(B5/B37 Area) Groundwater Contamination Assessment and (B5 Area) Remedial Action Status Annual Report-2018

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Tomoka Farms Road Landfill, Volusia County

Submitted To:
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1.0 Introduction

On behalf of Volusia County Solid Waste Division (County), HDR Engineering, Inc. (HDR) has prepared this 2018 annual Groundwater Assessment (B5 and B37 Areas) and Remediation (B5 Area) Report for the Tomoka Farms Road Landfill (TFRL) in Volusia County. This report describes the monitoring activities, summarizes the analytical results, and provides recommendations.

2.0 Background

The TFRL began operation in 1969 as an unlined Class I landfill. Due to the discovery of vinyl chloride in groundwater in the B5 area in 1990, the County developed a Contamination Assessment Plan (CAP). In 1992, the Florida Department of Environmental Protection (FDEP) approved the CAP and the County began quarterly monitoring in the B5/B37 area of the TFRL.

In response to elevated and increasing concentrations of vinyl chloride in monitoring well B5-28 during the regular quarterly monitoring, the County voluntarily performed assessment activities to delineate the vertical and horizontal extent of volatile organic compounds (VOCs) in the groundwater, and to identify potential sources of the vinyl chloride. In November 2006, a geophysical survey was performed to identify possible sources of the VOCs, and test pits were excavated in January 2007 in the areas where anomalies were identified. The test pit excavations did not identify the source of the VOCs.

Assessment activities conducted in March 2007 at the site included a groundwater assessment of the area surrounding well B5-28. A direct-push drilling rig and an on-site laboratory were used to collect and analyze samples. During this assessment, the extent of the VOC impact was characterized as a small area within the confined surficial aquifer groundwater approximately 250 feet in length, 150 feet in width, centered approximately 20 feet south of well B5-28 and extending to a depth of approximately 40 feet bls. The assessment findings were submitted to the FDEP by SCS on April 24, 2007, recommending remediation of the VOC plume and continued quarterly groundwater monitoring at the site. The FDEP concurred with this recommendation and requested a Remedial Action Plan (RAP) on May 25, 2007. A RAP was submitted to the FDEP on October 30, 2007, recommending in-situ chemical oxidation utilizing RegenOx™ and an Oxygen Release Compound (ORC).

The FDEP provided a review of the RAP in correspondence dated February 5, 2008, and indicated that the RAP should be considered as a Limited Scope Remedial Action Plan (LSRAP) since the RAP only addressed the B-5 area of the TFRL. The FDEP also recommended implementation of a pilot test with the results submitted in a LSRAP Addendum. The pilot test was implemented on October 20, 2008, near well B5-28, and the findings submitted to the FDEP in a LSRAP Addendum dated November 17, 2008. In response, the FDEP issued a LSRAP Approval Order on March 19, 2009.

Remedial activities began with the installation of 10 temporary monitoring wells in the B5 area to monitor the effects of the remediation. The details of the well installation were documented in a Well Completion Report dated June 9, 2009. Baseline groundwater sampling for the B5 area remediation was performed on April 21 and 22, 2009. The first round of RegenOx™ injections was performed from June 22 through July 3, 2009, followed by the second round of injections from August 10 through 20, 2009. The second round of injections included the injection of an ORC meant to promote aerobic conditions in groundwater. Details of the injection procedures were submitted to the FDEP in accordance with the LSRP Approval Order in the B5 Area Remediation Status Report dated August 26, 2009.

Post remediation groundwater monitoring is currently being performed at the site to evaluate the effectiveness of the remediation. A comprehensive evaluation of the remedial effectiveness was submitted by SCS on November 22, 2011, approximately two years following the chemical injections.

Quarterly groundwater sampling of the B5/B37 area continued until the FDEP approved semiannual monitoring in a correspondence dated April 10, 2008. The April 10, 2008, correspondence also reduced the number of wells to be monitored. The remedial progress reports had been submitted under separate cover to the FDEP through the March 2012 sampling event. The FDEP approved combining the B5 remediation progress report with the B5/B37 Assessment Report in correspondence dated August 2, 2012. In a letter dated July 18, 2014, FDEP allowed the facility to remove six wells (B5-30A, B5-42, B5-43, B5-44, B37-5, and B37-14) from the required monitoring list. An additional four wells (B5, B5-30B, B-5-32, and B5-41B) were authorized to cease monitoring (FDEP letter dated February 17, 2016). Based on the review of the second semiannual 2014 Remedial Action Status Report and additional discussion in a meeting on May 21, 2015 with the County and HDR, the FDEP requested modifying five wells (TMW-1A, TMW-1B, TMW-2A, TMW-2B, and TMW-3A) located in a swale where standing water typically prevents monitoring. The modifications which included extending the casings, adding above ground protective casings, and resurveying the well elevations were completed on October 21, 2015. A new well (MW100-6) was installed in Zone 6 during the same mobilization. The new well was installed to be used as Zone 6 downgradient delineation well for the B5/B37 area and as an upgradient well for the proposed expansion cell.

