



REPORT REVIEW

PRP-Team 5

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AGENDA

Report Requirements.

File Review.

Tables.

Figures.

Field Notes.

Automated Data Processing Tool (ADaPT).

Laboratory Reports.

Text.

Other Items.

Final Considerations.





REPORT REQUIREMENTS

Report Requirements:

1. Attachment A (V2.0) Scope of Services Amended and Restated Agency Term Contract.
2. Petroleum Restoration Program (PRP) Standard Specification Details (Updated 10/29/2019).



REPORT REQUIREMENTS

According to Attachment A (V2.0) Scope of Services Amended and Restated Agency Term Contract.

19. **REPORTS (Excluding Professional Engineering and Professional Geology Services):** The following pay items are for reports associated with specified scopes of work. Reports must be accurate and complete prior to submittal to DEP. All reports must be submitted to DEP in accordance with the requirements in Chapter 62-780, F.A.C., the “Technical Report and Deliverable Related Time Frames” table in Appendix I, applicable DEP guidance, and comply with the DWM Policy on Professional Certification of Technical Documents dated March 31, 2000, if applicable. All Reports must include a history of the site, a summary of activities completed under the work order, field notes and appropriate logs for any field work, lab reports, tables, figures and maps as applicable, evaluation of the data provided, deviations from Task Assignment requirements, and recommendations for additional work needed to move the site towards closure.

The Contractor shall use of the most current version of the specified report, permit, or document form. All maps shall include a dated title block, facility ID, site name and address, north arrow, bar scale, and a legend of all symbols used, whereas distribution maps shall include iso-contours for COCs drawn such that solid lines denote known concentration contours, dashed lines denote likely concentration contours, and dotted lines denote estimated concentration contours. Tables of analytical results shall be cumulative when the data is available, include the required qualifiers and qualifier codes, and bold the results that exceed the applicable target cleanup level. If due diligence was performed and previous data cannot be obtained in electronic format, copies of historical data are sufficient.



REPORT REQUIREMENTS

According to Section 9.6 of the PRP Standard Specification Details document dated 10/29/2019.

3.6 Site Assessment Deliverable

The deliverable is the submission of the report as specified in the Scope of Work (Interim SA, SSA, RA Interim, Baseline and TSAR report(s)). If submitting a TSAR, each section will be filled out in its entirety. Each report shall contain the results of the field activities performed, and shall include at a minimum:

- A. Copies of any permits obtained and not previously submitted;
- B. A summary of work performed, sampling results, conclusions based on data collected and recommendations for modifications of subsequent tasks, including, as applicable: a description of any changes in land use, efforts made to locate missing wells, description of methods used to identify IDW and disposal, and any other relevant information related to the field activities and resultant data;
- C. For TSAR only, summary of work shall also include: estimated costs with breakdown to achieve closure by RMO 1 and RMO 2;
- D. If applicable, a recommendation and justification for No Further Action, well abandonment and site restoration;
- E. A site map depicting the locations of all SBs, compliance wells and MWs in relation to former and current tank areas, integral piping and dispensers, buildings, land cover, sidewalks, utilities, and any public or private supply wells present onsite. Property lines and any former excavated areas must be indicated;
- F. Additional figures (with scale and legend) shall be provided depicting, as it applies to the assessment: off-site potable wells and potential receptors, a plume map showing the lateral and vertical extent of all contaminants of concern exceeding soil and/or groundwater CTLs and/or NADCs, groundwater elevation map with elevations calculated for each MWs, piezometer and compliance well, contamination map illustrating the degree



REPORT REQUIREMENTS

- of soil and/or groundwater contamination at each boring and well location with sampling dates and analytical data, OVA map depicting highest OVA reading for each boring location;
- G. For TSAR only, figures (with scale and legend) showing site location illustrated on an USGS topographic map including quadrangle name and scale, can be combined with a well survey map with $\frac{1}{2}$ mile and $\frac{1}{4}$ mile circles drawn around site, vicinity map depicting adjacent property usage within a one or two block radius of source property, lithological cross-section at site where lithological information has been collected with screened intervals and water levels;
 - H. Tabulated soil and groundwater data, including historical and current status of wells must be reflected in all groundwater tables;
 - I. SB, MW, groundwater and instrument calibration logs, as it applies to this SOW;
 - J. Laboratory report(s), COC(s) and NELAP certification for the field work conducted;
 - K. Disposal manifests, weight tickets and/or certificates of treatment or disposal, as they apply to this SOW;
 - L. Copy of all field notes.
 - M. Any other items specified in the Scope of Work/Purchase Order for the site-specific report (e.g. photographic documentation, ADaPT data, etc.).



FILE REVIEW

2.2 File Review

The Contractor shall perform a file review of all applicable FDEP records for the site. At a minimum, the information reported must include: historical free product and DTW Table(s), the DTW range, the screen intervals of MWs, and lithology in the affected depth interval. Additionally, this file review shall be used to describe the site history as it relates to the activities described in this SOW. The deliverable is a completed Historical Summary Worksheet that can be found at: <https://floridadep.gov/waste/petroleum-restoration/forms/historical-site-summary>.

FILE REVIEW TIPS

Always Keep Closure Endpoint Requirements in mind.

1. Tables should be complete and contain ALL historical and current data.
2. When reviewing historical reports, review lab reports (not just tables). Historical Tables often have typos and incorrect concentrations.

FILE REVIEW TIPS

3. Oculus Tip – Reimbursement Documents can contain Closure documents, Site Plans, Lab Reports, Contamination Assessment Report (CARs), etc that might not have been otherwise uploaded to Oculus.

Profile	Facility-Site ID	Document Date	Received Date	Document Type	Document Subject
<input type="checkbox"/> Reimbursement	8516823	11-11-1911	11-11-1911	APPLICATION REVIEW ROUTING SLI	
<input type="checkbox"/> Reimbursement	8516823	11-11-1911	11-11-1911	REVIEW - CHECKLIST MATERIALS	
<input type="checkbox"/> Permitting_Authorization	8516823	01-01-1985	01-01-1985	HISTORICAL REGISTRATION RECORD	REGISTRATION INFO
<input type="checkbox"/> Cleanup_Remediation	8516823	01-01-1990	01-01-1990	SIS REPORT	CAR
<input type="checkbox"/> Cleanup_Remediation	8516823	09-21-1990	09-21-1990	APPROVAL RELATED	
<input type="checkbox"/> Reimbursement	8516823	12-30-1991	12-30-1991	REIMBURSEMENT APPLICATION - CO	

TABLES

Organic Vapor Analyzer
(OVA).
Soil Analytical.
GW Elevation.
GW Analytical.
Well Construction.
Free Product Summary.



OVA measures volatile organic compounds (VOCs)

PID

versus

FID

PID

Photo Ionization Detector.

FID

Flame Ionization Detector.

- uses Ultraviolet Light.
- detects VOC directly.
- Readings = net.

- burns organic compound with H flame.
- Readings = total hydrocarbons (petroleum + other [methane]).
- analyze sample again with filter.

SOIL SCREENING SUMMARY (using Facility ID)

Check Borings Logs.

TABLE 3: SOIL SCREENING SUMMARY

Facility Name: Mr. Wong's Chinese Restaurant **FID** Facility ID#: 48/8513352

BORING NO.	DATE COLLECTED	DEPTH TO WATER	SAMPLE INTERVAL (FBS)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-18	10/6/2006	12	1	1.1	--	1.1	
			2	1.2	--	1.2	
			3	1.2	--	1.2	
			4	1.2	--	1.2	
			5	1	--	1	
			6	1 U	--	1 U	
			7	20.1	16.9	3.3	
			8	>4600	1,07	>4589	
			9	>4600	16	>4584	
			10	>4600	50.4	>4549	
			11	>4600	9.4	>4590	
			12	>4600	20.9	>4579	
			13	900.4	12.8	887.9	
			14	241.3	9.3	232	
SB-19	10/6/2006	12	1	1.1	--	1.1	
			2	1	--	1	
			3	1 U	--	1 U	
			4	1.2	--	1.2	
			5	1.3	--	1.3	
			6	1	--	1	
			7	1.2	--	1.2	
			8	1 U	--	1 U	
			9	1 U	--	1 U	
			10	1 U	--	1 U	
			11	1 U	--	1 U	
			12	1 U	--	1 U	
			13	1.1	--	1.1	
			14	1 U	--	1 U	
SB-20	10/5/2006	12	1	1 U	--	1 U	
			2	1 U	--	1 U	
			3	1 U	--	1 U	
			4	1 U	--	1 U	
			5	1 U	--	1 U	
			6	1 U	--	1 U	
			7	1 U	--	1 U	
			8	1 U	--	1 U	
			9	1 U	--	1 U	
			10	1.2	--	1.2	
			11	2.9	--	2.9	
			12	19.6	--	19.6	
			13	5.3	--	5.3	
			14	3.3	--	3.3	

Boring Log (using Facility ID)

Boring/Well Number SB-18		Permit Number.		FDEP Facility Identification Number 48/8513352	
Site Name Former Mr Wong's Chinese Restaurant		Borehole Start Date 10-6-06 End Date 10-6-06		Borehole Start Time <input type="checkbox"/> AM <input type="checkbox"/> PM End Time <input type="checkbox"/> AM <input type="checkbox"/> PM	
Environmental Contractor Shaw Environmental		Geologist's Name D Martinez		Environmental Technician's Name D Williams	
Drilling Company EDS		Pavement Thickness (inches) ~6		Borehole Diameter (inches) 4.25	
Drilling Method(s) DPT		Apparent Borehole DTW (in feet from soil moisture content) 12		Measured Well DTW (in feet after water recharges in well) N/A	
Disposition of Drill Cuttings (check method(s)) (describe if other or multiple items are checked)		<input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other		OVA (list model and check type) Photovac FID	
Borehole Completion (check one)		<input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)			

Sample Type	Sample Depth Interval (feet)	Sample Recovery	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples
HA	0-1		NA	11	-	1.1	1	SAND. ^{light} tan, ^{fine} loose, [FILL]	SP	M _d	
	1-2			1.2	-	1.2	2	as above			
	2-3			1.2	-	1.2	3	as above			
	3-4			1.2	-	1.2	4	as above			
	4-5			1.0	-	1.0	5	as above			
	5-6			<1	-	<1	6	SAND. ^{medium very} tan, ^{no} cohesive, silty, odor	SM	M	
DP	6-7			20.2	16.9	3.3	7	as above			
	7-8			74600	10.7	4589	8	as above odor			
	8-9			74600	16.0	4584	9	as above			
	9-10			74600	50.4	4544	10	as above			SB-18 @ 10'
	10-11			74600	9.4	4590	11	as above			
	11-12			74600	20.9	4579	12	as above			
	12-13			900.7	12.8	887.9	13	as above			
	13-14			241.3	9.3	232.0	14	as above			TD

Sample Type Codes PH = Post Hole, HA = Hand Auger, SS = Split Spoon, ST = Shelby Tube, DP = Direct Push, SC = Some Core, DC = Drill Cuttings
Moisture Content Codes D = Dry, M = Moist, W = Wet, S = Saturated

SOIL SCREENING SUMMARY (using Photo Ionization Detector (PID))

PID

TABLE 1: SOIL SCREENING SUMMARY

Facility Name: Sidekick Shell (former Texaco #100858 - San Miguel)
 Facility Address: 9011 Little Road, New Port Richey, Pasco County, FL
 FDEP ID: 518630449

BORING NO.	DATE COLLECTED	DEPTH TO WATER	SAMPLE INTERVAL (FBLS)	OVA-PID	COMMENTS & LITHOLOGY
				READING (ppm)	
B-9	2/28/2017	11	1	0.0	Fine sand, SP
			2	0.0	Fine sand, SP
			3	0.0	Fine sand, SP
			4	0.0	Fine sand, SP
			6	0.0	Fine sand, SP
			8	0.5	Fine sand, SP
			10	0.0	Fine sand, SP
			12	0.0	Fine sand, SP
			14	43.3	Fine sand, SP
B-10	2/28/2017	11	1	0.0	Gravelly sand, SW
			2	0.0	Gravelly sand, SW
			3	0.0	Gravelly sand, SW
			4	0.0	Gravelly sand, SW
			6	0.0	Gravelly sand, SW
			8	0.0	Gravelly sand, SW
			10	0.0	Gravelly sand, SW
			12	0.0	Fine sand, SP
			14	0.0	Fine sand, SP
B-11	2/28/2017	11	1	0.0	Fine sand, SP
			2	0.0	Fine sand, SP
			3	0.0	Fine sand, SP
			4	0.0	Fine sand, SP
			6	0.0	Gravelly sand, SW
			8	0.0	Gravelly sand, SW
			10	0.0	Fine sand, SP
			12	2.2	Fine sand, SP
			14	2.3	Fine sand, SP
DW-1	2/28/17, 3/3/17	14.9	1	0.0	Fine sand, SP
			2	0.0	Fine sand, SP
			3	0.0	Fine sand, SP
			4	0.0	Fine sand, SP
			6	0.0	Fine sand, SP
			8	0.0	Fine sand, SP
			10	0.0	Fine sand, SP
			12	326	Fine sand, SP, petroleum odor
			14	543	Fine sand, SP, petroleum odor
			16	702	Fine sand, SP, petroleum odor
			18	11.1	Fine sand, SP
			20	4.1	Fine sand, SP
			25	5.0	Clay and limestone, CL
			30	0.0	Limestone
35	0.0	Limestone			

BORING LOG

BORING LOG (using PID)

For Invoicing: Check
Borehole Depth and
Borehole Diameter.

Boring/Well Number: B-2		Permit Number:		FDEP Facility ID No.: 42-8735706							
Site Name: Automotive Fluid Recycling, LLC		Borehole Start Date: 9-6-2010		Borehole Start Time: 0935 AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>							
		End Date: 9-6-2010		End Time: 1015 AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>							
Environmental Contractor: Streamline Environmental, Inc.		Geologist's Name: Molissa M. Del Mastro		Environmental Technician's Name: Austen Everett							
Drilling Company: Preferred Drilling Solutions		Pavement Thickness (inches): NA - unpaaved		Borehole Diameter (inches): 6							
				Borehole Depth (feet): 32							
Drilling Method(s): H S A		Apparent Borehole DTW (in feet from soil moisture content): 28'		Measured Well DTW (in feet after water recharges in well): NA							
				OVA (list model and check type): <input checked="" type="checkbox"/> Mini/Rae 2000 <input type="checkbox"/> FID <input type="checkbox"/> PID <input checked="" type="checkbox"/>							
Disposition of Drill Cuttings (check method(s)): (describe if other or multiple items are checked):											
<input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input checked="" type="checkbox"/> Stockpile <input type="checkbox"/> Other											
Borehole Completion (check one): <input type="checkbox"/> Well <input checked="" type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)											
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
PH	0-1	NA	NA	-	-	0.0	1	BOR - SF F-M SAND NO OVA	SP	D	
PH	1-2	NA	NA	-	-	0.0	2	BOR - SF SS F-M SAND NO OVA	SP	D	
PH	2-3	NA	NA	-	-	0.0	3	SAME NO OVA	SP	D	
PH	3-4	NA	NA	-	-	0.0	4	SAME NO OVA	SP	D	
							5				
SS	4-6	24/24	4/12			799	6	4-5' BOR - SF SAND - petrolium 5-6' BOR + Gray mottled clay wet - perched aquifer	SH/CL	W	
SS							7				
SS	6-8	15/24	4/9			1150	8	BOR + on - mottled hard clay Moderate OVA	CL	M-W	
SS							9				
SS	8-10	24/24	10/16			1200	10	BOR + Gray - mottled clay hard - Moderate OVA	CL	D	LAB Sample @ 10'
SS							11				
SS	10-12	24/24	7/11			1027	12	SAME MOD OVA	CO	D	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Drive Push; SC = Sonic Core; DC = Drill Cuttings / Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

SOIL ANALYTICAL TABLE

(Volatile Organic Aromatics (VOAs), Total Recoverable Petroleum Hydrocarbons (TRPH), & Metals)

Review Soil Laboratory Report.

Concentrations must be displayed as they are presented in the laboratory report.

Florida Department of Environmental Protection -- Petroleum Restoration Program

TABLE 2A: SOIL ANALYTICAL SUMMARY - VOAs, TRPHs and METALS

Facility ID#: 518630449 Facility Name: Sidekick Shell (former Texaco #100858 - San Miguel) See notes at end of table.

