 gallons/foot = 1.44 gallons  
 EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
 = 10.5 gallons + ( 10.5 feet X 0.16 gallons/foot ) = 2.32 gallons  
 INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.5 PURGING INITIATED AT: 1143 PURGING ENDED AT: 1200 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) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) $\text{mg/L}$ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1151	1.06	1.16	0.12	6.61	7.07	25.1	1461	0.12	3.164	Clear	None
1154	0.24	1.84	0.08	6.35	7.06	24.8	1473	0.12	3.106		
1157	0.24	2.08	↓	6.35	7.06	24.9	1472	0.11	2.92	↓	↓
1200	0.24	2.32	↓	6.35	7.06	24.8	1477	0.10	2.61	↓	↓

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: Scott McManus / GFA SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 1201 SAMPLING ENDED AT: 1204  
 PUMP OR TUBING DEPTH IN WELL (feet): 10.5 TUBING MATERIAL CODE: LDPE FIELD-FILTERED: Y  N  FILTER SIZE: 0  $\mu\text{m}$   
 FIELD DECONTAMINATION: PUMP Y  N  TUBING Y  N (replaced)  DUPLICATE Y  N   
 SAMPLE CONTAINER SPECIFICATION: SAMPLE ID CODE: MW-12 # CONTAINERS: 1 MATERIAL CODE: PE VOLUME: 250ML PRESERVATIVE USED: HNO3 TOTAL VOL ADDED IN FIELD (mL): - FINAL pH: - INTENDED ANALYSIS AND/OR METHOD: 6010 TDS SAMPLING EQUIPMENT CODE: APP SAMPLE PUMP FLOW RATE (mL per minute): 280  
 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:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

## **APPENDIX B**

Laboratory Analytical Reports and Chain of Custody Forms



January 26, 2024

Scott McManus  
Universal Engineering Sciences Company  
5621 2nd Street West  
Lehigh Acres, FL 33971

RE: Project: Homerama-Revised Report  
Pace Project No.: 35848513

Dear Scott McManus:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

Revision 1 - This report replaces the 01/12/2024Y report. Arsenic and Manganese have been added.

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

Sincerely,

Christina Raschke  
christina.raschke@pacelabs.com  
(954)582-4300  
Project Manager

Enclosures

cc: Jamie Adams, Universal Engineering Sciences Company  
Mark Sautter, Universal Engineering Sciences Company



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### CERTIFICATIONS

Project: Homerama-Revised Report

Pace Project No.: 35848513

#### Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 2950

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010

Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572023-03

New Hampshire/TNI Certification #: 297622

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-015

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18

Utah/TNI Certification #: PA014572223-14

USDA Soil Permit #: 525-23-67-77263

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

#### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

California Certification# 3096

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

DoD-ANAB #:ADE-3199

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Massachusetts Certification #: M-FL1264

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Homerama-Revised Report  
Pace Project No.: 35848513

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**Pace Analytical Services Ormond Beach**  
Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Homerama-Revised Report  
Pace Project No.: 35848513

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35848513001	MWR-1	Water	12/14/23 10:01	12/15/23 10:45
35848513002	MWR-5	Water	12/14/23 10:48	12/15/23 10:45
35848513003	MWR-6	Water	12/14/23 11:28	12/15/23 10:45
35848513004	MW-7	Water	12/14/23 14:07	12/15/23 10:45
35848513005	MW-9	Water	12/14/23 14:39	12/15/23 10:45
35848513006	MW-8	Water	12/14/23 13:27	12/15/23 10:45
35848513007	MW-10	Water	12/14/23 12:42	12/15/23 10:45
35848513008	MW-12	Water	12/14/23 12:01	12/15/23 10:45

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Homerama-Revised Report

Pace Project No.: 35848513

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35848513001	MWR-1	EPA 6010	AME	2	PASI-O
		EPA 900.0	KET	1	PASI-PA
		ASTM D5174-97	SLC	1	PASI-PA
		SM 2540C	WW1	1	PASI-O
35848513002	MWR-5	EPA 6010	AME	3	PASI-O
		ASTM D5174-97	SLC	1	PASI-PA
		SM 2540C	WW1	1	PASI-O
35848513003	MWR-6	EPA 6010	AME	2	PASI-O
		EPA 900.0	KET	1	PASI-PA
		ASTM D5174-97	SLC	1	PASI-PA
35848513004	MW-7	EPA 6010	AME	1	PASI-O
35848513005	MW-9	EPA 6010	AME	1	PASI-O
35848513006	MW-8	EPA 6010	AME	1	PASI-O
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
35848513007	MW-10	EPA 6010	AME	2	PASI-O
		SM 2540C	WW1	1	PASI-O
35848513008	MW-12	EPA 6010	AME	3	PASI-O
		SM 2540C	WW1	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: Homerama-Revised Report