Boring/ Well No.	Date Collected	Depth to Water (ft)	Sample Interval (fbis)	Net OVA Reading (ppm)	Laboratory Analyses									
					Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TRPHs (mg/kg)	Arsenic (mg/kg)	Cad-mium (mg/kg)	Chro-mium (mg/kg)	Lead (mg/kg)
B-2	2/28/2017	11	4	163	0.000504 U	0.000555 U	0.000578 U	0.000703 U	0.000681 U	6.40 U	NS	NS	NS	NS
B-3	2/28/2017	11	8	0	0.000411 U	0.000452 U	0.000529 I	0.000745 I	0.000555 U	11.9 V	NS	NS	NS	NS
East @ 8ftR	5/16/2022	10	8	0	0.00034 U	0.00024 U	0.00025 U	0.00069 U	0.00067 U	5.3 I	NS	NS	NS	NS
South @ 7ftR	5/16/2022	10	7	NS	0.00036 U	0.00026 U	0.00027 U	0.00094 U	0.00071 U	4.8 U	NS	NS	NS	NS
B-5 @ 7-8ft	5/17/2022	10	7-8	0	0.00034 U	0.00024 U	0.00025 U	0.00069 U	0.00067 U	4.9 U	NS	NS	NS	NS
B-6 @ 3ft	5/17/2022	10	3	0	0.00038 U	0.00027 U	0.00029 U	0.0010 U	0.00076 U	5.1 U	NS	NS	NS	NS
B-7 @ 3ft	5/17/2022	10	3	0	0.00038 U	0.00027 U	0.00028 U	0.00099 U	0.00075 U	5.0 U	NS	NS	NS	NS
B-8 @ 7-8ft	5/17/2022	10	7-8	0	0.00036 U	0.00026 U	0.00027 U	0.00095 U	0.00072 U	4.9 U	NS	NS	NS	NS
MW-14 @ 1ft	5/17/2022	10	1	144.1	0.00037 U	0.00027 U	0.00028 U	0.00098 U	0.00074 U	5.2 U	NS	NS	NS	NS
OW-2R @ 8'	5/16/2022	10	8	0.2	0.00034 U	0.00025 U	0.00026 U	0.00090 U	0.00068 U	5.0 U	NS	NS	NS	0.50
IDW	5/17/2022	NA	8	NS	0.00037 U	0.00026 U	0.00028 U	0.00097 U	0.00073 U	12 I	0.14 U	0.035 I	1.0	0.63
Leachability Based on Groundwater Criteria (mg/kg)					0.007	0.6	0.5	0.2	0.09	340	*	7.5	38	*
Direct Exposure Residential (mg/kg)					1.2	1,500	7,500	130	4,400	460	2.1	82	210	400

Notes: NA = Not Available.
 NS = Not Sampled.
 * = Leachability value may be determined using TCLP.
 ** = Not a health concern for exposure scenario
 U = Not detected to the level shown. I = Concentration is between the method detection limit and the practical quantitative limit.
 V = Analyte equal to or above detection limit in the method blank

Check accuracy of SCTLs

SOIL ANALYTICAL TABLE

(Non-Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs))

Review Soil Laboratory Report.

Concentrations must be displayed as they are presented in the laboratory report.

Florida Department of Environmental Protection – Bureau of Petroleum Storage Systems

Check accuracy of SCTLs

TABLE 3: SOIL ANALYTICAL SUMMARY - Non-Carcinogenic PAHs

Facility ID#: 429064010

Facility Name: Sharyn's Bridal Gallery

See notes at end of table.

Sample				OVA	Laboratory Analyses											Comments
Boring/ Well No.	Date Collected	Depth to Water (ft)	Sample Interval (fbs)	Net OVA Reading (ppm)	Naphthalene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo (g,h,i) perylene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)	
Leachability Based on Groundwater Criteria (mg/kg)					1.2	3.1	8.5	2.1	27	2,600	32,000	1,200	160	250	880	
Direct Exposure Residential (mg/kg)					55	200	210	2,400	1,800	21,000	2,500	3,200	2,800	2,200	2,400	
SB-5R2	05/17/19	16	12	367	0.052	0.042(I)	0.094	0.031U	0.031U	0.029U	0.021U	0.023U	0.029U	0.028U	0.024U	
SB-15R	04/16/13	13	8	423	0.00065U	0.00066U	0.00065U	0.00072U	0.00066U	0.00082U	0.0014U	0.0074U	0.00065U	0.00065U	0.00065U	
SB-17R	04/17/13	12	12	1182	0.0087(I)	0.0074(I)	0.015	0.00088U	0.00061U	0.00075U	0.0013U	0.0041(I)	0.00058U	0.0025(I)	0.0025(I)	
FSB-33	04/16/13	16	14	700	0.031	0.037	0.088	0.00085(I)	0.00065U	0.00094(I)	0.0044(I)	0.0013(I)	0.0020(I)	0.0028(I)	0.00085(I)	
FSB-33R	05/17/19	25	16	903	0.040U	0.037U	0.066	0.031U	0.031U	0.028U	0.021U	0.022U	0.028U	0.027U	0.023U	
FSB-34	04/16/13	14	14	1282	0.95	0.59	1.3	0.0054(I)	0.0015U	0.0018U	0.0031U	0.0048(I)	0.0067(I)	0.011(I)	0.0014U	
FSB-34R	05/17/19	22	14	12100	0.80	0.38	0.83	0.031U	0.031U	0.029U	0.021U	0.023U	0.029U	0.028U	0.024U	
FSB-35	04/16/13	14	14	224	0.074	0.13	0.30	0.0012(I)	0.00066U	0.00082U	0.0014U	0.0013(I)	0.0020(I)	0.0032(I)	0.0015(I)	
MW-13	05/16/19	46.5	12	10	0.041U	0.037U	0.037U	0.031U	0.031U	0.029U	0.021U	0.022U	0.029U	0.027U	0.027U	
SB-21/26R	05/16/19		2	405	0.10	0.17	0.35	0.027U	0.027U	0.025U	0.019U	0.029(I)	0.025U	0.024U	0.033(I)	
SB-12/27R	05/16/19		2	316	0.078	0.11	0.30	0.031U	0.031U	0.028U	0.021U	0.022U	0.028U	0.027U	0.023U	
SB-11/30R	05/16/19		12	360	0.040U	0.080	0.13	0.030U	0.030U	0.028U	0.021U	0.038(I)	0.028U	0.028(I)	0.028(I)	
SB-20/26R	05/17/19	14	12	550	0.045	0.13	0.29	0.030U	0.030U	0.027U	0.020U	0.021U	0.027U	0.028U	0.023U	
SB-40	05/20/19	31	12	397	0.071	0.40	0.93	0.031U	0.031U	0.028U	0.021U	0.022U	0.028U	0.027U	0.023U	
SB-41	05/20/19	15	14	11700	0.25	0.31	0.73	0.034U	0.034U	0.032U	0.023U	0.025U	0.032U	0.030U	0.026U	
SB-42	05/20/19		14	0	0.037U	0.034U	0.034U	0.028U	0.028U	0.028U	0.019U	0.020U	0.028U	0.025U	0.021U	

SOIL ANALYTICAL TABLE

(Carcinogenic PAHs)

Review Soil Laboratory Report.

Calculate Benzo(a)pyrene Equivalent (BaPE) concentration if at least 1 carcinogenic PAHs is equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (no qualifier) or estimated (J,T, I qualifiers)

TABLE 4: SOIL ANALYTICAL SUMMARY - Carcinogenic PAHs

Facility ID#: 429064010

Carcinogenic PAHs

See notes at end of table.

Boring/ Well No.	Sample			OVA Net OVA Reading (ppm)	Laboratory Analyses								Comments
	Date Collected	Depth to Water (ft)	Sample Interval (ft/s)		Benzo (a) pyrene (mg/kg)	Benzo (a) anthracene (mg/kg)	Benzo (b) fluoranthene (mg/kg)	Benzo (k) fluoranthene (mg/kg)	Chry-sene (mg/kg)	Dibenz (a,h) anthra-cene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Benzo (a) pyrene equivalent (mg/kg)	
Leachability Based on Groundwater Criteria (mg/kg)					8	0.8	2.4	24	77	0.7	6.6	**	
Direct Exposure Residential (mg/kg)					0.1	#	#	#	#	#	#	0.1	
SB-20/28R	05/17/19	14	12	550	0.023U	0.019U	0.023U	0.025U	0.023U	0.020U	0.020U	0	
SB-40	05/20/19	31	12	397	0.023U	0.020U	0.023U	0.026U	0.023U	0.021U	0.021U	0	
SB-41	05/20/19	15	14	11700	0.026U	0.022U	0.026U	0.029U	0.026U	0.023U	0.023U	0	
SB-42	05/20/19		14	0	0.021U	0.018U	0.021U	0.024U	0.021U	0.019U	0.019U	0	
SB-43	05/20/19		14	3	0.026U	0.022U	0.026U	0.029U	0.026U	0.023U	0.023U	0	
SB-44	05/20/19		14	196	0.024U	0.020U	0.024U	0.027U	0.024U	0.022U	0.022U	0	
Waste Characterization	5/17/2019				0.023U	0.020U	0.023U	0.026U	0.023U	0.021U	0.021U	0	
SB-12/27R	06/19/23				0.0019U	0.0023U	0.0018U	0.0027U	0.0033U	0.0019U	0.0027U	0	
SB-11/30RR	06/19/23				0.0020U	0.0023U	0.0018U	0.0028U	0.0034U	0.0020U	0.0028U	0	
SB-3R	06/19/23				0.067	0.042	0.11	0.041	0.076	0.013	0.064	0.1	
SB-20R	06/19/23				0.0019U	0.0022U	0.0018U	0.0026U	0.0033U	0.0019U	0.0027U	0	
SB-5R	06/19/23				0.0020U	0.0024U	0.0032(I)	0.0028U	0.0035U	0.0020U	0.0028U	0	
SB-7/25R	06/19/23				0.0020U	0.0023U	0.0018U	0.0028U	0.0034U	0.0019U	0.0028U	0	
SB-21RA	06/19/23				0.0019U	0.0022U	0.0019(I)	0.0026U	0.0033U	0.0019U	0.0026U	0	
SB-21RB	06/19/23				0.0019U	0.0023U	0.0018U	0.0027U	0.0034U	0.0019U	0.0028U	0	
SB-16R	06/19/23				0.0020U	0.0023U	0.0018U	0.0027U	0.0034U	0.0019U	0.0028U	0	
FSB-33R	06/19/23				0.0020U	0.0024U	0.0019U	0.0028U	0.0035U	0.0020U	0.0029U	0	
Pre-Burn	07/26/23				0.082	0.038	0.12	0.051	0.081	0.018	0.10	0.1	

Notes: NA = Not Available.
 NS = Not Sampled.
 ** = Leachability value not applicable.
 # = Direct Exposure value not applicable except as part of the Benzo(a)pyrene equivalent.
 U=Indicates that the compound was analyzed for but not detected.
 I=The reported value is between the laboratory method detection limit & the laboratory practical quantitation limit.
 J=Estimated value.

If analyte is not detected, report the method detection limit [i.e., 0.01 U or ND(0.01); BDL or <0.01 are not acceptable].

Benzo(a)Pyrene Conversion Table

Add concentration from Soil Analytical Table.

Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Facility/Site Name: Sharyn's Bridal Gallery
 Location: 2411 S. Pine Ave, Ocala
 Facility/Site ID No.: 429084010

Soil Sample No. SB-3R
 Sample Date 6/19/2023
 Location: SB-3R
 Depth (ft): 2

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter the contaminant concentrations (in mg/kg) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):

1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.067	1.0	0.0670
Benzo(a)anthracene	0.042	0.1	0.0042
Benzo(b)fluoranthene	0.110	0.1	0.0110
Benzo(k)fluoranthene	0.041	0.01	0.0004
Chrysene	0.076	0.001	0.0001
Dibenz(a,h)anthracene	0.013	1.0	0.0130
Indeno(1,2,3-cd)pyrene	0.064	0.1	0.0064

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = **0.1**

Enter Carcinogenic PAH concentrations using above instructions

The concentration shown does not exceed the Residential Direct Exposure SCTL of 0.1 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 0.7 mg/kg.

BaPE Concentration Autopopulated

Summary Criteria for Table Entries			
Detection	Concentration Reported	Data Qualifier	Enter
Various	Quantified with certainty	None	reported value
Various	Estimated	J	reported (estimated) value
ND at MDL	MDL	U	1/2 reported value
< MDL	Estimated	T	reported (estimated) value
≥ MDL but < PQL	Estimated	I	reported (estimated) value
≥ MDL but < PQL	PQL	M	1/2 reported value

GROUNDWATER ELEVATION



Check DTW (and FP as needed) from Field Notes

TABLE 5: GROUNDWATER ELEVATION SUMMARY

Facility ID#: 429064010

Facility Name: Sharyn's Bridal Gallery

WELL NO.	MW-9			MW-10			MW-11			MW-12			MW-13		
DIAMETER	2 in			2 in			2 in			2 in			2 in		
WELL DEPTH	27.55 ft			34.23 ft			34.30 ft			43.30 ft			50 ft		
SCREEN INTERVAL	4.5 to 27.5			9.2 to 34.2			9.3 to 34.3			13.3 to 43.3			35 to 50		
TOC ELEVATION	105.90			103.87			100.40			101.12			104.28		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
3/26/2008	99.69	6.21	NP												
12/2/2008	96.28	9.62	NP												
8/31/2011	96.52	9.38	NP												
7/19/2012	102.85	3.05	NP	96.59											
4/15/2013	93.35	12.55	NP	89.11											
8/4/2014	99.25	6.65	NP	94.68											
11/7/2018	96.91	8.99	NP	92.47											
5/29/2019	98.17	7.73	NP	93.44	10.43	NP	90.48	9.92	NP	64.08	37.04	NP	57.78	46.50	NP
5/5/2022	98.37	7.53	NP	93.04	10.83	NP	89.95	10.45	NP	64.42	36.70	NP	DRY		
7/24/2023	Unable to Locate			Unable to Locate			91.66	8.74	NP						
7/25/2023	Unable to Locate			Unable to Locate				--		67.46	33.66	NP	66.38	37.90	NP

For newly installed wells, check TOC Elevation calculations from Field Notes & well construction details from Well Construction & Development Log

Check Depth to Water Measurements in Field Notes.

Groundwater Analytical Table – VOAs & Metals

Concentrations must be displayed as they are presented in the laboratory report

GROUNDWATER MONITORING WELL ANALYTICAL SUMMARY - VOCS & METALS

Facility ID#: 429064010

Facility Name: Sharyn's Bridal Gallery

Check CTLs for accuracy

See notes at end of table.

Sample		Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-Dibromethane (EDB)	1,2-Dichloroethane	Total Arsenic	Total Cadmium	Total Chromium	Total Lead
Location	Date	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
GCTLs		1**	40**	30**	20**	20	0.02**	3**	10**	5**	100**	15**
NADCs		100	400	300	200	200	2	300	100	50	1,000	150
MW-1	8/1/2006	0.36U	0.31U	0.46(l)	0.83U	0.32U	NS	NS	NS	NS	NS	NS
	6/12/2007	6.2	0.31U	2.5	0.83U	0.32U	NS	NS	NS	NS	NS	NS
	12/2/2008	6.2	0.3U	0.87	0.4U	0.05U	NS	NS	NS	NS	NS	NS
	8/31/2011	9.0	0.3U	18	2.0	0.05U	NS	NS	NS	NS	NS	NS
	7/19/2012	8.6	0.73(l)	30	7.0	0.28U	NS	NS	NS	NS	NS	2.9U
	8/6/2014	0.71U	0.72U	3.3	1.7(l)	0.60U	0.004U	NS	NS	NS	NS	NS
	11/8/2018	0.93(l)	0.72U	0.69U	1.3U	0.60U	NS	NS	NS	NS	NS	NS
	5/4/2022	0.89(l)	0.72U	0.69U	1.3U	0.60U	NS	NS	NS	NS	NS	15.0U
	7/25/2023	0.83(l)	0.66U	3.6	1.4(l)	0.71U	NS	NS	NS	NS	NS	3.0U
MW-2	8/1/2006	35	28	760	900	0.32U	NS	NS	NS	NS	NS	NS
MW-2R	7/19/2012	62	210	1900	3900	0.28U	NS	NS	NS	NS	NS	2.9U
	8/6/2014	18U	18U	920	380	15U	0.004U	NS	NS	NS	NS	NS
	11/8/2018	6.1	3.6U	420	68	3.0U	NS	NS	NS	NS	NS	NS
	5/4/2022	2.4	4.4	71	74	0.60U	NS	NS	NS	NS	NS	15.0U
	7/25/2023	0.28U	0.66U	0.56U	1.3U	0.71U	NS	NS	NS	NS	NS	10

Groundwater Analytical Table – PAHs & TRPH

TABLE 7: GROUNDWATER MONITORING WELL ANALYTICAL SUMMARY - PAHs and TRPHs

Florida Department of Environmental Protection -- Bureau of Petroleum Storage Systems

For BaA, BbF, D(a,h)A, and Ind(1,2,3-cd)P, if MDLs exceed GCTLs, check Lab PQLs & Compare with Target PQLs

Facility ID#: 429064010

Facility Name: Sharyn's Bridal Gallery

Sample		TRPHs	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (g,h,i) perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo (a) pyrene	Benzo (a) anthracene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Indeno (1,2,3-cd) pyrene
Location	Date	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
GCTLs		5,000	14	28	28	20	210	2,100	210	280	280	210	210	0.2**	0.05 ^a	0.05 ^a	0.5	4.8	0.005 ^a	0.05 ^a
NADCs		50,000	140	280	280	200	2,100	21,000	2,100	2,800	2,800	2,100	2,100	20	5	5	50	480	0.5	5
MW-1	12/2/2008	200(I)	6.0	1.3	3.6	0.032(I)	0.022U	0.02U	0.012U	0.096	0.03U	0.059(I)	0.077(I)	0.032(I)	0.034(I)	0.070	0.036(I)	0.057	0.011U	0.011U
	8/31/2011	260(I)	9.1	2.8	4.8	0.048(I)	0.040(I)	0.91	0.96	2.1	0.035(I)	0.83	1.9	1.2	0.70	1.5	0.68	1.2	0.36	0.91
	7/19/2012	940	33	15	32	0.050(I)	0.023U	0.021U	0.012U	0.10	0.087(I)	0.10	0.089(I)	0.0094U	0.027(I)	0.076	0.020(I)	0.057	0.011U	0.011U
	8/6/2014	NS	1.1	0.31	0.49	0.040(I)	0.036U	0.036U	0.040U	0.051U	0.063(I)	0.039U	0.048U	0.043U	0.037U	0.059U	0.046U	0.051U	0.026U	0.037U
	11/8/2018	180(I)	0.8	1.3	0.10	0.040(I)	0.036U	0.036U	0.040U	0.051U	0.057(I)	0.040(I)	0.048U	0.043U	0.037U	0.059U	0.046U	0.051U	0.026U	0.037U
	5/4/2022	100U	0.4	0.83	0.50U	0.050U	0.050U	0.050U	0.050U	0.051U	0.057(I)	0.057(I)	0.050U	0.050U	0.050U	0.059U	0.050U	0.051U	0.052U	0.050U
	7/25/2023	530U	2.0	2.2	2.70	0.027(I)	0.030U	0.049U	0.041U	0.035U	0.041(I)	0.035(I)	0.034U	0.034U	0.039U	0.040U	0.025U	0.029U	0.049U	0.039U
MW-2R	7/19/2012	9500	200	50	100	0.21	0.022U	0.020U	0.012U	0.024(I)	0.22	0.19	0.022U	0.0092U	0.011U	0.0071U	0.017U	0.010U	0.011U	0.011U
	8/6/2014	3400	220	59	110	0.35	0.036U	0.069(I)	0.040U	0.051U	0.34	0.30	0.048U	0.043U	0.037U	0.059U	0.046U	0.051U	0.026U	0.037U
	11/8/2018	2900	100	45	68	0.38	0.036U	0.036U	0.040U	0.051U	0.29	0.080(I)	0.048U	0.043U	0.037U	0.059U	0.046U	0.051U	0.026U	0.037U
	5/4/2022	560(I)	0.050U	0.097(I)	0.10	0.050U	0.050U	0.050U	0.050U	0.051U	0.050U	0.050U	0.050U	0.050U	0.050U	0.059U	0.050U	0.051U	0.052U	0.050U
	7/25/2023	2200	31	10	16	0.13(I)	0.031U	0.051U	0.043U	0.043(I)	0.11(I)	0.077(I)	0.036U	0.035U	0.040U	0.042U	0.026U	0.030U	0.051U	0.041U

Carcinogenic PAHs in Groundwater

Prior to April 17, 2005, the groundwater CTLs for four carcinogenic PAHs [Benzo(a)anthracene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, and Indeno(1,2,3-cd)pyrene] were based on the PQL, that is, "the lowest level that can be reliably measured during routine laboratory operating conditions within specified limits of precision and accuracy" [see Subsection 62-770.200(44), F.A.C.]. Since April 17, 2005, the groundwater CTLs for those four contaminants have been based on their respective toxicities. While this change is consistent with the way other CTLs were calculated, it creates a little confusion because the risk-based groundwater CTLs for those four carcinogenic PAHs are lower than their respective PQLs. However, as specified in Chapter 62-770, F.A.C. and the other cleanup rules, when the risk-based CTL is lower than the PQL, the PQL becomes the alternative CTL as long as it is the best achievable detection limit. In order to provide assistance in determining whether PQLs reported in laboratory reports are actually the best achievable detection limit for each contaminant, the FDEP prepared the document "Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits", dated October 12, 2004, and referenced in the cleanup rules (the document can be accessed at www.dep.state.fl.us/waste/categories/wc/pages/LinksToGuidanceDocuments.htm). Table C of that document provides Target PQLs for the four carcinogenic PAHs in question as follows:

<u>Contaminant</u>	<u>GCTL</u> <u>($\mu\text{g/L}$)</u>	<u>Target PQL</u> <u>($\mu\text{g/L}$)</u>	<u>EPA Method</u>
Benzo(a)anthracene	0.05	0.2	8310
Benzo(b)fluoranthene	0.05	0.1	8310
Dibenz(a,h)anthracene	0.005	0.2	8310
Indeno(1,2,3-cd)pyrene	0.05	0.2	8310

Well Construction Details

Check MW Construction & Development Logs

Check Boring Logs

TABLE 11: WELL CONSTRUCTION DETAILS

Facility Name: WE Hoffman, Inc.

Facility ID: 42/9200474

7850 South Pine Avenue, Ocala, FL

WELL NO	DATE INSTALLED	INSTALLATION METHOD	TOP OF CASING ELEVATION	ABANDONED YES/NO	TOTAL WELL DEPTH (FEET)	SCREENED INTERVAL (FBLs)	WELL DIAMETER (INCHES)	LITHOLOGY OF SCREENED INTERVAL
MW-1	3/22/1995	UNK	100.20	NO	35.00	25-35	2	LIMESTONE
MW-2	7/16/1996	UNK	99.91	NO	35.00	25-35	2	CLAY
MW-3	7/16/1996	UNK	100.63	NO	25.00	15-25	2	CLAY
MW-4	7/17/1996	UNK	100.26	NO	25.00	15-25	2	LIMESTONE
MW-5	7/17/1996	UNK	100.83	YES	25.00	15-25	2	LIMESTONE
MW-7	7/9/2001	UNK	99.23	NO	29.90	14.9-29.9	2	CLAY
MW-8	7/9/2001	UNK	100.03	NO	34.88	19.88-34.88	2	CLAY
MW-10	7/9/2001	UNK	99.65	NO	34.10	19.1-34.1	2	SANDY CLAY
MW-11	7/10/2001	UNK	99.53	NO	34.40	19.4-34.4	2	CLAYEY SAND
MW-12	7/10/2001	UNK	99.50	NO	31.20	16.2-31.2	2	SANDY CLAY
MW-13	11/8/2002	UNK	99.66	NO	36.70	21.37-36.37	2	CLAY
MW-14	11/7/2002	UNK	99.71	NO	30.72	15.72-30.72	2	LIMESTONE
MW-15	11/7/2002	UNK	99.66	NO	31.35	16.35-31.35	2	LIMESTONE
MW-16	11/7/2002	UNK	98.66	NO	30.85	15.85-30.85	2	CLAY
MW-17	11/7/2002	UNK	99.87	NO	30.71	15.71-30.71	2	LIMESTONE
MW-18	11/7/2002	UNK	99.72	YES	32.00	17-32	2	LIMESTONE
MW-18R	3/3/2015	H.S.A.	98.57	NO	30.00	15-30	2	CLAY OVER LIMESTONE
MW-19	11/8/2002	UNK	99.87	NO	30.36	15.36-30.36	4	LIMESTONE
MW-19R	3/8/2019	H.S.A.		NO	30.00	15-30	2	CLAY OVER LIMESTONE
MW-20	11/8/2002	UNK	99.70	CNF	30.70	15.7-30.7	2	LIMESTONE
MW-21	5/1/2003	UNK	100.35	YES	33.05	18-33	2	LIMESTONE
MW-21R	3/3/2015	H.S.A.	99.53	NO	28.00	13-28	2	CLAY OVER LIMESTONE
MW-22	5/1/2003	UNK	99.99	CNF	25.00	10-25	2	LIMESTONE

Free Product Summary

Check Field Notes, water level data collected with product interface probe, photos, etc.

TABLE 5: FREE PRODUCT SUMMARY

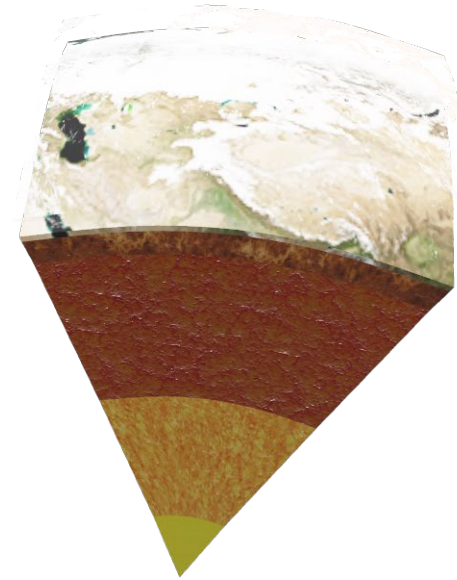
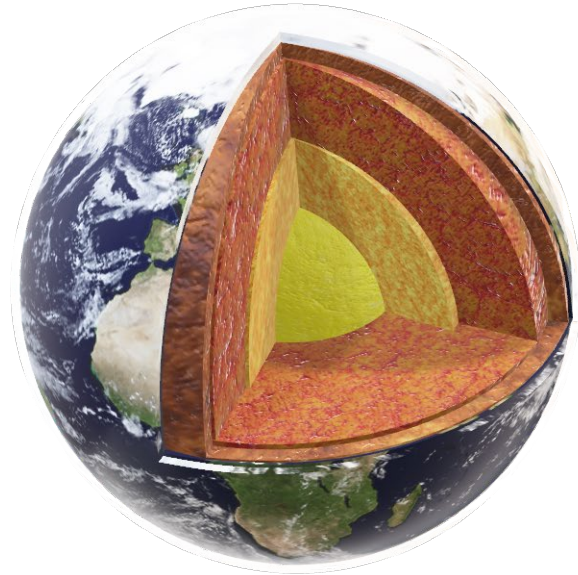
LOCATION	DATE MEASURED	FP THICKNESS BEFORE FP REMOVAL (feet)	FP THICKNESS AFTER FP REMOVAL (feet)	VOLUME RECOVERED (gal)	CUMULATIVE VOLUME RECOVERED (gal)	COMMENTS
MW-1	4/5/2023	0.32	0.1	1	1	dark brown
	4/12/2023	0.29	0.1	0.8	1.8	dark brown
	4/18/2023	0.25	0.1	0.8	2.6	dark brown
	4/27/2023	0.27	0.1	1	3.6	dark brown

TABLES – (Final Note)

- Always check Tables to ensure all samples have been collected that are needed for closure requirements.
- Don't wait to closure to determine if additional sampling/well installation is needed.

FIGURES

Site Location.
Site Plan.
OVA.
Soil Analytical.
Groundwater
(GW) Analytical.
GW Elevation.



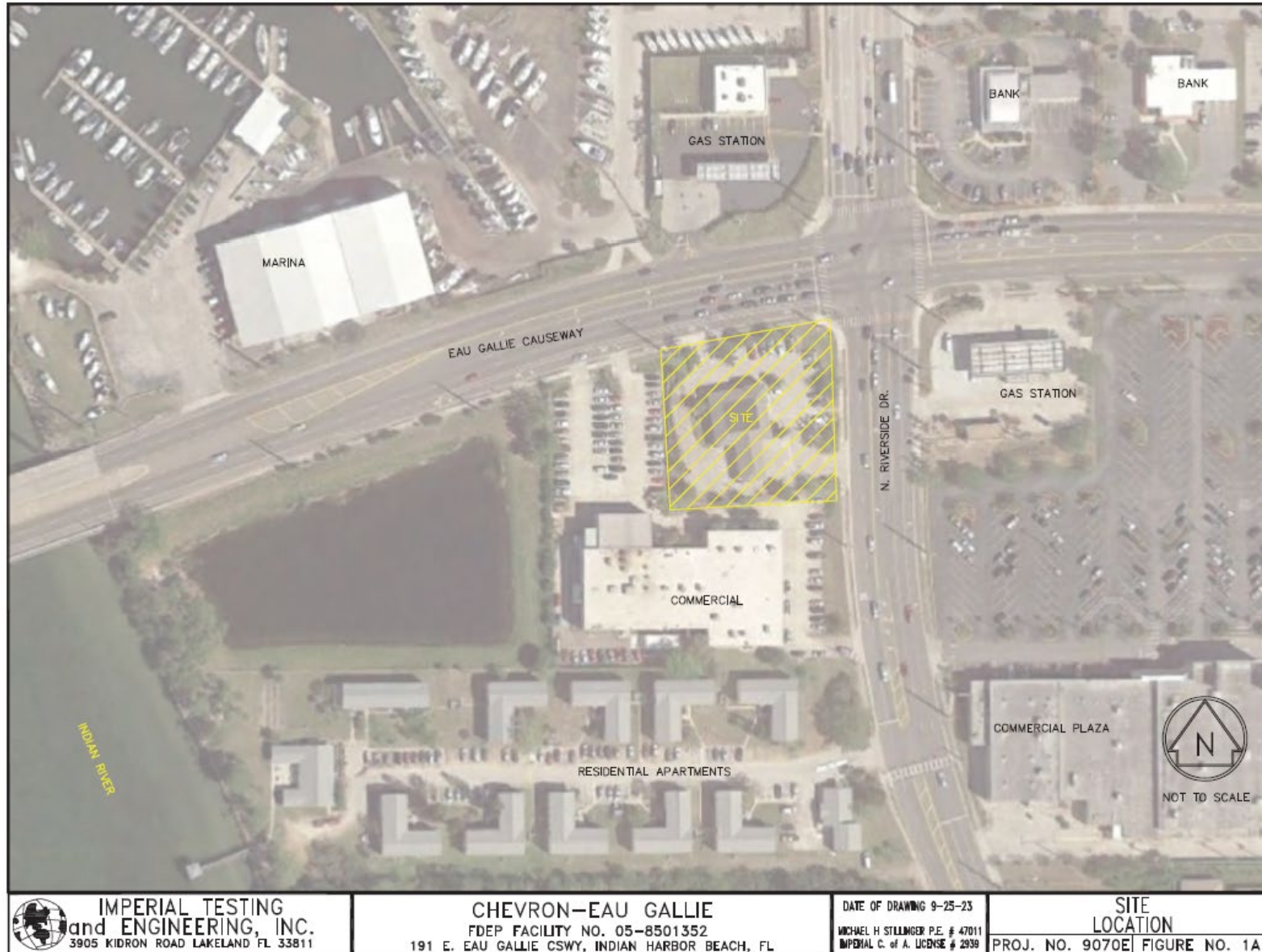
FIGURES MUST INCLUDE:

- Site Map depicting locations of all Soil Boring (SBs), Contamination Wells (CWs), and Monitoring Wells (MWs) in relation to former and current tanks areas, integral piping and dispensers, buildings, land cover, sidewalks, utilities, and any public or private supply wells present onsite.
- Property lines and any former excavated areas.
- Additional figures (with scale and legend) depicting off-site potable wells and potential receptors.
- Plume maps showing lateral and vertical extent of all contaminants of concern exceeding soil and/or groundwater Cleanup Target Levels (CTLs) and/or Natural Attenuation Default Concentration (NADCs).

FIGURES MUST INCLUDE:

- Groundwater Elevation Map with groundwater elevations calculated for each MW, piezometer, and compliance well elevation contours and interpretation of groundwater flow direction. Contamination Map illustrating the degree of soil and/or groundwater contamination at each boring and well locations with sampling dates and analytical data.
- OVA map depicting the highest OVA reading for each soil boring location.
- FOR TEMPLATE SITE ASSESSMENT REPORT (TSARS) ONLY: figure showing site location on USGS topographic map, vicinity map, well survey map, lithologic cross-section.