Pace Project No.: 35848513

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>35848513001</b>	<b>MWR-1</b>					
EPA 6010	Arsenic	9.9 I	ug/L	10.0	12/19/23 10:49	
EPA 6010	Iron	1700	ug/L	40.0	12/19/23 10:49	
EPA 900.0	Gross Alpha	17.5 ± 4.69 (2.91) C:NA T:NA	pCi/L		01/10/24 08:20	
ASTM D5174-97	Total Uranium	25.4 ± 0.558 (3.23) C:NA T:NA	ug/L		01/04/24 12:08	
SM 2540C	Total Dissolved Solids	602	mg/L	10.0	12/18/23 22:21	
<b>35848513002</b>	<b>MWR-5</b>					
EPA 6010	Arsenic	4.1 I	ug/L	10.0	12/19/23 10:52	
EPA 6010	Iron	3250	ug/L	40.0	12/19/23 10:52	
EPA 6010	Manganese	57.6	ug/L	5.0	12/19/23 10:52	
ASTM D5174-97	Total Uranium	15.0 ± 0.331 (3.23) C:NA T:NA	ug/L		01/04/24 12:17	
SM 2540C	Total Dissolved Solids	489	mg/L	5.0	12/18/23 22:21	
<b>35848513003</b>	<b>MWR-6</b>					
EPA 6010	Iron	98.7	ug/L	40.0	12/19/23 10:55	
EPA 6010	Manganese	7.2	ug/L	5.0	12/19/23 10:55	
EPA 900.0	Gross Alpha	13.9 ± 3.80 (2.73) C:NA T:NA	pCi/L		01/10/24 08:42	
ASTM D5174-97	Total Uranium	25.2 ± 0.556 (3.23) C:NA T:NA	ug/L		01/04/24 12:21	
<b>35848513004</b>	<b>MW-7</b>					
EPA 6010	Iron	1580	ug/L	40.0	12/19/23 10:59	
<b>35848513005</b>	<b>MW-9</b>					
EPA 6010	Iron	1770	ug/L	40.0	12/19/23 11:02	
<b>35848513006</b>	<b>MW-8</b>					
EPA 6010	Iron	647	ug/L	40.0	12/19/23 11:05	
EPA 903.1	Radium-226	2.33 ± 1.16 (1.46) C:NA T:87%	pCi/L		01/08/24 14:12	
EPA 904.0	Radium-228	1.02U ± 0.481 (1.02) C:76% T:84%	pCi/L		01/08/24 16:10	
<b>35848513007</b>	<b>MW-10</b>					
EPA 6010	Arsenic	92.2	ug/L	10.0	12/19/23 11:09	
EPA 6010	Iron	2620	ug/L	40.0	12/19/23 11:09	
SM 2540C	Total Dissolved Solids	710	mg/L	10.0	12/18/23 22:21	

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### SUMMARY OF DETECTION

Project: Homerama-Revised Report

Pace Project No.: 35848513

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>35848513008</b>	<b>MW-12</b>					
EPA 6010	Iron	84.8	ug/L	40.0	12/19/23 11:12	
EPA 6010	Manganese	31.9	ug/L	5.0	12/19/23 11:12	
SM 2540C	Total Dissolved Solids	926	mg/L	10.0	12/18/23 22:21	

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MWR-1 Lab ID: 35848513001 Collected: 12/14/23 10:01 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach								
Arsenic	<b>9.9 I</b>	ug/L	10.0	3.4	1	12/17/23 12:08	12/19/23 10:49	7440-38-2	
Iron	<b>1700</b>	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 10:49	7439-89-6	
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C Pace Analytical Services - Ormond Beach								
Total Dissolved Solids	<b>602</b>	mg/L	10.0	10.0	1		12/18/23 22:21		

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MWR-5 Lab ID: 35848513002 Collected: 12/14/23 10:48 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach							
Arsenic	4.1 I	ug/L	10.0	3.4	1	12/17/23 12:08	12/19/23 10:52	7440-38-2	
Iron	3250	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 10:52	7439-89-6	
Manganese	57.6	ug/L	5.0	1.1	1	12/17/23 12:08	12/19/23 10:52	7439-96-5	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Ormond Beach							
Total Dissolved Solids	489	mg/L	5.0	5.0	1		12/18/23 22:21		

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MWR-6 Lab ID: 35848513003 Collected: 12/14/23 11:28 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Pace Analytical Services - Ormond Beach									
Iron	98.7	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 10:55	7439-89-6	
Manganese	7.2	ug/L	5.0	1.1	1	12/17/23 12:08	12/19/23 10:55	7439-96-5	

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**ANALYTICAL RESULTS**

Project: Homerama-Revised Report  
 Pace Project No.: 35848513

**Sample: MW-7**      **Lab ID: 35848513004**      Collected: 12/14/23 14:07      Received: 12/15/23 10:45      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010    Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach									
Iron	<b>1580</b>	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 10:59	7439-89-6	

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MW-9 Lab ID: 35848513005 Collected: 12/14/23 14:39 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Pace Analytical Services - Ormond Beach									
Iron	1770	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 11:02	7439-89-6	