Site Location Map



 **IMPERIAL TESTING
and ENGINEERING, INC.**
3905 KIDRON ROAD LAKELAND FL 33811

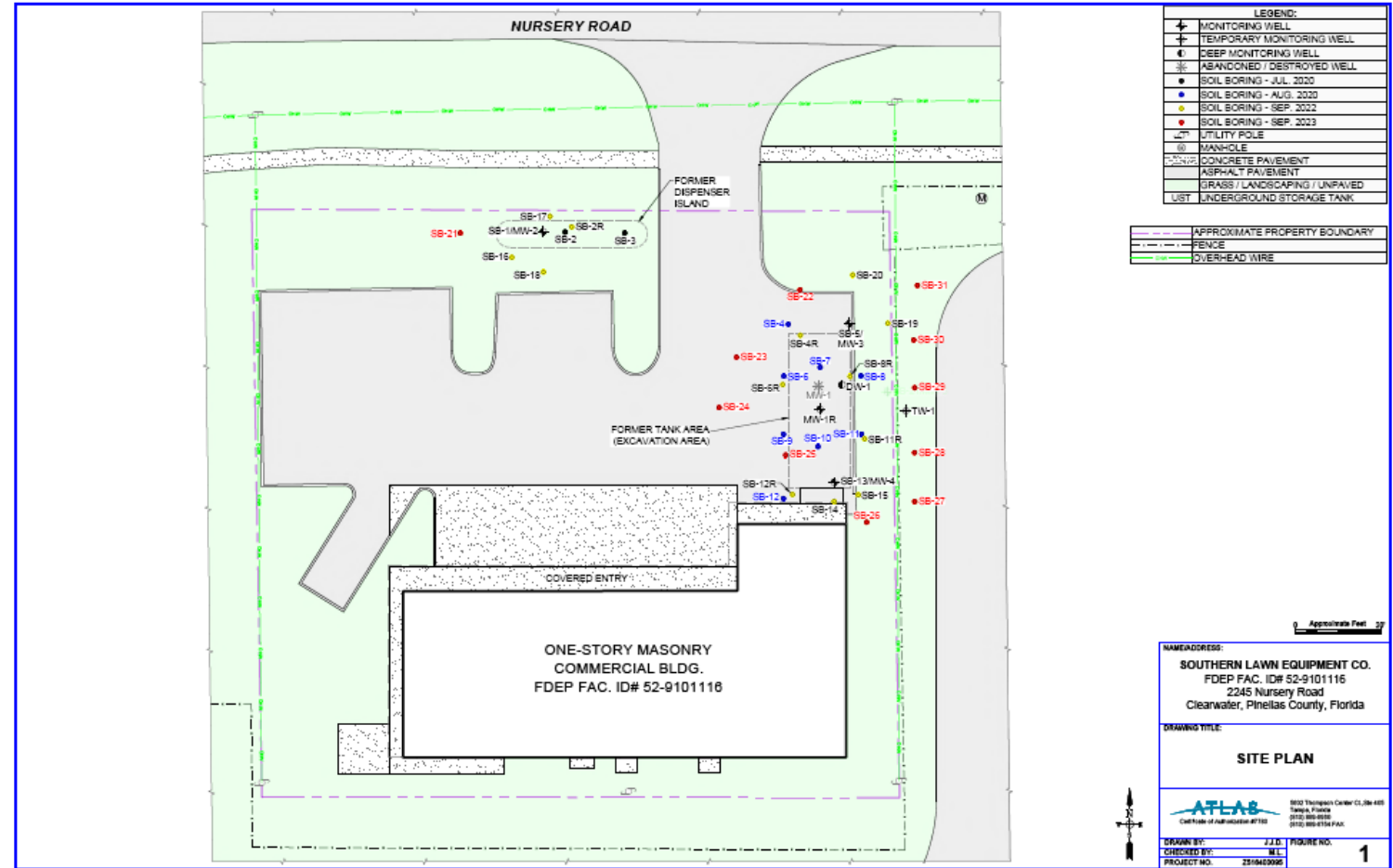
CHEVRON-EAU GALLIE
FDEP FACILITY NO. 05-8501352
191 E. EAU GALLIE CSWY, INDIAN HARBOR BEACH, FL

DATE OF DRAWING 9-25-23
MICHAEL H. STILLINGER P.E. # 47011
IMPERIAL C. of A. LICENSE # 2939

**SITE
LOCATION**
PROJ. NO. 9070E FIGURE NO. 1A

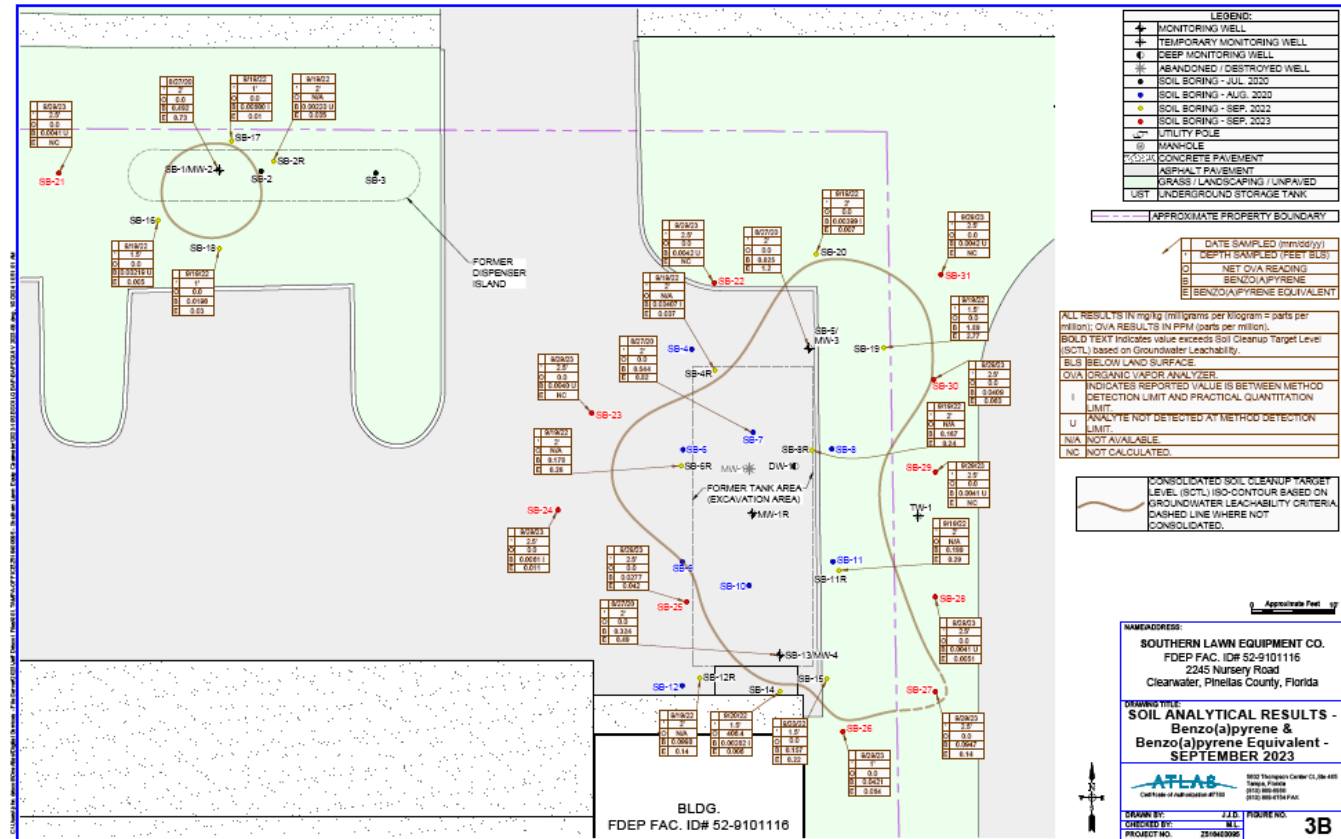
Site Plan

Depicting locations of all SBs, CWs, and MWs in relation to former and current tanks areas, integral piping and dispensers, buildings, land cover, sidewalks, utilities, and any public or private supply wells present onsite.



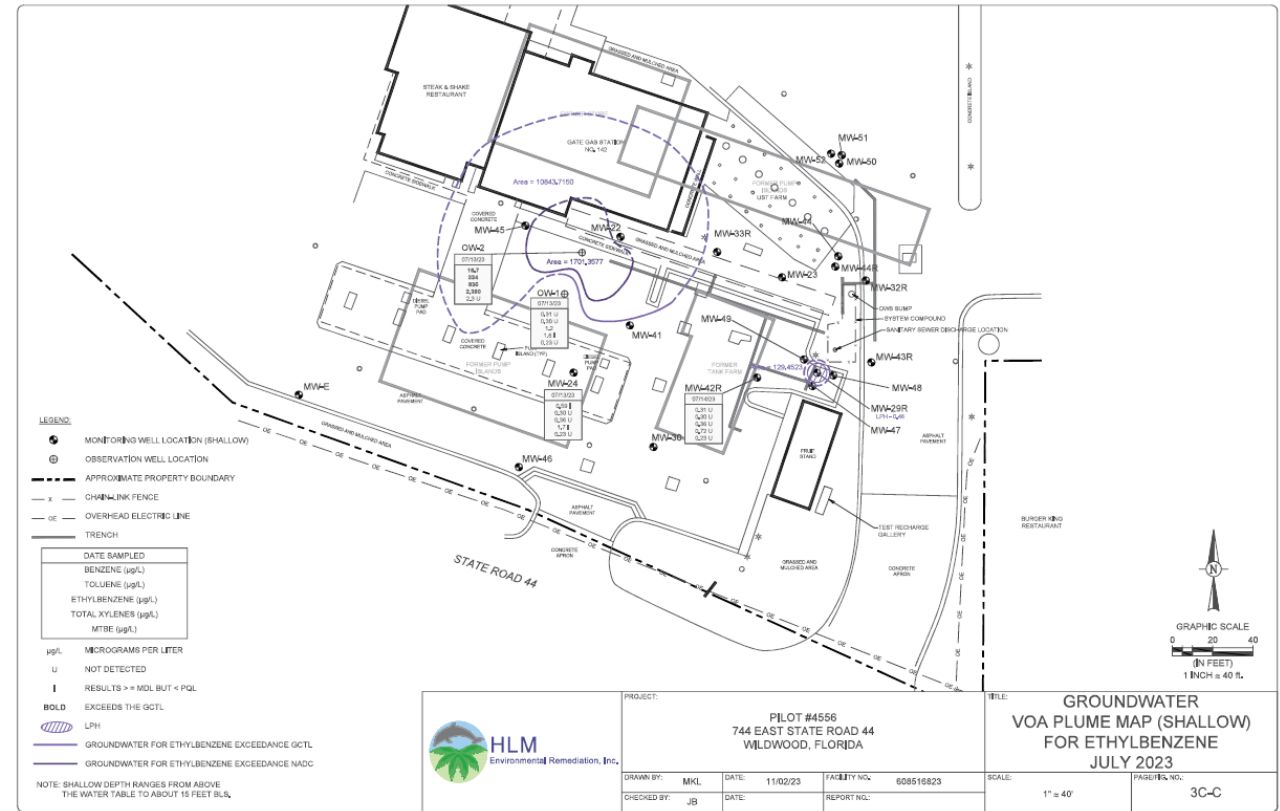
Soil Plume Map / Contamination Map

Showing extent of all contaminants of concern exceeding soil CTLs; illustrating the degree of soil contamination at each boring with sampling dates and analytical data.



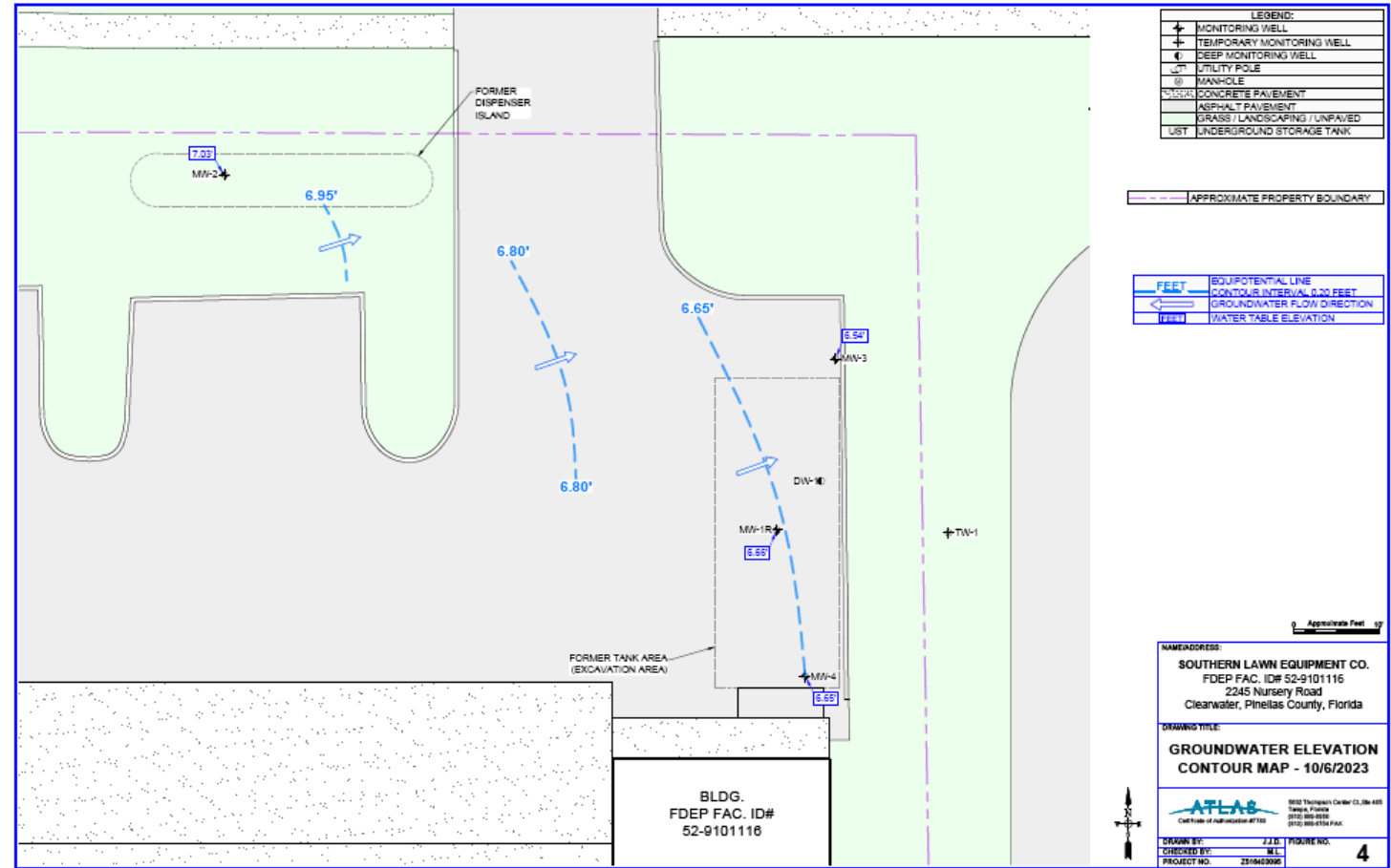
Plume Map / Contamination Map

Showing extent of all contaminants of concern exceeding groundwater CTLs and/or NADCs; illustrating the degree groundwater contamination at each well location with sampling dates and analytical data.



Groundwater Elevation Map

Groundwater elevations calculated for each MW, piezometer, and compliance well elevation contours and interpretation of groundwater flow direction.



FIELD NOTES



FIELD NOTES MUST INCLUDE:

- Daily Field Log.
- Boring Logs.
- Groundwater Sampling Logs.
- Calibration Logs.
- MW Construction & Development Logs.
- Documentation and Logs of any other field work performed.



DAILY FIELD LOG

Must comply with PRP Field Notes Guidance document dated 8/17/2017.

Facility Address → 2801 North Central Avenue Wednesday
 Date → Location St. Pete, Pinellas Co. FL Date 03/22/2023⁷⁷
 Facility Name → Project / Client Stop N Shop (pg. 1 of 1)
 Purpose of Field Event → Monthly O&M → 67° Sunny
 Temperature & Weather Conditions →
 Facility ID → FDEP Facility ID #: 5218515629
 P.O. Number → FDEP PO #: C04694 - Task # 4
 Arrival Time → HCR Project #: 129191.05.31
 Names of all personnel onsite → 0915: [redacted] [redacted] w/ vehicle
 (missing: abbreviation of applicable labor category, ULT added)

Nissan Titan (#1010). [redacted] greeted store manager upon arrival.

No blank lines between entries
 any blank area are lined through
 References beginning of activity
 Cross-reference using other Forms to collect data

10:10 Calibrate equip. (See separate Cal log).
 10:20 **EST** Begin O&M Data Readings.
 Equipment: PID Ion Science Tiger, VSI Pro 2030
 Do meter, Water level Indicator.
 10:40 Open all wells.
 10:45 Start well data readings. Note: All well data readings on separate logs. Sent to PM for "if needed" adjustments.
 12:50 As per PM, no adjustments necessary.
 12:55 End well data readings. Post Calibrate.
 13:00 Clean up site. Hr. Readings upon departure:
 SVE: 17971.7 ms pump: 0.6 (off) sparge: 17335.0
 13:10 HCR offsite. Mob back to Tampa office.
KT

Military Time or a.m./p.m.
 (Missing: Standard Time Zone: EST added)

Documentation of all significant activities

Departure Time
 any blank area not utilized by the end of the day must be lined though and initialized. Missing: Initials (added)

Signature of Person maintaining logbook.
 → *Kyle J. J...*
 3/22/23

BORING LOG

Check borehole diameter and borehole depth must match invoiced amount on Invoice Rate Sheet.

BORING LOG

Boring/Well Number: B-2		Permit Number:		FDEP Facility ID No.: 42-6735706							
Site Name: Automotive Fluid Recycling, LLC		Borehole Start Date: 9-6-2010		Borehole Start Time: 0935 AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>							
		End Date: 9-6-2010		End Time: 1015 AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>							
Environmental Contractor: Streamline Environmental, Inc.		Geologist's Name: Melissa M. Del Mastro		Environmental Technician's Name: Austen Everett							
Drilling Company: Preferred Drilling Solutions		Pavement Thickness (inches): NA - unpaved		Borehole Diameter (inches): 6"							
				Borehole Depth (feet): 32'							
Drilling Method(s): H S A		Apparent Borehole DTW (in feet from soil moisture content): 28'		Measured Well DTW (in feet after water recharges in well): NA							
				OVA (list model and check type): Mini/Rae 2000 <input type="checkbox"/> FID <input type="checkbox"/> PID <input checked="" type="checkbox"/>							
Disposition of Drill Cuttings (check method(s)): (describe if other or multiple items are checked):											
<input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input checked="" type="checkbox"/> Stockpile <input type="checkbox"/> Other											
Borehole Completion (check one): <input type="checkbox"/> Well <input checked="" type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)											
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
HA PH	0-1	NA	NA	-	-	0.0	1	BRN - SF F-M SAND NO OPEN	SP	D	
HA PH	1-2	NA	NA	-	-	0.0	2	BRN - SF SS F-M SAND NO OPEN	SP	D	
HA PH	2-3	NA	NA	-	-	0.0	3	SAME NO OPEN	SP	D	
HA PH	3-4	NA	NA	-	-	0.0	4	SAME NO OPEN	SP	D	
							5				
SS	4-6	24/24	24/24			799	6	4-5 = BRN - SF SAND - petrol stain 5-6 = BRN + Gray mottled clay wet - perched aquifer	SH CL	W	
SS							7				
SS	6-8	15/24	4/4 7/12			1150	8	BRN + OR - mottled hard clay Moderate open	CL	M W	
SS							9				
SS	8-10	24/24	10/12 14/16			1200	10	BRN + Gray - mottled clay hard - Moderate open	CL	D	LAB Sample @ 10'
SS							11				
SS	10-12	27/27	7/11 9/9			1027	12	SAME Mod open	CO	D	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings / Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

GROUNDWATER SAMPLING LOG

Check Screen interval, Well Volume Purge calculation, tubing depth, Stabilization parameter readings; must match of wells sampled on Invoice Rate Sheet.

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

NAME: Stone Trust / FDEP FAC ID: 52/9103178				SITE LOCATION: 15701 US Highway 19 N, Largo, FL							
WELL NO: MW-14		SAMPLE ID: MW-14		DATE: 8/1/23							
PURGING DATA											
WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DPTH: 2 ft to 12 ft	STATIC DEPTH TO WATER (feet): 4.20	PURGE PUMP TYPE OR BAILER: PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (12 feet - 4.20 feet) X 0.16 gallons/foot = 1.248 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6	PURGING INITIATED AT: 1244	PURGING ENDED AT: 1301	TOTAL VOLUME PURGED (gallons): 1.70							
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 $\mu\text{mS/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1257	1.30	1.30	0.10	5.30	6.92	29.0	1221	0.31	4.33	Clear	None
1259	0.20	1.50	0.10	5.33	6.92	28.9	1218	0.30	2.98		
1301	0.20	1.70	0.10	5.35	6.92	28.8	1211	0.30	4.04	↓	↓
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" = 0.0028; 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: W&AR William Ruane				SAMPLER(S) SIGNATURE(S): <i>William Ruane</i>		SAMPLING INITIATED AT: 1302		SAMPLING ENDED AT: 1305			
PUMP OR TUBING DEPTH IN WELL (feet): 6		TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>		FILTER SIZE: μm					
FIELD DECONTAMINATION: PUMP Y <input type="radio"/> N <input checked="" type="radio"/>		TUBING Y <input type="radio"/> N (replaced) <input checked="" type="radio"/>		DUPLICATE: Y <input type="radio"/> N <input checked="" type="radio"/>							
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-14	3	CG	40mL	HCl/4C	-	<2	BTEX + MTBE	APP	108		
MW-14	1	AG	250 mL	H2SO4	-	<2	PAH & TRPH	APP	370		
MW-14	1	PP	250 mL	HNO3	-	<2	Lead (Pb)	APP	370		
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; RFP = 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: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

CALIBRATION LOG GUIDANCE

FIELD INSTRUMENT CALIBRATION RECORDS - EXAMPLE CALIBRATION LOG – PRP

Guidance for Completing the Field Instrument Calibration Log for FT 1000 of DEP-SOP-001/01

TERMS:

- Calibration (CAL)
 - Performed as needed depending on parameter and results of ICV or CCV.
 - Performed in "CAL" mode.
- Initial Calibration Verification (ICV)
 - Performed after equipment calibration.
 - Performed at start of sampling event.
 - Performed only in "RUN" or "READ" mode.
- Continuing Calibration Verification (CCV)
 - Performed during or at the end of a sampling event.
 - Performed only in "RUN" or "READ" mode.

SEQUENCE:

1. Calibrate equipment if required (CAL-mode) and document on calibration log.
2. Perform ICVs (Read-mode), check acceptance criteria, and document on calibration log.
3. Conduct sampling event.
4. Perform CCVs (Read-mode), check acceptance criteria, and document on calibration log.

All field measurements shall be **chronologically** bracketed by an Initial Calibration Verification (ICV) and a Continuing Calibration Verification (CCV).

- The instrument should *not* be calibrated between an ICV and CCV.
- A calibration should *not* be performed in place of a CCV.

Per the SOPs, field measurements for turbidity, pH, and OVA shall also be **quantitatively** bracketed by ICVs and also subsequently by CCVs. For quantitative bracket requirements for specific conductance, see DEP-SOP-001/01, FT 1200 Field Measurement of Specific Conductance, section 3.

IF AN ICV RESPONSE FAILS ACCEPTANCE CRITERIA:

If an ICV response fails acceptance criteria, rinse the probe, reattempt calibration, and perform ICV. If second or third attempts at verification also fail, it is recommended to place the probe out-of-service. Extra calibration sheet(s) may be necessary to accommodate documentation.

IF A CCV RESPONSE FAILS ACCEPTANCE CRITERIA:

If a CCV response fails acceptance criteria, rinse the probe and reattempt the **verification** (i.e. *not* calibration). If the second attempt at verification also fails:

- Document both attempts on the applicable rows of the calibration form for the CCVs; and,
- Mark an "X" in the box at the top of the form indicating qualified data.

If additional sampling is to be conducted following the failed CCV, recalibrate the instrument followed by ICV. Extra calibration sheet(s) may be necessary to accommodate documentation.

REFERENCES:

The form uses the calibration acceptance criteria documented in DEP SOP FT 1100 (pH), FT 1200 (Specific Conductance), FT 1500 (Dissolved Oxygen), and FT 1600 (Turbidity). The calibration acceptance criteria for OVA and ORP instruments are based on the EPA guidance document, *Portable Instruments User's Manual For Monitoring VOC Sources*, EPA-340/1-86-015, June 1986, and the EPA Region 4, Operating Procedure, *Field Measurement of Oxidation-Reduction Potential (ORP)* (<https://www.epa.gov/quality/field-measurement-oxidation-reduction-potential>), respectively.

Guidance and trainings are not a substitute for reading and following the SOPs. The SOPs are available at the following website: <https://floridadep.gov/dear/quality-assurance/content/dep-sops>; and, useful trainings provided by AEQAS are available at the following website: <https://floridadep.gov/dear/quality-assurance/content/training-presentations>

CALIBRATION LOG (CHECK MATH)

FIELD INSTRUMENT CALIBRATION RECORDS - EXAMPLE CALIBRATION LOG - PRP

Project Site/FacID: Stone Trust / 5219103178

Calibrated by (Print)/Affiliation: William Rouse / Water & Air

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

Temperature (Quarterly) _____ Date of Last Temp Verification: 7/11/23 See log book: _____

DISSOLVED OXYGEN (DO) (REFERENCE: DEP SOP FT 1500) **Acceptance Criteria +/-0.3 mg DO/L**

Meter/Instrument Name and Unique ID: YSI-1

Initials	Date	Time	Standard (DO %)	Temp °C	Saturation mg/L (100%)	Response DO (%)	Deviation mg DO/L	Deviation mg DO/L	Pass or Fail
CAL ICV CCV <u>WR</u>	<u>8/1/23</u>	<u>751</u>	<u>100%</u>	<u>23.7</u>	<u>8.47</u>	<u>100.0</u>	<u>8.466</u>	<u>20.3</u>	F
CAL ICV CCV <u>↓</u>	<u>8/1/23</u>	<u>753</u>	<u>100%</u>	<u>23.7</u>	<u>8.48</u>	<u>100.1</u>	<u>8.466</u>	<u>20.3</u>	F
CAL ICV CCV <u>WR</u>	<u>8/1/23</u>	<u>1650</u>	<u>100%</u>	<u>24.9</u>	<u>8.39</u>	<u>101.4</u>	<u>8.279</u>	<u>20.3</u>	F
CAL ICV CCV _____	_____	_____	<u>100%</u>	_____	_____	_____	_____	_____	P F
CAL ICV CCV _____	_____	_____	<u>100%</u>	_____	_____	_____	_____	_____	P F
CAL ICV CCV _____	_____	_____	<u>100%</u>	_____	_____	_____	_____	_____	P F

See Table FT 1500-1 and/or Table FS 2200-2 for Dissolved Oxygen Saturation corresponding to Temperature.

WELL CONSTRUCTION & DEVELOPMENT LOG

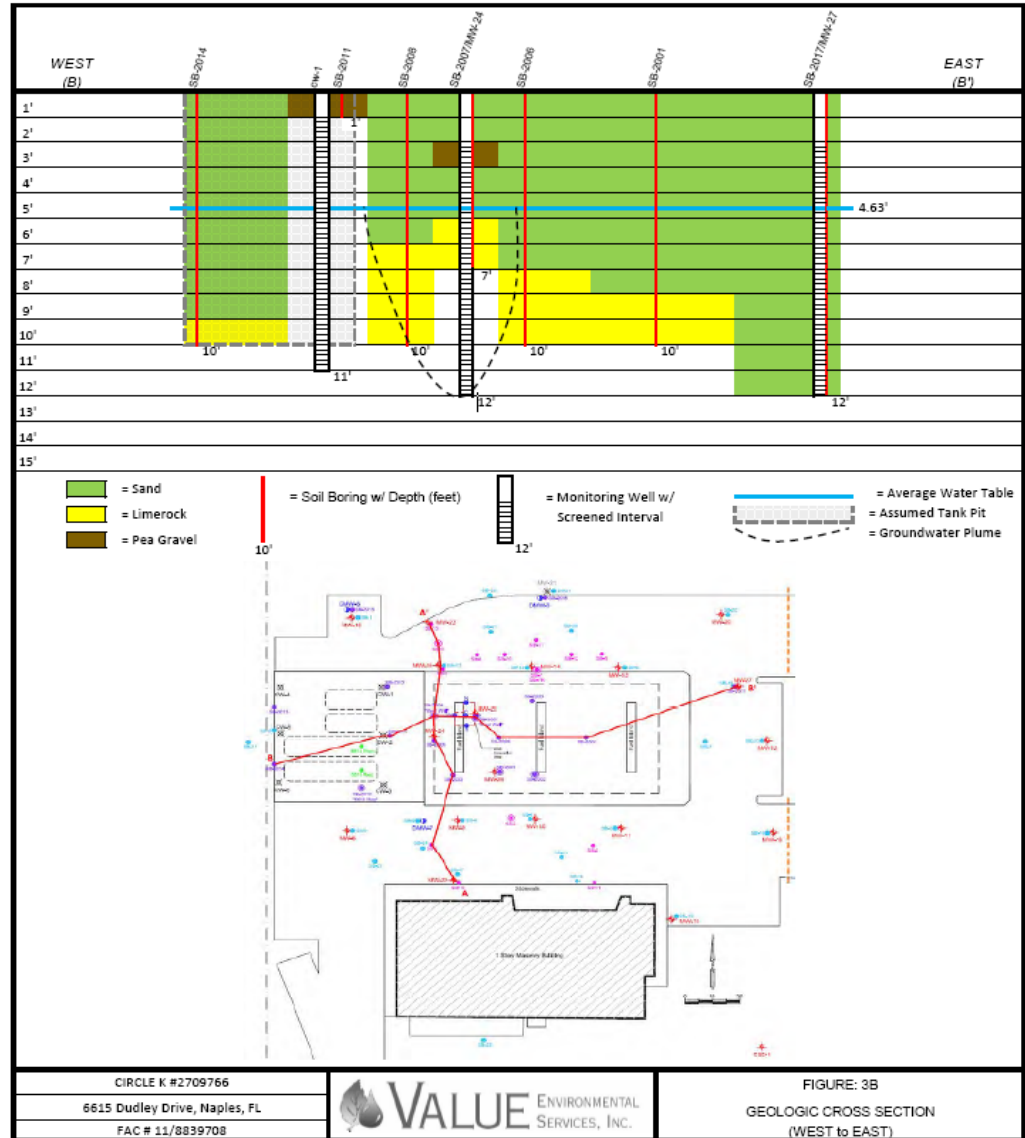
WELL CONSTRUCTION AND DEVELOPMENT LOG

Borehole/Well Depth/Diameter, Install Method, Diameter, and Surface Casing Diameter, Depth/Install Method must match Invoice Rate Sheet.

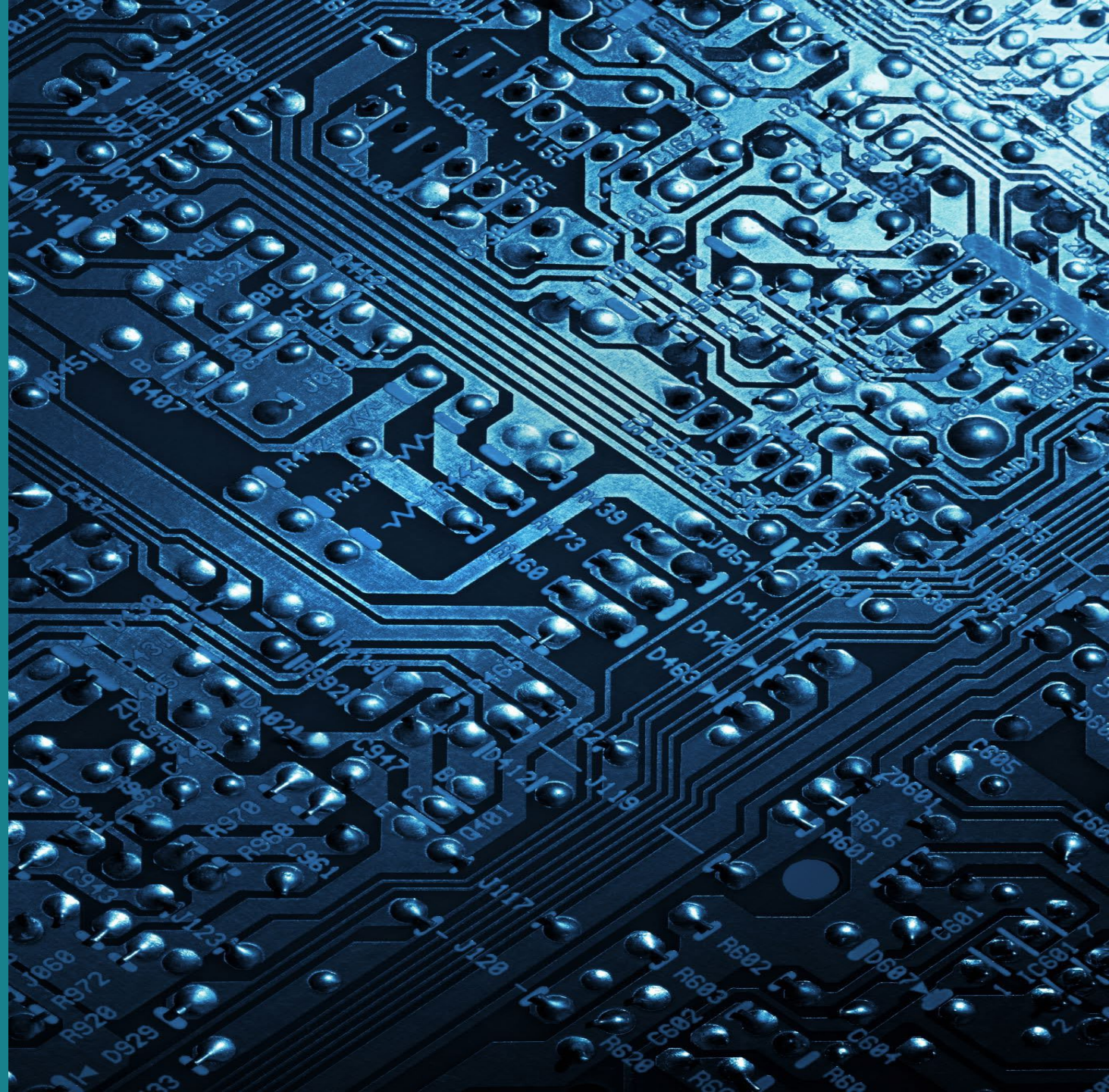
WELL CONSTRUCTION DATA			
Well Number: MW-28	Site Name: CIRCLE K #2709766	FDEP Facility ID Number: 11/8839708	Well Install Date(s): 4/5/2021
Well Location and Type (check appropriate boxes): <input checked="" type="checkbox"/> On-Site <input type="checkbox"/> Right-of-Way <input type="checkbox"/> Off-Site Private Property <input type="checkbox"/> Above Grade (AG) <input checked="" type="checkbox"/> Flush-to-Grade		Well Purpose: <input type="checkbox"/> Potholed Monitoring <input checked="" type="checkbox"/> Shallow (Water-Table) Monitoring <input type="checkbox"/> Intermediate or Deep Monitoring <input type="checkbox"/> Remediation or Other (describe)	Well Install Method: HSA: Surface Casing Install Method: N/A
IFAC, list feet of riser above land surface: N/A			
Borehole Depth (feet): 12	Well Depth (feet): 12	Borehole Diameter (inches): 8.25	Manhole Diameter (inches): 8
Well Pad Size: 2 feet by 2 feet		Riser Diameter and Material: 2" SCH 40 PVC	
Riser/Screen Connections: <input checked="" type="checkbox"/> Flush-Threaded <input type="checkbox"/> Other (describe)		Riser Length: 2 feet from 0 feet to 2 feet	
Screen Diameter and Material: 2" SCH 40 PVC		Screen Slot Size: 0.010"	
Screen Length: 10 feet from 2 feet to 12 feet		1 st Surface Casing Material: N/A also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary	
1 st Surface Casing I.D. (inches): N/A		1 st Surface Casing Length: N/A feet from N/A feet to N/A feet	
2 nd Surface Casing Material: N/A also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		2 nd Surface Casing I.D. (inches): N/A	
2 nd Surface Casing Length: N/A feet from N/A feet to N/A feet		3 rd Surface Casing Material: N/A also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary	
3 rd Surface Casing I.D. (inches): N/A		3 rd Surface Casing Length: N/A feet from N/A feet to N/A feet	
Filter Pack Material and Size: 20/30 silica	Prepacked Filter Around Screen (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Filter Pack Length: 11 feet from 1 feet to 12 feet
Filter Pack Seal Material and Size:	30/65 Silica		Filter Pack Seal Length: 0.5 feet from 0.5 feet to 1 feet
Surface Seal Material: Cement Grout			Surface Seal Length: 0.3 feet from 0.2 feet to 0.5 feet
WELL DEVELOPMENT DATA			
Well Development Date: 04/05/21	Well Development Method (check one): <input checked="" type="checkbox"/> Surge/Pump <input type="checkbox"/> Pump <input type="checkbox"/> Compressed Air <input type="checkbox"/> Other (describe)		
Development Pump Type (check): <input type="checkbox"/> Submersible <input checked="" type="checkbox"/> Centrifugal <input type="checkbox"/> Peristaltic	Depth to Groundwater (before developing in feet): 6.00		
Pumping Rate (gallons per minute): 0.5	Maximum Drawdown of Groundwater During Development (feet): 2.15	Well Purged Dry (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pumping Condition: <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	Total Development Water Removed (gallons): -15	Development Duration (minutes): 30	Development Water Drummed (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Appearance (color and odor) At Start of Development: CLOUDY BROWN, NO ODOR		Water Appearance (color and odor) At End of Development: CLEAR, NO ODOR	
WELL CONSTRUCTION OR DEVELOPMENT REMARKS			