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report  
 Pace Project No.: 35848513

**Sample: MW-8**      **Lab ID: 35848513006**      Collected: 12/14/23 13:27      Received: 12/15/23 10:45      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010    Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach									
Iron	<b>647</b>	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 11:05	7439-89-6	

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MW-10 Lab ID: 35848513007 Collected: 12/14/23 12:42 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach								
Arsenic	<b>92.2</b>	ug/L	10.0	3.4	1	12/17/23 12:08	12/19/23 11:09	7440-38-2	
Iron	<b>2620</b>	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 11:09	7439-89-6	
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C Pace Analytical Services - Ormond Beach								
Total Dissolved Solids	<b>710</b>	mg/L	10.0	10.0	1		12/18/23 22:21		

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### ANALYTICAL RESULTS

Project: Homerama-Revised Report

Pace Project No.: 35848513

Sample: MW-12 Lab ID: 35848513008 Collected: 12/14/23 12:01 Received: 12/15/23 10:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Ormond Beach							
Arsenic	3.4 U	ug/L	10.0	3.4	1	12/17/23 12:08	12/19/23 11:12	7440-38-2	
Iron	84.8	ug/L	40.0	25.0	1	12/17/23 12:08	12/19/23 11:12	7439-89-6	
Manganese	31.9	ug/L	5.0	1.1	1	12/17/23 12:08	12/19/23 11:12	7439-96-5	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Ormond Beach							
Total Dissolved Solids	926	mg/L	10.0	10.0	1		12/18/23 22:21		

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### QUALITY CONTROL DATA

Project: Homerama-Revised Report  
 Pace Project No.: 35848513

QC Batch:	974306	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35848513001, 35848513002, 35848513003, 35848513004, 35848513005, 35848513006, 35848513007, 35848513008

METHOD BLANK: 5360934 Matrix: Water  
 Associated Lab Samples: 35848513001, 35848513002, 35848513003, 35848513004, 35848513005, 35848513006, 35848513007, 35848513008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	3.4 U	10.0	3.4	12/19/23 09:41	
Iron	ug/L	25.0 U	40.0	25.0	12/19/23 09:41	
Manganese	ug/L	1.1 U	5.0	1.1	12/19/23 09:41	

LABORATORY CONTROL SAMPLE: 5360935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	221	88	80-120	
Iron	ug/L	2500	2320	93	80-120	
Manganese	ug/L	250	235	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5360936 5360937

Parameter	Units	5360936		5360937		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35848442001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Arsenic	ug/L	3.4 U	250	250	221	220	88	88	75-125	0	20
Iron	ug/L	94.1	2500	2500	2490	2450	96	94	75-125	1	20
Manganese	ug/L	4.1 I	250	250	239	238	94	94	75-125	0	20

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QUALITY CONTROL DATA

Project: Homerama-Revised Report

Pace Project No.: 35848513

QC Batch:	974605	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35848513001, 35848513002, 35848513007, 35848513008

METHOD BLANK: 5362038 Matrix: Water  
 Associated Lab Samples: 35848513001, 35848513002, 35848513007, 35848513008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0 U	5.0	5.0	12/18/23 22:21	

LABORATORY CONTROL SAMPLE: 5362039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	298	99	90-110	

SAMPLE DUPLICATE: 5362040

Parameter	Units	35848507001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	201	145	32	10	J(D6)

SAMPLE DUPLICATE: 5362041

Parameter	Units	35848507002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	145	150	3	10	

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REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MWR-1</b> <b>Lab ID: 35848513001</b> Collected: 12/14/23 10:01      Received: 12/15/23 10:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Gross Alpha	EPA 900.0	<b>17.5 ± 4.69 (2.91)</b> <b>C:NA T:NA</b>	pCi/L	01/10/24 08:20	12587-46-1	
Total Uranium	ASTM D5174-97	<b>25.4 ± 0.558 (3.23)</b> <b>C:NA T:NA</b>	ug/L	01/04/24 12:08	7440-61-1	

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Homerama-Revised Report  
 Pace Project No.: 35848513

<b>Sample:</b> MWR-5	<b>Lab ID:</b> 35848513002	Collected: 12/14/23 10:48	Received: 12/15/23 10:45	Matrix: Water			
PWS:	Site ID:	Sample Type:					
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Total Uranium	ASTM D5174-97	<b>15.0 ± 0.331</b>	<b>(3.23)</b>	ug/L	01/04/24 12:17	7440-61-1	
		<b>C:NA</b>	<b>T:NA</b>				

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

**Sample: MWR-6**                      **Lab ID: 35848513003**    Collected: 12/14/23 11:28    Received: 12/15/23 10:45    Matrix: Water  
 PWS:                                      Site ID:                                      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Gross Alpha	EPA 900.0	<b>13.9 ± 3.80 (2.73)</b> <b>C:NA T:NA</b>	pCi/L	01/10/24 08:42	12587-46-1	
	Pace Analytical Services - Greensburg					
Total Uranium	ASTM D5174-97	<b>25.2 ± 0.556 (3.23)</b> <b>C:NA T:NA</b>	ug/L	01/04/24 12:21	7440-61-1	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

QC Batch: 639001

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35848513006

METHOD BLANK: 3115879

Matrix: Water

Associated Lab Samples: 35848513006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.384 ± 0.326 (0.404) C:NA T:79%	pCi/L	01/08/24 13:59	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

QC Batch: 639003

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35848513006

METHOD BLANK: 3115885

Matrix: Water

Associated Lab Samples: 35848513006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.555 ± 0.435 (0.857) C:76% T:77%	pCi/L	01/08/24 16:08	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

QC Batch: 639798

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35848513001, 35848513003

METHOD BLANK: 3119204

Matrix: Water

Associated Lab Samples: 35848513001, 35848513003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.094 ± 0.508 (1.51) C:NA T:NA	pCi/L	01/10/24 08:41	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Homerama-Revised Report

Pace Project No.: 35848513

QC Batch: 639064

Analysis Method: ASTM D5174-97

QC Batch Method: ASTM D5174-97

Analysis Description: D5174.97 Total Uranium KPA

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35848513001, 35848513002, 35848513003

METHOD BLANK: 3116084

Matrix: Water

Associated Lab Samples: 35848513001, 35848513002, 35848513003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.037 ± 0.001 (0.323) C:NA T:NA	ug/L	01/04/24 10:27	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: Homerama-Revised Report

Pace Project No.: 35848513

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U Compound was analyzed for but not detected.

J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Homerama-Revised Report  
 Pace Project No.: 35848513

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35848513001	MWR-1	EPA 3010	974306	EPA 6010	974405
35848513002	MWR-5	EPA 3010	974306	EPA 6010	974405
35848513003	MWR-6	EPA 3010	974306	EPA 6010	974405
35848513004	MW-7	EPA 3010	974306	EPA 6010	974405
35848513005	MW-9	EPA 3010	974306	EPA 6010	974405
35848513006	MW-8	EPA 3010	974306	EPA 6010	974405
35848513007	MW-10	EPA 3010	974306	EPA 6010	974405
35848513008	MW-12	EPA 3010	974306	EPA 6010	974405
35848513001	MWR-1	EPA 900.0	639798		
35848513003	MWR-6	EPA 900.0	639798		
35848513006	MW-8	EPA 903.1	639001		
35848513006	MW-8	EPA 904.0	639003		
35848513001	MWR-1	ASTM D5174-97	639064		
35848513002	MWR-5	ASTM D5174-97	639064		
35848513003	MWR-6	ASTM D5174-97	639064		
35848513001	MWR-1	SM 2540C	974605		
35848513002	MWR-5	SM 2540C	974605		
35848513007	MW-10	SM 2540C	974605		
35848513008	MW-12	SM 2540C	974605		

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.



Company Name: Universal Engineering Sciences Company-Ft. Meyers  
 Street Address: 5621 2nd Street West, Lehigh Acres, FL 33971

### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Contact/Report To: Scott McManus  
 Phone #: (239)257-6971  
 E-Mail: smcmanus@universalengineering.com  
 Cc E-Mail:  
 Invoice To: Accounts Payable  
 Invoice E-Mail: uesap@universalengineering.com  
 Purchase Order # (if applicable):  
 Quote #:

**WO#: 35848513**

35848513

Scan QR Code for instructions



LAB USE ONLY - Affix Workorder/Login Label Here

\*\* Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 50mL vial, (7) EnCore, (8) TerraCone, (9) Other  
 \*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Proj Mgr: **Christina Raschke**  
 AcctNum / Client ID:  
 Table #:  
 Profile / Template: **16071**  
 Prelog / Bottle Ord. ID: **EZ 3030760**

Lab Use Only  
 Preservation non-conformance identified for

County / State origin of sample(s): Florida  
 Regulatory Program (DW, RCRA, etc.) as applicable:  
 Rush (Pre-approval required):  
 [ ] 2 Day [ ] 3 day [ ] 5 day [ ] Other  
 Date Results Requested: **3/20**  
 Field Filtered (if applicable): [ ] Yes [X] No  
 Analysis:  
 \* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Other (OT), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res. CLZ	Number & Type of Containers		6010 As, Fe	6010 As, Fe, Mn	6010 Fe, Mn	Gross Alpha	Radium 226	Radium 228	Uranium	Sample Comment
			Date	Time	Date	Time		Plastic	Glass								
MWR-1	WT	G	12/14/23	1001				✓	4	X			X				
MWR-5	WT			1048				✓	3	X							
MWR-6	WT			1128				✓	3		X						
MWR-7	WT			1407				✓	1			X					
MWR-9	WT			1439				✓	1	X							
MWR-8	WT			1327				✓	3	X				X			
MWR-10	WT			1242				✓	2	X							
MWR-12	WT			1201				✓	2	X							

Customer Remarks / Special Conditions / Possible Hazards:

Additional Instructions from Pace:

# Coolers: Thermometer ID: Correction Factor (C): Obs. Temp. (C) Corrected Temp. (C)  
 1.9

Collected By: Printed Name: Signature:  
 Received by/Company: (Signature) **AS/Man**  
 Date/Time: **12/4/23 1520**

Tracking Number: **12/15/23 1045**

Delivered by: [ ] In-Person [ ] Courier  
 [ ] FedEx [ ] UPS [ ] Other

Date/Time: Date/Time: Date/Time: Date/Time:

Page: 1 of 1

Addresses	Ship To :	Return To:
<b>Order By :</b> Company <u>Universal Engineering Sciences</u> Contact <u>Scott McManus</u> Email <u>smcmanus@universalengineering.com</u> Address <u>5621 2nd Street West</u> Address 2 _____ City <u>Lehigh Acres</u> State <u>FL</u> Zip <u>33971</u> Phone <u>(239)257-6971</u>	Company <u>Universal Engineering Sciences</u> Contact <u>Scott McManus</u> Email <u>smcmanus@universalengineering.com</u> Address <u>5621 2nd Street West</u> Address 2 _____ City <u>Lehigh Acres</u> State <u>FL</u> Zip <u>33971</u> Phone <u>(239)257-6971</u>	Company <u>Pompano Beach, FL (Pace)</u> Contact <u>Christina Raschke</u> Email <u>christina.raschke@pacelabs.com</u> Address <u>3610 Park Central Blvd North</u> Address 2 _____ City <u>Pompano Beach</u> State <u>FL</u> Zip <u>33064</u> Phone <u>(954)582-4300</u>

Info				
<b>Project Name</b> <u>Homerama</u>	<b>Due Date</b> <u>12/08/2023</u>	<b>Profile</b> <u>16071</u>	<b>Quote</b> _____	
<b>Project Manager</b> <u>Raschke, Christina</u>	<b>Return Date</b> _____	<b>Carrier</b> <u>FedEx Ground</u>	<b>Location</b> <u>FL</u>	

**Return Shipping Labels**

Return Label Type

No Shipper

With Shipper

**Bottle Labels**

Blank

Pre-Printed No Sample IDs

Pre-Printed With Sample IDs

**Bottles**

Boxed Cases

Individually Wrapped

Grouped By Sample ID/Matrix

**Trip Blanks**

Include Trip Blanks

**Misc**

Sampling Instructions

Custody Seal

Temp. Blanks

Coolers

Syringes

Extra Bubble Wrap

Short Hold/Rush Stickers

DI Water

USDA Regulated Soils

Dry Weight

**COC Options**

Number of Blanks

Pre-Printed

# of Samp	Matrix	Analysis	Qty / Samp	Container	Total	# of QC	Lot #	Notes
2	WT	Gross Alpha	1	1L plastic HNO3	2		100923-2EEY	
1	WT	Radium 226	1	1L plastic HNO3	1		100923-2EEY	
1	WT	Radium 228	1	1L plastic HNO3	1		100923-2EEY	
3	WT	Uranium	1	1L plastic HNO3	3		100923-2EEY	
1	WT	6010 As, Fe	1	250mL plastic HNO3	1		103023-2EIZ	
1	WT	6010 As, Fe, Mn	1	250mL plastic HNO3	1		103023-2EIZ	
5	WT	6010 Fe	1	250mL plastic HNO3	5		103023-2EIZ	
1	WT	6010 Fe, Mn	1	250mL plastic HNO3	1		103023-2EIZ	
4	WT	2540C TDS	1	500mL plastic unpreserved	4		102323-2ADT	

**Hazard Shipping Placard In Place : N/A**

**LAB USE:**

\*Sample receiving hours are typically 8am-5pm, but may differ by location. Please check with your Pace Project Manager.

\*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

\*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

\*Payment term are net 30 days.

\*Please include the proposal number on the chain of custody to ensure proper billing.

**Ship Date :** 12/08/2023

**Prepared By:** DP

**Verified By:** \_\_\_\_\_

**Tracking Num:** 645388639196

**Sample Notes :**

**CLIENT USE (Optional):**

**Date Rec'd:** \_\_\_\_\_

**Received By:** \_\_\_\_\_

**Verified By:** \_\_\_\_\_

Pace

Project #  
Project Manager:  
Client:

**WO#: 35848513**  
PM: CTR Due Date: 01/02/24  
CLIENT: 36-UNVFTP

Date and Initials of person:  
Examining contents: AES  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_  
Initials: AES

Thermometer Used: T-414 Date: 12/15/23 Time: 1114

State of Origin \_\_\_\_\_  
 For WV projects, all containers verified to  $\pm 6^\circ\text{C}$   
Cooler #1 Temp.  $^\circ\text{C}$  11.9 (Visual) 0 (Correction Factor) 11.9 (Actual)  
Cooler #2 Temp.  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #3 Temp.  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #4 Temp.  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #5 Temp.  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #6 Temp.  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Recheck for OOT  $^\circ\text{C}$  \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
 Samples on ice, cooling process has begun.  
Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  
Shipping Method:  Standard Overnight  First Overnight  Priority Overnight  Ground  International Priority  
Billing:  Recipient  Sender  Third Party  Credit Card  Unknown  Other