LITHOLOGIC CROSS SECTION

Sample locations, check boring logs for lithology, vertical & horizontal scale depth.



ADaPT

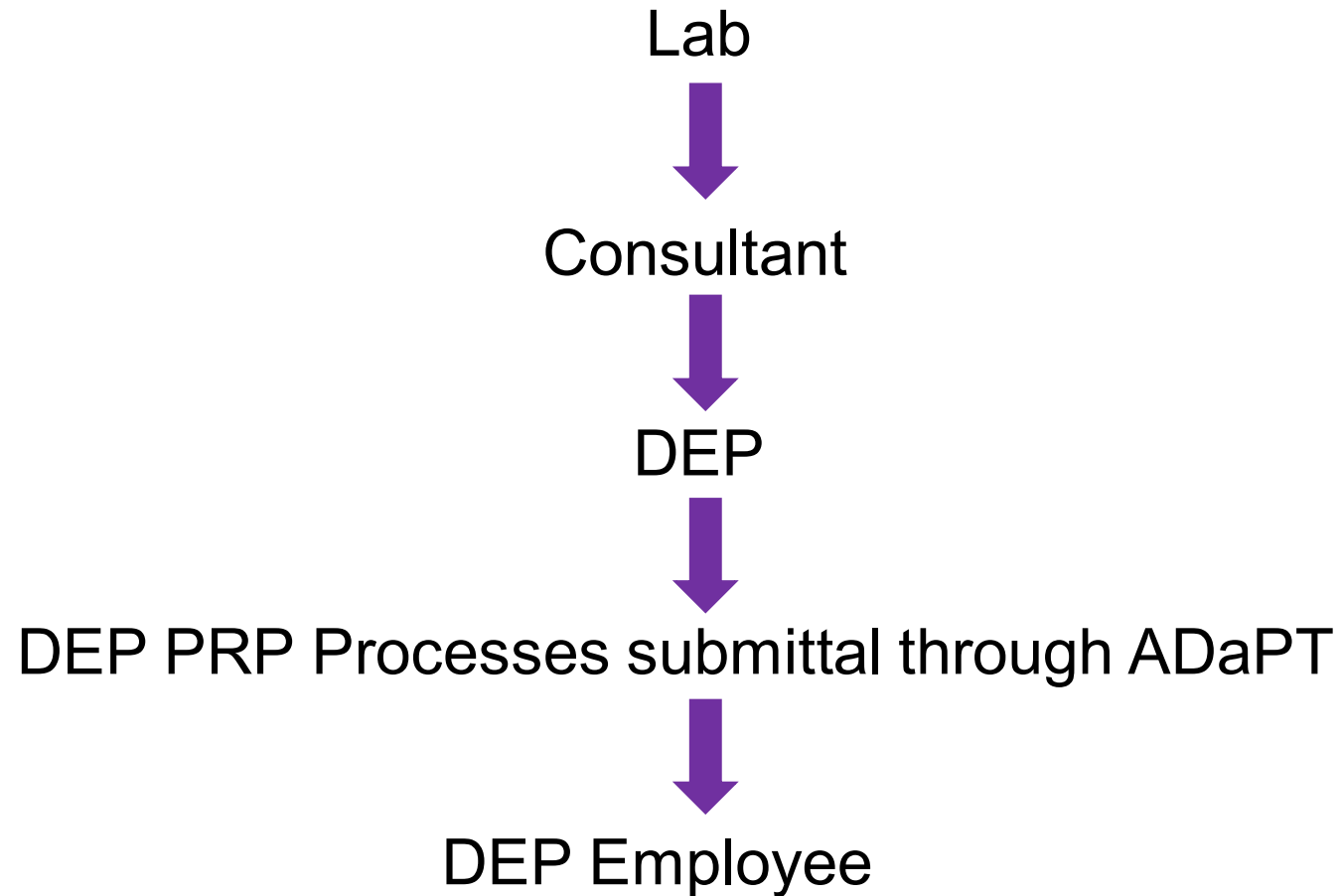


WHAT IS ADaPT:

ADaPT is a Microsoft Access application used by the Division of Waste Management (DWM) to evaluate analytical chemistry data from water, soil and air samples. It checks for the completeness of data using method specific Quality Control (QC) elements specified in the DWM library, and then further evaluates the data. For example, ADaPT evaluates all QC data reporting, all QC that falls outside specific QC limits, and compares all lab quality control accuracy and precision information reported in the Electronic Data Deliverable (EDD) against the criteria established in the DWM library. Further, it evaluates holding times and looks for contamination in the samples collected for field, equipment and trip blanks.

If QC problems (outliers) exist, and the laboratory has not assigned or has incorrectly assigned the appropriate qualifiers, then ADaPT will add the necessary qualifiers to the associated sample results.

ADaPT PROCESS



ADaPT – FDEP SITE MANAGER RECEIVES EMAIL FROM OTIS USER



Caution: This is an external email and may be malicious. Please take care when clicking links or opening attachments.

* An Electronic Data Deliverable (EDD) has been received by FDEP
* and loaded into REDD - Repository for Electronic Data Deliverables.
*
* Data is now available for analysis and reporting
* or for upload to the program specific destination.

PRODUCTION Repository Load

Program Area: PRP

Email Contact: casey.lax@floridadep.gov

Lab EDD File: 8516823_20231016_PRlidd.txt

Field EDD File: 8516823_20231016_PRfdd.txt

Use 3 Links


Oculus Document Link for ADaPT EDD(single ZIP file): [https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdepdms.dep.state.fl.us%2FOculus%2Fservlet%2Fshell%3Fcommand%3DgetEntity%26%26data=05%7C01%7Ccmdelmasto%40northstar.com%7Cae0addb850fd45a4327008dbdcf8bdb3%7C36226acbbe984ea0aa7d700781c294a9%7C1%7C0%7C638346733156522256%7CUnknown%7CTWFpbGZsb3d8eyJWljoimC4wLjAwMDAilCjQjoiV2luMzliLjBtIl6k1haWwiLjXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=J3mRSiD9e33qmX5XOi4AzCp03uN9W9GeD%2FvYLCpbyl8%3D&reserved=0\[guid=11.4662372.1\]](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdepdms.dep.state.fl.us%2FOculus%2Fservlet%2Fshell%3Fcommand%3DgetEntity%26%26data=05%7C01%7Ccmdelmasto%40northstar.com%7Cae0addb850fd45a4327008dbdcf8bdb3%7C36226acbbe984ea0aa7d700781c294a9%7C1%7C0%7C638346733156522256%7CUnknown%7CTWFpbGZsb3d8eyJWljoimC4wLjAwMDAilCjQjoiV2luMzliLjBtIl6k1haWwiLjXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=J3mRSiD9e33qmX5XOi4AzCp03uN9W9GeD%2FvYLCpbyl8%3D&reserved=0[guid=11.4662372.1])

Click on the above link to download a ZIP file of the ADaPT lab EDD, lab EDD error log and field EDDs.

CTL Exceedance PHP Report: https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fprodapps.dep.state.fl.us%2Fredd%2FReports%2FCompliance_Report%2FCompliance%2FPRP%2F8516823%2F10%2F2023&data=05%7C01%7Ccmdelmasto%40northstar.com%7Cae0addb850fd45a4327008dbdcf8bdb3%7C36226acbbe984ea0aa7d700781c294a9%7C1%7C0%7C638346733156522256%7CUnknown%7CTWFpbGZsb3d8eyJWljoimC4wLjAwMDAilCjQjoiV2luMzliLjBtIl6k1haWwiLjXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=Slbl%2F6bXEY0iighnZp6IPdZSc5ZywcD0230Rqcc41ng%3D&reserved=0

Data Summary PHP Report: https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fprodapps.dep.state.fl.us%2Fredd%2FReports%2FCompleteness_Report%2FCompleteness%2FPRP%2F8516823%2F10%2F2023&data=05%7C01%7Ccmdelmasto%40northstar.com%7Cae0addb850fd45a4327008dbdcf8bdb3%7C36226acbbe984ea0aa7d700781c294a9%7C1%7C0%7C638346733156522256%7CUnknown%7CTWFpbGZsb3d8eyJWljoimC4wLjAwMDAilCjQjoiV2luMzliLjBtIl6k1haWwiLjXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=RzuKS0uvXe7AO9gSlucVZ4pJcD%2BGuDMWAYu%2FhaW42AY%3D&reserved=0

ADaPT – FDEP SITE MANAGER

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File Type	Profile	Facility-Site ID	Document Date	Received Date	Document Type	Document Subject	County	Facility Type
	Cleanup_Remediation	8509977	01-31-2024	01-31-2024	REVIEW COMMENTS	TASK 4 - RAIR - TA#731-003F	LAKE	STCM FACILITY
	Discovery_Compliance	8509977	01-29-2024	01-29-2024	INSPECTION RELATED	ATTACHMENT - 2024/01/29, E-MAI	LAKE	STCM FACILITY
	Cleanup_Remediation	8509977	01-17-2024	01-17-2024	LAB ANALYTICAL REPORTS	8509977_20231208_PR_REDD_UPLOA	LAKE	RETAIL STATION
	Cleanup_Remediation	8509977	01-16-2024	01-16-2024	SITE ASSESSMENT RELATED	TASK 4 - RAIR - PO#COC890	LAKE	STCM FACILITY
	Administrative	8509977	12-29-2023	12-29-2023	FIELD WORK NOTIFICATION	TASK 2 - FIELD WORK NOTIFICATI	LAKE	STCM FACILITY
	Cleanup_Remediation	8509977	12-08-2023	01-16-2024	OUTGOING CORRESPONDENCE	ELECTRONIC DATA DELIVERABLE SU	LAKE	STCM FACILITY
	Cleanup_Remediation	8509977	12-08-2023	01-16-2024	LAB ANALYTICAL REPORTS	ZIPPED ADAPT FILE - 8509977_12	LAKE	STCM FACILITY
	Fiscal	8509977	10-17-2023	10-17-2023	WORK ORDER - TASK ASSIGNMENT R	CHANGE ORDER 6 - PO COC890	LAKE	STCM FACILITY
	Fiscal	8509977	08-01-2023	08-01-2023	WORK ORDER - TASK ASSIGNMENT R	CHANGE ORDER 5 - PO COC890	LAKE	STCM FACILITY
	Fiscal	8509977	07-26-2023	07-26-2023	WORK ORDER - TASK ASSIGNMENT R	CHANGE ORDER 4 - PO COC890	LAKE	STCM FACILITY

ADaPT – FDEP SITE MANAGER



CTL EXCEEDANCE REPORT

REDD

Repository for Electronic Data Deliverables

Home

Facility: 8516823

Facility Name: PILOT #4556

Report Date: 10/2023

Completeness

x Export

This report indicates potential exceedances, any interpretation of this data should be performed by someone experienced in water quality data evaluation. This report assumes a criteria based on Chapter 62-777, F.A.C., values and does not consider the effect of background levels at a site or the data qualifiers.

Testsite Name: IW-4

Sample Date: 10/16/2023

Sample Time: 13:43

Report Type: SEMGW

ANALYTE ID	ANALYTE NAME	DISSOLVED	RESULTS	QUALIFIER	FDEP QUALIFIER	UNITS	REG LEVEL	REG LEVEL SOURCE	REG UNIT	UNIT MATCH	EXCEEDANCE FACTOR	TARGET PQL	PARAMETER COMMENTS
53703	Dibenzo(a,h)anthracene		0.032	U		ug/l	0.005	Groundwater Criteria, Table I (04/17/2005)	ug/L	MATCH	6.4	0.2	
1634044	Methyl-t-butyl ether		27			ug/l	20	Groundwater Criteria, Table I (04/17/2005)	ug/L	MATCH	1.35		

ADaPT – FDEP SITE MANAGER



DATA SUMMARY REPORT

REDD

Repository for Electronic Data Deliverables

Home

Facility: 8516823
 Facility Name: PILOT #4556
 Report Date: 10/2023
 Report Type: SEMGW

Compliance

Export

ANALYTICAL METHOD	ANALYTE ID	TESTSITE NAME	MATRIX	UNITS	IW-4	IW-42	IW-44	IW-45	IW-46	MW-33R	MW-42R	MW-47	MW-48	MW-49	MW-50	MW-51	MW-52
					10/16/2023	10/13/2023	10/16/2023	10/16/2023	10/16/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/16/2023	10/16/2023	10/16/2023
SAMPLE DATE	ANALYTE NAME	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
EPA 8270	90120	1-METHYLNAPHTHALENE	W	UG/L	1.3	0.31 U	3.8	2.4	1.5	1.8	0.32 U	29.6	9.2	37.4	9.5	0.6 I	1.2
EPA 8270	91576	2-METHYLNAPHTHALENE	W	UG/L	1.4	0.31 U	3.6	2.5	1.5	2.2	0.32 U	32.3	3	41.4	9.1	0.33 U	0.33 U
EPA 8270	83329	ACENAPHTHENE	W	UG/L	0.34 I	0.31 U	0.33 U	0.33 U	0.32 U	1.4	0.32 U	4.9	2.1	2 I	1.3 U	0.33 U	0.33 U
EPA 8270	208968	ACENAPHTHYLENE	W	UG/L	0.32 U	0.31 U	0.33 U	0.33 U	0.32 U	0.31 U	0.32 U	2.3	0.36 I	1.2 U	1.3 U	0.33 U	0.33 U
EPA 8270	120127	ANTHRACENE	W	UG/L	0.2 U	0.19 U	0.21 U	0.21 U	0.2 U	0.62 I	0.2 U	21.4 L	0.19 U	0.77 U	0.8 U	0.21 U	0.21 U
EPA 8260	71432	BENZENE	W	UG/L	0.31 U	0.31 U	0.31 U	0.31 U	2.1	3.5	0.31 U	15.2	12.3	4.2	5.7	1.2	1.3
EPA 8270	56553	BENZO(A)ANTHRACENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.033 I	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	50328	BENZO(A)PYRENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.043 I	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	205992	BENZO(B)FLUORANTHENE	W	UG/L	0.04 I	0.044 I	0.033 U	0.033 U	0.032 U	0.031 U	0.085	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	191242	BENZO(G,H,I)PERYLENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.043 I	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	207089	BENZO(K)FLUORANTHENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.033 I	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	218019	CHRYSENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.064 I	1.2	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8270	53703	DIBENZO(A,H)ANTHRACENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.032 U	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8260	100414	ETHYLBENZENE	W	UG/L	0.36 U	0.36 U	0.45 I	0.36 U	0.36 U	0.61 I	0.36 U	15.2	21.9	9	3.7	0.36 U	0.36 U
EPA 8270	206440	FLUORANTHENE	W	UG/L	0.2 U	0.19 U	0.21 U	0.21 U	0.2 U	0.19 U	0.2 U	4	0.21 I	0.77 U	0.8 U	0.21 U	0.21 U
EPA 8270	86737	FLUORENE	W	UG/L	0.23 I	0.19 U	0.3 I	0.21 U	0.2 U	1.3	0.2 U	5.7	1.5	2.2 I	0.99 I	0.21 U	0.23 I
EPA 8270	193395	INDENO(1,2,3-CD)PYRENE	W	UG/L	0.032 U	0.031 U	0.033 U	0.033 U	0.032 U	0.031 U	0.047 I	0.031 U	0.031 U	0.12 U	0.13 U	0.033 U	0.033 U
EPA 8260	1634044	METHYL-T-BUTYL ETHER	W	UG/L	27	0.23 U	2.6	2.3	7.2	0.85 I	0.23 U	0.44 I	0.23 U	0.63 I	7.6	2.4	4.3
EPA 8270	91203	NAPHTHALENE	W	UG/L	1.1	0.31 U	4.8	2.2	1.3	2.1	0.32 U	40.2	15.8	39.2	16.5	3.4	5
EPA 8270	85018	PHENANTHRENE	W	UG/L	0.2 U	0.19 U	0.21 U	0.21 U	0.2 U	0.75 I	0.2 U	2.6 I	0.19 U	2.1 I	0.8 U	0.21 U	0.21 U
EPA 8270	129000	PYRENE	W	UG/L	0.2 U	0.19 U	0.21 U	0.21 U	0.2 U	0.19 U	0.2 U	11.9	0.19 U	0.77 U	0.8 U	0.21 U	0.21 U
EPA 8260	108883	TOLUENE	W	UG/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.48 I	0.6 I	0.3 U	0.3 U	0.3 U	0.3 U
FDEP FL-PRO	1935	TOTAL RECOVERABLE PET. HYDROCARBONS	W	MG/L	1.4	3.79	0.326	0.275	0.337		0.319	13	14.9	0.459	2.38	1.03	3.12