Tracking # 7880 3487 6311  
Custody Seal Present:  Yes  No Seal properly placed and intact:  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
Ice:  Wet  Blue  Dry  None  Melted

Samples shorted to lab:  Yes  No (If yes, complete the following)  
Shorted Date: \_\_\_\_\_  
Bottle Quantity / Type: \_\_\_\_\_

Shorted Time: \_\_\_\_\_

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sufficient Volume.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
Sample Labels Match COC (Sample ID, Date/Time of Collection)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
All containers needing acid / base preservation have been checked	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   Comments:								
All containers needing preservation are found to be in compliance with EPA recommendation:	<table border="1"> <tr> <td colspan="2">Preservation Information</td> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>	Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
Preservation Information									
Preservative: _____	Date: _____								
Lot / Trace: _____	Time: _____								
Amount added (mL): _____	Initials: _____								
Exceptions: Vials, Microbiology, O&G, PFAS									
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
pip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Comments / Resolutions (use back for additional comments):									

## **APPENDIX C**

95 % Upper Confidences Limit Results

**UCL Statistics for Uncensored Full Data Sets**

User Selected Options  
 Date/Time of Computation ProUCL 5.2 2/1/2024 10:42:31 AM  
 From File Worksheet\_b.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

**Background (MW-7 & MW-9) IRON (mg/l)**

<b>General Statistics</b>			
Total Number of Observations	47	Number of Distinct Observations	45
		Number of Missing Observations	0
Minimum	0.109	Mean	1.006
Maximum	8.22	Median	0.801
SD	1.257	Std. Error of Mean	0.183
Coefficient of Variation	1.249	Skewness	4.329

<b>Normal GOF Test</b>			
Shapiro Wilk Test Statistic	0.597	<b>Shapiro Wilk GOF Test</b>	
1% Shapiro Wilk Critical Value	0.928	Data Not Normal at 1% Significance Level	
Lilliefors Test Statistic	0.238	<b>Lilliefors GOF Test</b>	
1% Lilliefors Critical Value	0.15	Data Not Normal at 1% Significance Level	

**Data Not Normal at 1% Significance Level**

<b>Assuming Normal Distribution</b>			
<b>95% Normal UCL</b>		<b>95% UCLs (Adjusted for Skewness)</b>	
95% Student's-t UCL	1.314	95% Adjusted-CLT UCL (Chen-1995)	1.432
		95% Modified-t UCL (Johnson-1978)	1.334

<b>Gamma GOF Test</b>			
A-D Test Statistic	0.544	<b>Anderson-Darling Gamma GOF Test</b>	
5% A-D Critical Value	0.773	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0797	<b>Kolmogorov-Smirnov Gamma GOF Test</b>	
5% K-S Critical Value	0.132	Detected data appear Gamma Distributed at 5% Significance Level	

**Detected data appear Gamma Distributed at 5% Significance Level**

<b>Gamma Statistics</b>			
k hat (MLE)	1.229	k star (bias corrected MLE)	1.165
Theta hat (MLE)	0.819	Theta star (bias corrected MLE)	0.864
nu hat (MLE)	115.5	nu star (bias corrected)	109.5
MLE Mean (bias corrected)	1.006	MLE Sd (bias corrected)	0.933
Adjusted Level of Significance	0.0449	Approximate Chi Square Value (0.05)	86.33
		Adjusted Chi Square Value	85.67

<b>Assuming Gamma Distribution</b>			
95% Approximate Gamma UCL	1.276	<b>95% Adjusted Gamma UCL</b>	1.286

<b>Lognormal GOF Test</b>			
Shapiro Wilk Test Statistic	0.964	<b>Shapiro Wilk Lognormal GOF Test</b>	
10% Shapiro Wilk Critical Value	0.954	Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.104	<b>Lilliefors Lognormal GOF Test</b>	
10% Lilliefors Critical Value	0.118	Data appear Lognormal at 10% Significance Level	

**Data appear Lognormal at 10% Significance Level**

<b>Lognormal Statistics</b>			
Minimum of Logged Data	-2.216	Mean of logged Data	-0.453
Maximum of Logged Data	2.107	SD of logged Data	0.975

<b>Assuming Lognormal Distribution</b>			
95% H-UCL	1.425	90% Chebyshev (MVUE) UCL	1.51
95% Chebyshev (MVUE) UCL	1.737	97.5% Chebyshev (MVUE) UCL	2.053
99% Chebyshev (MVUE) UCL	2.673		

**Nonparametric Distribution Free UCL Statistics**  
**Data appear to follow a Discernible Distribution**

<b>Nonparametric Distribution Free UCLs</b>			
95% CLT UCL	1.308	95% BCA Bootstrap UCL	1.475
95% Standard Bootstrap UCL	1.304	95% Bootstrap-t UCL	1.588
95% Hall's Bootstrap UCL	2.64	95% Percentile Bootstrap UCL	1.324
90% Chebyshev(Mean, Sd) UCL	1.557	95% Chebyshev(Mean, Sd) UCL	1.806
97.5% Chebyshev(Mean, Sd) UCL	2.152	99% Chebyshev(Mean, Sd) UCL	2.831

**Suggested UCL to Use**  
 95% Adjusted Gamma UCL 1.286

**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.**  
**Please verify the data were collected from random locations.**  
**If the data were collected using judgmental or other non-random methods,**  
**then contact a statistician to correctly calculate UCLs.**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. Recommendations are based upon data size, data distribution, and skewness using results from simulation studies. However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

**UCL Statistics for Uncensored Full Data Sets**

User Selected Options  
 Date/Time of Computation ProUCL 5.2 2/1/2024 10:38:15 AM  
 From File Worksheet.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

**MW-7 IRON (mg/l)**

<b>General Statistics</b>			
Total Number of Observations	23	Number of Distinct Observations	22
		Number of Missing Observations	0
Minimum	0.123	Mean	1.208
Maximum	8.22	Median	0.801
SD	1.683	Std. Error of Mean	0.351
Coefficient of Variation	1.393	Skewness	3.571

<b>Normal GOF Test</b>		<b>Shapiro Wilk GOF Test</b>	
Shapiro Wilk Test Statistic	0.578	Data Not Normal at 1% Significance Level	
1% Shapiro Wilk Critical Value	0.881	<b>Lilliefors GOF Test</b>	
Lilliefors Test Statistic	0.26	Data Not Normal at 1% Significance Level	
1% Lilliefors Critical Value	0.209		

**Data Not Normal at 1% Significance Level**

<b>Assuming Normal Distribution</b>			
<b>95% Normal UCL</b>		<b>95% UCLs (Adjusted for Skewness)</b>	
95% Student's-t UCL	1.811	95% Adjusted-CLT UCL (Chen-1995)	2.065
		95% Modified-t UCL (Johnson-1978)	1.854

<b>Gamma GOF Test</b>		<b>Anderson-Darling Gamma GOF Test</b>	
A-D Test Statistic	0.536	Detected data appear Gamma Distributed at 5% Significance Level	
5% A-D Critical Value	0.768	<b>Kolmogorov-Smirnov Gamma GOF Test</b>	
K-S Test Statistic	0.11	Detected data appear Gamma Distributed at 5% Significance Level	
5% K-S Critical Value	0.187		

**Detected data appear Gamma Distributed at 5% Significance Level**

<b>Gamma Statistics</b>			
k hat (MLE)	1.046	k star (bias corrected MLE)	0.939
Theta hat (MLE)	1.155	Theta star (bias corrected MLE)	1.287
nu hat (MLE)	48.13	nu star (bias corrected)	43.19
MLE Mean (bias corrected)	1.208	MLE Sd (bias corrected)	1.247
Adjusted Level of Significance	0.0389	Approximate Chi Square Value (0.05)	29.12
		Adjusted Chi Square Value	28.28

<b>Assuming Gamma Distribution</b>			
95% Approximate Gamma UCL	1.792	<b>95% Adjusted Gamma UCL</b>	<b>1.845</b>

<b>Lognormal GOF Test</b>		<b>Shapiro Wilk Lognormal GOF Test</b>	
Shapiro Wilk Test Statistic	0.971	Data appear Lognormal at 10% Significance Level	
10% Shapiro Wilk Critical Value	0.928	<b>Lilliefors Lognormal GOF Test</b>	
Lilliefors Test Statistic	0.109	Data appear Lognormal at 10% Significance Level	
10% Lilliefors Critical Value	0.165		

**Data appear Lognormal at 10% Significance Level**

<b>Lognormal Statistics</b>			
Minimum of Logged Data	-2.096	Mean of logged Data	-0.36
Maximum of Logged Data	2.107	SD of logged Data	1.049

<b>Assuming Lognormal Distribution</b>			
95% H-UCL	2.158	90% Chebyshev (MVUE) UCL	2.041
95% Chebyshev (MVUE) UCL	2.436	97.5% Chebyshev (MVUE) UCL	2.985
99% Chebyshev (MVUE) UCL	4.063		

**Nonparametric Distribution Free UCL Statistics**  
**Data appear to follow a Discernible Distribution**

<b>Nonparametric Distribution Free UCLs</b>			
95% CLT UCL	1.785	95% BCA Bootstrap UCL	2.228
95% Standard Bootstrap UCL	1.765	95% Bootstrap-t UCL	2.585
95% Hall's Bootstrap UCL	4.137	95% Percentile Bootstrap UCL	1.817
90% Chebyshev(Mean, Sd) UCL	2.261	95% Chebyshev(Mean, Sd) UCL	2.738
97.5% Chebyshev(Mean, Sd) UCL	3.4	99% Chebyshev(Mean, Sd) UCL	4.7