ADaPT – FDEP Site Manager Review

ADaPT indicates of additional Qualifiers should have been reported.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
	Facility_ID	Facility_Name	TestSite_Name	Well_Purpose	Sample_ID	Sample_Date	Sample_Method	Sample_Filtered	Matrix	STORET_Code	Parameter	Lab_Cert_Numb	Prep_Date	Prep_Method	Presrv_Intact	Analysis_Date	Analysis_Method	Result	Units	Qualifier	Detection_Limit	Comments	Report_Type	Rev	Program_Area	Client_Analyte_ID	Error	Dilution
2	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	1002	Arsenic	E84589	#####	3010	Y	8/17/2023 14:33	EPA 6010	8	ug/L	U	8		SEMGW		PRP	7440382		1
3	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	1027	Cadmium	E84589	#####	3010	Y	8/17/2023 14:33	EPA 6010	1	ug/L	U	1		SEMGW		PRP	7440439		1
4	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	1034	Chromium	E84589	#####	3010	Y	8/17/2023 14:33	EPA 6010	5	ug/L	U	5		SEMGW		PRP	7440473		1
5	8501352	DN-EAU	MW-3	Y	1585C	8/9/2023 11:15	PP	N	W	1051	Lead	E84589	#####	3010	Y	8/16/2023 11:40	EPA 6010	3	ug/L	U	3		SEMGW		PRP	7439921		1
6	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	1051	Lead	E84589	#####	3010	Y	8/17/2023 14:33	EPA 6010	3	ug/L	U	3		SEMGW		PRP	7439921		1
7	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	30204	4,6-Dinitro-2-methylphenol	E84589	#####	3510	Y	8/12/2023 5:36	EPA 8270	2.2	ug/L	U	2.2	ADaPT found the following outliers;ReasonCode(S)Surrrogate Recovery.	SEMGW	JU	PRP	534521		1
8	8501352	DN-EAU	MW-4	Y	1585C	8/9/2023 10:28	PP	N	W	31666	Recoverable Pet. Hydrocarbons	E84589	#####	FL-PRO	Y	8/16/2023 13:09	DEP FL-PRO	0.52	mg/L	U	0.52		SEMGW		PRP	1935		1
9	8501352	DN-EAU	MW-3	Y	1585C	8/9/2023 11:15	PP	N	W	31666	Total Recoverable Pet. Hydrocarbons	E84589	#####	FL-PRO	Y	8/15/2023 18:16	DEP FL-PRO	0.55	mg/L	U	0.55	ADaPT found the following outliers;ReasonCode(S)Surrrogate Recovery.	SEMGW	JU	PRP	1935		1
10	8501352	DN-EAU	MW-2	Y	1585C	8/9/2023 12:08	PP	N	W	31666	Total Recoverable Pet. Hydrocarbons	E84589	#####	FL-PRO	Y	8/15/2023 18:16	DEP FL-PRO	0.55	mg/L	U	0.55		SEMGW		PRP	1935		1
11	8501352	DN-EAU	MW-1	Y	1585C	8/9/2023 13:30	PP	N	W	31666	Total Recoverable Pet. Hydrocarbons	E84589	#####	FL-PRO	Y	8/15/2023 15:24	DEP FL-PRO	0.52	mg/L	U	0.52	Estimated Result	SEMGW		PRP	1935		1

Workorder: Chevron-Eau Gallie (T2315850)

Analytical Results

Parameter	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Lab
Aroclor 1016 (PCB-1016)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1221 (PCB-1221)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1232 (PCB-1232)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1242 (PCB-1242)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1248 (PCB-1248)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1254 (PCB-1254)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
Aroclor 1260 (PCB-1260)	0.14 U	ug/L	0.20	0.14	1	08/14/2023 10:00	08/16/2023 22:47	T
SEMIVOLATILES (SW-846 3510C/SW-846 8270C)								
2,6-Dinitrotoluene (2,6-DNT)	2.2 U	ug/l	5.0	2.2	1	08/11/2023 09:45	08/12/2023 05:36	T
2-Chloronaphthalene	4.0 U	ug/l	5.0	4.0	1	08/11/2023 09:45	08/12/2023 05:36	T
2-Chlorophenol	1.6 U	ug/l	5.0	1.6	1	08/11/2023 09:45	08/12/2023 05:36	T
2-Methyl-4,6-dinitrophenol	2.2 U	ug/L	5.0	2.2	1	08/11/2023 09:45	08/12/2023 05:36	T
2-Methylnaphthalene	0.0082 U	ug/L	0.050	0.0082	1	08/11/2023 09:45	08/12/2023 05:36	T
SEMIVOLATILES (FL-PRO)								
TPH	550 U	ug/L	650	550	1	08/15/2023 10:30	08/15/2023 18:16	T

"J" Qualifier Missing
as indicated in
ADaPT

LABORATORY REPORTS



REVIEWING LAB REPORTS

- Read Narrative.
- Review Results, Check for Qualifiers.
- Check Quality Control (QC) Summaries & Surrogate Reports (if any issues).
- Check Consultant Report Tables for analytical results and CTLs (use Chemical Abstracts Service (CAS) numbers if needed).
- Check the Contaminants of Concern (COC) (cooler temperature, correct samples collected & analysis, notes).

CASE NARRATIVE

“Story” of the Lab Report. Short statement that summarizes the report, any problems encountered, the date the samples were received, QA/QC problems, etc. Important because it helps identify a problem that could lead to limitations on the use of the data.

Example:

Comments

No additional comments.

Receipt

The samples were received on 1/13/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.6° C, 2.4° C and 2.5° C.

GC/MS VOA

Method(s) 8260B: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: (490-95719-B-4 MS) and (490-95719-C-4 MSD). The parent sample's surrogate recovery was within limits. LCS/LCSD was within limits. The MS/MSD sample has been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-313127, 313401.

Method(s) 8270D SIM: No laboratory control sample duplicate (LCSD) was prepared for preparation batch 490-313127. There was insufficient volume for the following sample to perform a sample re-extraction; therefore, the data has been reported: MW-A (490-95706-2).

Method(s) 8270D SIM: The following sample is reported without the required LCSD due to loss of sample during re-extract: MW-1 (490-95706-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NOTE: Not all laboratories include Narratives in their Reports.

REVIEWING LAB REPORTS



Pace Analytical Services, LLC
 3610 Park Central Blvd N
 Pompano Beach, FL 33064
 (954)582-4300

ANALYTICAL RESULTS

Project: 14985-AS03/-Eleven Store#300
 Pace Project No.: 35772742

Make sure units in Table match

Verify CAS # if needed

Sample: MW-D/U-14 Lab ID: 35772742004 Collected: 01/12/23 13:00 Received: 01/13/23 17:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
FL-PRO Water, Low Volume									
Analytical Method: FL-PRO Preparation Method: EPA 3510 Pace Analytical Services - Ormond Beach									
Petroleum Range Organics	0.80 I	mg/L	0.96	0.77	1	01/17/23 11:45	01/18/23 20:04		
Surrogates									
o-Terphenyl (S)	81	%	66-139		1	01/17/23 11:45	01/18/23 20:04	84-15-1	
N-Pentatriacontane (S)	68	%	42-159		1	01/17/23 11:45	01/18/23 20:04	630-07-09	
8270 MSSV PAHLV by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Pace Analytical Services - Ormond Beach									
Acenaphthene	0.14 I	ug/L	0.48	0.018	1	01/16/23 12:56	01/16/23 22:36	83-32-9	
Acenaphthylene	0.030 U	ug/L	0.48	0.030	1	01/16/23 12:56	01/16/23 22:36	208-96-8	
Anthracene	0.019 U	ug/L	0.48	0.019	1	01/16/23 12:56	01/16/23 22:36	120-12-7	
Benzo(a)anthracene	0.019 U	ug/L	0.096	0.019	1	01/16/23 12:56	01/16/23 22:36	56-55-3	
Benzo(a)pyrene	0.020 U	ug/L	0.19	0.020	1	01/16/23 12:56	01/16/23 22:36	50-32-8	
Benzo(b)fluoranthene	0.026 U	ug/L	0.096	0.026	1	01/16/23 12:56	01/16/23 22:36	205-99-2	

MDL VERSUS PQL

- **Method Detection Limit (MDL)** = an *estimate* of the minimum amount of a substance that can be reported with 99% confidence that the measured concentration is *distinguishable* from method blank results, or the minimum result that can be reliably discriminated from a blank with a predetermined confidence level.
- MDL is based on the analytical METHOD used.
- **Practical Quantitative Limit (PQL)** = the lowest level of measurement that can be *reliably* achieved during routine laboratory operating conditions.

Source: Chapter 62-160.120 F.A.C. Quality Assurance.

“COMMON” DATA QUALIFIER CODES – CHAPTER 62-160 F.A.C.

- **Q** = Sample held beyond the accepted hold time.
- **U** = Compound was analyzed for but not detected. The value of the qualifier should be the MDL.
- **V** = Analyte was detected at or above the MDL in both the sample and the associated method blank and the blank value was greater than 10% of the associated sample value.

See Chapter 62-160 F.A.C. for the complete list.

“COMMON” DATA QUALIFIER CODES – CHAPTER 62-160 F.A.C.

- **U** = Compound was analyzed for but not detected. The value of the qualifier should be the MDL.
- **V** = Analyte was detected at or above the MDL in both the sample and the associated method blank and the blank value was greater than 10% of the associated sample value.

See Chapter 62-160 F.A.C. for the complete list.

“L” QUALIFIER

L Qualifier: Off-scale high.

Actual value is known to be greater than value given.

To be used when the concentration of the analyte is above the acceptable level for quantitation (exceeds the linear range or highest calibration standard).

Source: Chapter 62-160 Quality Assurance.

“L” QUAL. - KEEP LOOKING FOR FINAL RESULT

Parameter	Method	Results	Analysis Date	Prep Date	Units	RL	Dilution Factor
1,2-Dichlorobenzene	8021	ND	02/07/2005 16:46		ug/kg	106	50
1,3-Dichlorobenzene	8021	ND	02/07/2005 16:46		ug/kg	106	50
1,4-Dichlorobenzene	8021	ND	02/07/2005 16:46		ug/kg	106	50
Benzene	8021	3280 LJ4	02/07/2005 16:46		ug/kg	106	50
Chlorobenzene	8021	ND	02/07/2005 16:46		ug/kg	106	50
Ethylbenzene	8021	15300 LJ4	02/07/2005 16:46		ug/kg	106	50
MTBE	8021	1040 LJ4	02/07/2005 16:46		ug/kg	106	50
o-Xylene	8021	34300 LJ4	02/07/2005 16:46		ug/kg	106	50
p,m-Xylene	8021	48200 LJ4	02/07/2005 16:46		ug/kg	211	50
Toluene	8021	37300 LJ4	02/07/2005 16:46		ug/kg	106	50
1,4-Dichlorobutane(SURR)	8021	73.7	02/07/2005 16:46		%	(72 - 117)	50
4-Bromofluorobenzene(SURR)	8021	28 J4	02/07/2005 16:46		%	(71 - 124)	50
Benzene	8021	6430	02/07/2005 17:35		ug/kg	211	100
Ethylbenzene	8021	31600 L	02/07/2005 17:35		ug/kg	211	100
MTBE	8021	3200	02/07/2005 17:35		ug/kg	211	100
o-Xylene	8021	79600 L	02/07/2005 17:35		ug/kg	211	100
p,m-Xylene	8021	122000 L	02/07/2005 17:35		ug/kg	423	100
Toluene	8021	71900 L	02/07/2005 17:35		ug/kg	211	100
1,4-Dichlorobutane(SURR)	8021	107 J4	02/07/2005 17:35		%	(72 - 117)	100
4-Bromofluorobenzene(SURR)	8021	52 J4	02/07/2005 17:35		%	(71 - 124)	100
Ethylbenzene	8021	58000	02/07/2005 18:24		ug/kg	2110	1000
o-Xylene	8021	158000	02/07/2005 18:24		ug/kg	2110	1000
p,m-Xylene	8021	292000	02/07/2005 18:24		ug/kg	4230	1000
Toluene	8021	135000	02/07/2005 18:24		ug/kg	2110	1000
1,4-Dichlorobutane(SURR)	8021	133 J4	02/07/2005 18:24		%	(72 - 117)	1000

Source: PEL Laboratories, Inc.

QC EXAMPLES & PURPOSE

- **Method Blanks:** Identify contamination introduced within the laboratory.
- **Matrix Spike (MS)/Duplicates (MSD):** Identify whether the lab has performed method properly or if sample matrix is introducing a positive or negative bias (Matrix Interference). Duplicate determines reproducibility or precision of MS.
- **Laboratory Control Samples:** Identify whether the lab has performed the method properly.
- **Surrogate Recoveries:** Mimics behavior of the target compounds. Used to identify either matrix or extraction problems.

Source: Laboratory Data Review for the Non-Chemist, USEPA Region 9, San Francisco, CA (October 2014).

SURROGATE RECOVERIES

- Surrogate Spikes: samples fortified at known concentrations with one or more compounds having similar chemical characteristics to the compounds of interest, but which are not normally found in environmental samples.

Source: Ch. 62-160, F.A.C., Quality Assurance.

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit
Benzene	0.749	I	1.00	0.200	ug/L
Toluene	0.420	I	1.00	0.170	ug/L
Ethylbenzene	7.03		1.00	0.190	ug/L
Xylenes, Total	0.580	U	3.00	0.580	ug/L
Methyl tert-butyl ether	0.170	U	1.00	0.170	ug/L

Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	112		70 - 130
1,2-Dichloroethane-d4 (Surr)	130		70 - 130
4-Bromofluorobenzene (Surr)	108		70 - 130

SURROGATE RECOVERIES

- Usually added to all samples, blanks, QC samples.
- Used to monitor analytical performance, extraction efficiency, purging efficiency (volatiles), and possible matrix interference.
- Showed as a percent with an allowable range. Ideally should be close to 100%.
- Advantage surrogates have over MS/MSD spike, is that Matrix Spikes is added only to one sample per batch.

Source: Laboratory Data Review for the Non-Chemist, USEPA Region 9, San Francisco, CA (October 2014).

INTERPRETING SURROGATE RECOVERIES

- ABOVE 100 % - Target analyte(s) concentrations may also be biased/reported high. Actual target analyte concentration may be lower than the reported value.
- BELOW 100 % - Target analyte(s) concentrations may also be suppressed or biased low. Actual target analyte concentration may be higher than the reported value.

Out of range surrogate recoveries (usually +/- 30%) trigger a re-extraction or re-analysis to determine cause of the anomaly (i.e. laboratory error or matrix interference).

NOTE: High concentrations of a target analyte can cause can result in poor surrogate recovery QC results.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

- **Matrix Spike (spiked sample or fortified sample)** = a sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of Target analyte concentration is available.
- **Duplicate** = Aliquot of a sample taken from the same container under laboratory conditions and processed and analyzed independently.
- **Matrix Spike Duplicates** – spiked sample or fortified sample duplicate, a second replicate matrix spike prepared in the laboratory and analyzed to obtain a measure of the precision of the recovery for each analyte. (ie. Split Samples).

Source: NELAC Program Policy and Structure (Approved May 25, 2001, Effective July 1, 2003 – unless otherwise noted).

MATRIX INTERFERENCE

- In addition to the analyte you are trying measure, the sample may contain non-target analytes or physical/chemical characteristics of a sample that prevents the quantification of the target analyte.

Example: TRPH: Non-Target Non-petroleum organic compound present in the sample that will elevate the TRPH concentration.

CAS REGISTRY NUMBERS

A unique and unambiguous identifier for a specific substance that allows clear communication and, with the help of CAS scientists links together all available data and research about that substance.

Governmental agencies rely on CAS Registry Numbers for substance identification in regulatory applications because they are unique, easily validated, and internationally recognized.

CAS #s in Lab Reports can ensure correct reporting.

Source: cas.org/cas-data/cas-registry

CAS NUMBERS

- Useful when trying to verify the CTLs of analytes – especially ones with multiple names (generic, historical, commercial) for instance:

EDB (CAS# 106-93-4)

NIST

National Institute of
Standards and Technology
U.S. Department of Commerce

NIST Chemistry WebBook, SRD 69

- **Other names:** α,β -Dibromoethane; sym-Dibromoethane; Aadibroom; Bromofume; Dowfume W-8; Dowfume W85; Ethylene bromide; Ethylene dibromide; EDB; Glycol Dibromide; Iscobrome D; Nefis; Sanhyuum; Soilfume; 1,2-Dibromoethane; CH₂BrCH₂Br; Dibromoethane; Aethylenbromid; Bromuro di etile; Celmide; DBE; 1,2-Dibromaethan; 1,2-Dibromoetano; Dibromure D'ethylene; 1,2-Dibroomethaan; Dowfume 40; Dowfume edb; Dowfume W-90; Dowfume W-100; Dwubromoetan; EDB-85; E-D-Bee; ENT 15,349; 1,2-Ethylene dibromide; Fumo-gas; Kopfume; NCI-C00522; Nephis; Pestmaster edb-85; Rcra waste number U067; Soilbrom; Soilbrom-40; Soilbrom-85; Soilbrom-90; Soilbrom-100; Soilbrome-85; Soilbrom-90ec; UN 1605; Unifume; Edabrom; α,ω -Dibromoethane; 1,2-dibromoethane (EDB)

CAS NUMBERS IN LAB REPORTS & 62-777 CTLS

Lab Report

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.
Field Data								
Analytical Method:								
Field pH	7.51	Std. Units			1		03/18/20 14:06	
Field Temperature	24.44	deg C			1		03/18/20 14:06	
Field Specific Conductance	1476	umhos/cm			1		03/18/20 14:06	
Oxygen, Dissolved	0.79	mg/L			1		03/18/20 14:06	7782-44-7
Turbidity	5.53	NTU			1		03/18/20 14:06	
FL-PRO Water, Low Volume								
Analytical Method: FL-PRO Preparation Method: EPA 3510								
Petroleum Range Organics	0.73 U	mg/L	0.91	0.73	1	03/19/20 20:37	03/20/20 10:38	
Surrogates								
o-Terphenyl (S)	84	%	66-139		1	03/19/20 20:37	03/20/20 10:38	84-15-1
N-Pentatriacontane (S)	82	%	42-159		1	03/19/20 20:37	03/20/20 10:38	630-07-09
8270 MSSV PAHLV by SIM								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Acenaphthene	0.040 U	ug/L	0.50	0.040	1	03/20/20 09:22	03/20/20 22:01	83-32-9
Acenaphthylene	0.030 U	ug/L	0.50	0.030	1	03/20/20 09:22	03/20/20 22:01	208-96-8
Anthracene	0.043 U	ug/L	0.50	0.043	1	03/20/20 09:22	03/20/20 22:01	120-12-7
Benzo(a)anthracene	0.055 U	ug/L	0.10	0.055	1	03/20/20 09:22	03/20/20 22:01	56-55-3
Benzo(a)pyrene	0.12 U	ug/L	0.20	0.12	1	03/20/20 09:22	03/20/20 22:01	50-32-8
Benzo(b)fluoranthene	0.027 U	ug/L	0.10	0.027	1	03/20/20 09:22	03/20/20 22:01	205-99-2
Benzo(g,h,i)perylene	0.15 U	ug/L	0.50	0.15	1	03/20/20 09:22	03/20/20 22:01	191-24-2
Benzo(k)fluoranthene	0.16 U	ug/L	0.50	0.16	1	03/20/20 09:22	03/20/20 22:01	207-08-9
Chrysene	0.026 U	ug/L	0.50	0.026	1	03/20/20 09:22	03/20/20 22:01	218-01-9
Dibenz(a,h)anthracene	0.13 U	ug/L	0.15	0.13	1	03/20/20 09:22	03/20/20 22:01	53-70-3
Fluoranthene	0.018 U	ug/L	0.50	0.018	1	03/20/20 09:22	03/20/20 22:01	206-44-0

GCTLs

Chemical	Groundwater Criteria	Freshwater Surface Water Criteria	Marine Surface Water Criteria	Groundwater of Low Yield/Poor Quality Criteria	Non-Cancer Target Organs/Syst ems or Effects	CAS	Carcinogenic
Acenaphthene	20	3	3	200	-Liver	83-32-9	
Acenaphthylene	210	.	.	2100	-Liver	208-96-8	
Acephate	4	190	190	40	-Neurological	30560-19-1	-yes
Acetone	6300	1700	1700	63000	-Kidney -Liver -Neurological	67-64-1	
Acetonitrile	42	20000	20000	420	-Mortality	27522	
Acetophenone	700	7800	7800	7000	-None Specified	98-86-2	
Acifluorfen, sodium [or Bl]	1	190	190	10	-Kidney	62476-59-9	
Acrolein	3.5	0.4	0.4	35	-Nasal	-654840	
Acrylamide	0.008	0.3	0.3	0.08	-Neurological	29007	-yes
Acrylic acid	3500			35000	-Developmental	29135	
Acrylonitrile	0.06	0.2	0.2	0.6	-Nasal -Reproductive	107-13-1	-yes
Alachlor	2	0.5	0.5	20	-Blood	15972-60-8	-yes
Aldicarb [or Temik]	7	0.9	0.9	70	-Neurological	-651437	
Aldicarb sulfone	7	46	46	70	-Neurological	1646-88-4	
Aldicarb sulfoxide	7	4.2	4.2	70	-Neurological	1646-87-3	

Note: Not all Lab Reports include CAS Numbers.

Source: Chapter 62-777-Tech Rpt-Table1-Groundwater-CTL_Feb 2005

[Excel].

CAS NUMBERS RESOURCES

☐ To Find Chemical Synonyms:

- National Institute of Standards and Technology (NIST) – U.S. Dept. of Commerce – NIST Chemistry WebBook, SRD 69.

<https://webbook.nist.gov/chemistry/>

Search by: Name, CAS Numbers, Formula, IUPAC Identifier, etc.



International
Union of Pure
and Applied
Chemistry.

HOLDING TIME

HOLDING TIME = The storage time allowed between sample collection and sample preparation and/or analysis as specified by regulatory requirements or by the field sample collection protocol or laboratory method.

Any results not meeting the holding times specified in this table must be qualified and reported with the “Q” qualifier code.

Sources: Chapter 62-160, F.A.C. – Quality Assurance

<https://floridadep.gov/dear/quality-assurance/content/holding-time-calculations>.

COMMON HOLDING TIMES (STARTING FROM TIME OF SAMPLE COLLECTION)

	Soil	Aqueous
• Volatiles	48 Hours	7 Days
• Semi-Volatiles	14 Days	14 Days
• TRPH	14 Days	7 Days
• Metals	180 Days	180 Days

Source: DEP SOP FS 1000 (General Sampling Procedures) tables.

WHEN TO “REJECT” RESULTS

Discuss with your Professional and Team Leader!

Possible Reasons:

- Samples analyzed out of hold time.
- Blank Contamination and sample analysis is above CTLs.

CHAIN OF CUSTODY (COC) FORM

- Includes: number of containers:
 - Preservation.
 - Requested analysis.
 - Cooler temperature upon receipt at the laboratory.
 - Notes/comments.

Sources: Laboratory Data Review for the Non-Chemist, USEPA Region 9, San Francisco, CA (October 2014).

NELAC Program Policy and Structure

(Approved May 25, 2001, Effective July 1, 2003 – unless otherwise noted).

CHAIN OF CUSTODY (COC) FORM

- Includes: number of containers:
 - Preservation.
 - Requested analysis.
 - Cooler temperature upon receipt at the laboratory.
 - Notes/comments.

Sources: Laboratory Data Review for the Non-Chemist, USEPA Region 9, San Francisco, CA (October 2014).

National Environmental Laboratory Accreditation Conference (NELAC) Program Policy and Structure

(Approved May 25, 2001, Effective July 1, 2003 – unless otherwise noted).

FS 1000 General Sampling Procedures

Table FS 1000-4 (Required Containers, Preservation Techniques, and Holding Times) - Applicable to all Non-Potable Water Samples (inc. wastewater, SW, and GW)

Table FS 1000-5 (Approved Water & Wastewater Procedures, Containers, Preservation and Holding Times for Analytes Not Found in 40 CFR 136)

Table FS 1000-6 (Recommended Sample Containers, Sample Volumes, Preservation Techniques & Holding Times for Residuals, Soil and Sediment Samples)

Table FS 1000-7 (Sample Handling, Preservation and Holding Time Table for SW 846 Method 5035A)

Table FS 1000-8 (Preservation Methods and Holding Times for Drinking Water Samples that Differ from 40 CFR Part 136, Table II)

COOLER TEMPS				D.W.
ANALYTE	SOIL FS 1000-6 & FS 1000-7	WATER FS 1000-4	WATER FS 1000-5	WATER FS 1000-8
Volatile Organics Compounds	4±2°C	≤6°C	Not Listed	4°C
Semivolatile Organics (PAHs)	<6°C	≤6°C	Not Listed	4°C
TRPH	<6°C	Not Listed	4°C	Not Listed
Total Metals except Mercury & Chromium VI	None	Not Needed	Not Listed	Not Listed
EDB	Not Listed	Needed	Not Listed	4°C
Organohalide Pesticides & Commercial PCBs	NA	≤6°C	Not Listed	4°C
Nitrate / Nitrite	<6°C	≤6°C	Not Listed	4°C
O-Phosphate	<6°C	≤6°C	Not Listed	Listed
Organic Carbon		<6°C	Not Listed	Listed
Chloronated Pesticides	NA	<6°C	Not Listed	4°C
PCBs	NA	<6°C	Not Listed	4°C

COOLER TEMPERATURE

THERMAL PRESERVATION (FROM FS1006, SECTION 5)

- When preservation requirements indicate cooling to a specific temperature, samples must be immersed in wet ice within 15 minutes of sample collection. Frozen ice packs are not acceptable for cooling samples. Unless specified, do not freeze samples.
- All supplies (ice, dry ice, etc.) necessary to meet a thermal preservation requirement must be onsite for immediate use.
- Ship samples in wet ice. If samples are cooled to the required temperature before shipment, samples may be shipped with frozen ice packs if the specified temperature is maintained during shipment. The sample temperature must not exceed the specified temperature.
- If immediate freezing is required, dry ice must be available in the field to begin the freezing process.
- Note: It should be noted that wet ice has a temperature of 0 degrees Celsius. A sample cooler temperature blank is water contained within a small sample container not larger than a 40 mL vial. If properly placed within the sample cooler at the start of sampling activities and following the procedures above, this container should easily reach a temperature of 4 degrees Celsius during the sampling activities.
- The specific authority for the sampling SOP is in 62-160 [FAC] QA Rule. Sample preservation is specifically authorized per 62-160.400 [FAC]. DEP Sampling SOPs can be found at <https://floridadep.gov/dear/quality-assurance/content/dep-sops>

Source: PRP Statewide Teleconference Draft Meeting Minutes
(September 3, 2020).

Sample COC



Advanced Environmental Laboratories, Inc.

- Altamonte Springs: 380 Northlake Blvd., Ste. 1048, FL 32701 • 407.937.1994 • Lab ID: E55076
- Fort Myers: 13100 Westlins Terrace, Ste. 10, FL 33913 • 239.674.8130 • Lab ID: E84492
- Jacksonville: 6681 Southpoint Pkwy., FL 32216 • 904.363.9350 • Lab ID: E82574
- Tallahassee: 2639 North Monroe St., Suite D, FL 32303 • 850.218.6274 • Lab ID: E811095

- Page 1 of 2
- Gainesville: 4068 SW 41st Blvd., FL 32608 • 352.377.2349 • Lab ID: E82001
 - Miramar: 10200 USA Today Way, FL 33025 • 954.889.2288 • Lab ID: E82835
 - Tampa: 9610 Princess Palm Ave., FL 33619 • 813.630.9616 • Lab ID: E84589

Client Name: MDM Services		Project Name: TEXACO #100858-SAN MIGUEL			BOTTLE SIZE & TYPE ANALYSIS REQUIRED 82608 TEXM (& Total BTEX) 82705 IMPPAH FLPRO Pb-6010	LABORATORY I.D. NUMBER							
Address: 1055 Kathleen Rd Lakeland, FL 33805		Project Number: 15075 PO Number: 15075											
Phone: 800-899-1794		FDEP Facility No: 8630449											
FAX: 863-648-1106		FDEP Facility Addr: 9011 Little Rd, New Port Richey, FL											
Contact: Joel Cornwell		Special Instructions:											
Sampled By: Derek Davis													
Turn Around Time: Standard Rush													
AEL Profile #: 65107		AOLP											
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	Preservation (Field-Filtered?)	ANALYSIS REQUIRED				LABORATORY I.D. NUMBER	
			DATE	TIME				82608 TEXM (& Total BTEX)	82705 IMPPAH	FLPRO	Pb-6010		
	MW-5R		7/14/20	13:17	GW	6		X	X	X	X		001
	MW-6		7/15/20	11:59	GW	6		X	X	X	X		002
	MW-8R		7/14/20	12:35	GW	6		X	X	X	X		003
	MW-9		7/15/20	13:35	GW	6		X	X	X	X		004
	MW-11		7/15/20	13:08	GW	6		X	X	X	X		005
	MW-12		7/15/20	14:07	GW	6		X	X	X	X		006
	OW-1		7/14/20	14:00	GW	6		X	X	X	X		007
	OW-3		7/15/20	11:03	GW	6		X	X	X	X		008
	OW-4		7/14/20	14:44	GW	6		X	X	X	X		009
	PZ-1		7/15/20	12:35	GW	6		X	X	X	X		010

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S=(H2SO4) N=(HNO3) T=(Sodium Thiosulfate)

Received on ice Yes No Temp taken from sample Temp from blank Where required, pH checked Temp. when received (observed) 10 °C Temp. when received (corrected) 10 °C

DCN: AD-D051web Form last revised 08/07/2019 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 F: 10A A: 3A M: 3A S: 1V F: 1A

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>[Signature]</i>		1310	<i>[Signature]</i>	7/16/20	1310
2	<i>[Signature]</i>	7/16/20		<i>[Signature]</i>	7/16/20	1330
3						
4						

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____

Contact Person: _____

Supplier of Water: _____

Site Address: _____

TEXT



TEXT MUST INCLUDE:

- B. A summary of work performed, sampling results, conclusions based on data collected and recommendations for modifications of subsequent tasks, including, as applicable: a description of any changes in land use, efforts made to locate missing wells, description of methods used to identify IDW and disposal, and any other relevant information related to the field activities and resultant data;
- C. For TSAR only, summary of work shall also include: estimated costs with breakdown to achieve closure by RMO 1 and RMO 2;
- D. If applicable, a recommendation and justification for No Further Action, well abandonment and site restoration;

OTHER ITEMS MAY BE REQUIRED

- Permits for well installations, soil borings, abandonment (Water Management District, City, and/or County).
- Well Completion Reports.
- Photos.
- Contaminant Mass & Other Calculations.
- Subcontractor Invoices for Reimbursable Items.
- Manifests / Weight Tickets, etc.
- Check Required Documents Tab in Schedule Pay Items (SPI) for complete list.

Final Considerations

- Always keep closure in mind when reviewing Reports, specifically Tables and Figures.
- Add additional well sampling to the next field visit (if needed) and include any well installation (if needed) during the next drilling event.
- Groundwater grab samples can be used in lieu of well installation if only 1 sample is needed.
- Before approving any Task, check the Required Documents tab in the SPI to ensure all Required Documents for Invoiced Items have been submitted with the Deliverable.
- Include missing items in a Deliverable Review letter requesting items.



A photograph of the Aurora Borealis (Northern Lights) in the Northern Hemisphere, showing vibrant green and blue light streaks against a dark, starry night sky. The image is partially obscured by a teal circular graphic on the right side of the slide.

THANK YOU

Melissa M. Del Masto

PRP-Team 5

mdelmasto@northstar.com