**Suggested UCL to Use**  
 95% Adjusted Gamma UCL **1.845**

**The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner. Please verify the data were collected from random locations. If the data were collected using judgmental or other non-random methods, then contact a statistician to correctly calculate UCLs.**

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. Recommendations are based upon data size, data distribution, and skewness using results from simulation studies. However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

**UCL Statistics for Uncensored Full Data Sets**

User Selected Options  
 Date/Time of Computation ProUCL 5.2 2/1/2024 10:41:07 AM  
 From File Worksheet\_a.xls  
 Full Precision OFF  
 Confidence Coefficient 95%  
 Number of Bootstrap Operations 2000

**MW-9 IRON (mg/L)**

<b>General Statistics</b>			
Total Number of Observations	24	Number of Distinct Observations	24
		Number of Missing Observations	0
Minimum	0.109	Mean	0.813
Maximum	2.34	Median	0.726
SD	0.611	Std. Error of Mean	0.125
Coefficient of Variation	0.752	Skewness	0.906

<b>Normal GOF Test</b>		<b>Shapiro Wilk GOF Test</b>	
Shapiro Wilk Test Statistic	0.914	Data appear Normal at 1% Significance Level	
1% Shapiro Wilk Critical Value	0.884	<b>Lilliefors GOF Test</b>	
Lilliefors Test Statistic	0.125	Data appear Normal at 1% Significance Level	
1% Lilliefors Critical Value	0.205		

**Data appear Normal at 1% Significance Level**

<b>Assuming Normal Distribution</b>			
<b>95% Normal UCL</b>		<b>95% UCLs (Adjusted for Skewness)</b>	
95% Student's-t UCL	1.027	95% Adjusted-CLT UCL (Chen-1995)	1.043
		95% Modified-t UCL (Johnson-1978)	1.031

<b>Gamma GOF Test</b>		<b>Anderson-Darling Gamma GOF Test</b>	
A-D Test Statistic	0.294	Detected data appear Gamma Distributed at 5% Significance Level	
5% A-D Critical Value	0.76	<b>Kolmogorov-Smirnov Gamma GOF Test</b>	
K-S Test Statistic	0.118	Detected data appear Gamma Distributed at 5% Significance Level	
5% K-S Critical Value	0.181		

**Detected data appear Gamma Distributed at 5% Significance Level**

<b>Gamma Statistics</b>			
k hat (MLE)	1.64	k star (bias corrected MLE)	1.462
Theta hat (MLE)	0.496	Theta star (bias corrected MLE)	0.556
nu hat (MLE)	78.7	nu star (bias corrected)	70.2
MLE Mean (bias corrected)	0.813	MLE Sd (bias corrected)	0.672
Adjusted Level of Significance	0.0392	Approximate Chi Square Value (0.05)	51.91
		Adjusted Chi Square Value	50.8

<b>Assuming Gamma Distribution</b>			
95% Approximate Gamma UCL	1.099	95% Adjusted Gamma UCL	1.123

<b>Lognormal GOF Test</b>		<b>Shapiro Wilk Lognormal GOF Test</b>	
Shapiro Wilk Test Statistic	0.941	Data appear Lognormal at 10% Significance Level	
10% Shapiro Wilk Critical Value	0.93	<b>Lilliefors Lognormal GOF Test</b>	
Lilliefors Test Statistic	0.147	Data appear Lognormal at 10% Significance Level	
10% Lilliefors Critical Value	0.162		

**Data appear Lognormal at 10% Significance Level**

<b>Lognormal Statistics</b>			
Minimum of Logged Data	-2.216	Mean of logged Data	-0.542
Maximum of Logged Data	0.85	SD of logged Data	0.913

<b>Assuming Lognormal Distribution</b>			
95% H-UCL	1.401	90% Chebyshev (MVUE) UCL	1.399
95% Chebyshev (MVUE) UCL	1.643	97.5% Chebyshev (MVUE) UCL	1.981
99% Chebyshev (MVUE) UCL	2.644		

**Nonparametric Distribution Free UCL Statistics**  
**Data appear to follow a Discernible Distribution**

<b>Nonparametric Distribution Free UCLs</b>			
95% CLT UCL	1.018	95% BCA Bootstrap UCL	1.039
95% Standard Bootstrap UCL	1.017	95% Bootstrap-t UCL	1.051
95% Hall's Bootstrap UCL	1.049	95% Percentile Bootstrap UCL	1.029
90% Chebyshev(Mean, Sd) UCL	1.187	95% Chebyshev(Mean, Sd) UCL	1.357
97.5% Chebyshev(Mean, Sd) UCL	1.592	99% Chebyshev(Mean, Sd) UCL	2.054

<b>Suggested UCL to Use</b>	
95% Student's-t UCL	1.027

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. Recommendations are based upon data size, data distribution, and skewness using results from simulation studies. However, simulation results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.