In response to recommendations in the 2016 second semiannual report, FDEP on March 1, 2017 reduced the monitoring frequency requirement from semiannual to annual monitoring beginning in fall 2017. FDEP also agreed to discontinue 5 monitoring wells (B5-22, B5-25, B37-4, TMW-4A, and TMW-5A) from the monitoring list. Three wells (B5-37A, B5-37B, and MW-100-6) will remain on the list of wells to be monitored.

3.0 Groundwater Sampling

The current Assessment Monitoring system consists of 3 monitoring wells in the B5 Area and 5 monitoring wells in B37 Area (see Table 1). The FDEP has approved discontinuing sampling of three Assessment wells (B5-22, B5-25, B37-4) and two post remediation monitoring wells (TMW-4A, and TMW-5A). Monitoring well locations for the assessment wells are shown on Figures 1 and 2.

The B5 Area Remediation Status Monitoring system consists of eight temporary wells (TMW-1A/B, TMW-2A/B, TMW-3A/B, TMW-4B, and TMW-5B) and one assessment monitoring well (B5-28). Three temporary wells (TMW-1A through TMW-3A) were screened in Zone 4; and another five temporary wells (TMW-1B through TMW-5B) were screened in Zone 6 of the surficial aquifer. Zone 6 is below Zone 4 and is separated by a confining bed (clayey sand) in the surficial aquifer system and ranges from 40 to 60 ft below the ground surface. B5-28 is screened in Zone 4 (see Table 1). Another well (MW100-6) was installed down gradient from the TMW wells toward the northeast in October 2015 and was screened in Zone 6. Monitoring well locations for the remediation wells are shown on Figures 5 and 6.

The assessment groundwater monitoring wells were installed within two zones: the shallow surficial aquifer (Zone 1-2) and a deeper semi-confined surficial aquifer (Zone 4). Zones 1-2 consist of sands and silty sands that extend from the land surface to approximately 17 feet below land surface (bls). The two upper zones are separated by layers of silt and clayey sands extending from approximately 17 feet to 25 feet bls. Zone 4 consists of sands extending from approximately 25 to 36 feet bls. Beneath the Zone 4 sands is a semi-confining unit extending from approximately 36 to 47 feet bls. Site maps indicating the locations of the Zone 1-2 and Zone 4 wells are included as Figures 1 and 2, respectively.

Pace Analytical (Pace) conducted the field sampling for the current monitoring event. Groundwater samples were collected utilizing a portable peristaltic pump and dedicated tubing from the monitoring wells. Prior to sampling, the monitoring wells were opened and allowed to equilibrate to static

atmospheric pressure. Depth to groundwater was measured and the groundwater elevations were calculated at each monitoring location (Table 1). Groundwater from each monitoring well was purged and sampled in accordance with the current FDEP Standard Operating Procedures (SOPs). Following completion of purging activities, the wells were sampled using a portable peristaltic pump and dedicated tubing in the monitoring wells. Samples were collected to be analyzed for the parameters listed in Table 2. During sampling, field parameters (including pH, dissolved oxygen, specific conductivity, temperature, and turbidity) were recorded in a field-sampling log. Samples were collected, placed on ice in coolers, and shipped to PACE laboratory under a signed chain of custody documentation. Trip and equipment blanks were also included for the laboratory analyses.

4.0 Groundwater Elevation and Flow Direction

The depth to water and calculated groundwater elevations are presented in Table 1. The groundwater potentiometric contour maps and flow directions for Zone 1-2, Zone 4, and Zone 6 are presented in Figures 1, 2, 5, and 6 as described below:

- Figure 1 – Zone 1-2 B5 assessment wells: Groundwater typically flows southeasterly, which is consistent with the historic trend.
- Figure 2 – Zone 4 B5 and B37 assessment wells: During the September 2018 monitoring event flow was east-southeasterly which is typical for this area.
- Figure 5 – Zone 4 B5 remediation wells: During the September 2018 monitoring event flow was southeasterly which is typical for this area.
- Figure 6 – Zone 6 B5 remediation wells: Flow is generally southeasterly, but groundwater flowed more southerly during September 2018 monitoring event.

The flow directions modeled in Figure 6 is slightly atypical of the historical norm, but flow directions modeled in Figures 1, 2 and 5 are generally consistent with the historic results. It has been noted in past reports that groundwater flow in the B5 Area has likely been influenced by wetlands and the canal west of the B5 area, and in the B37 Area Zone 4 groundwater flow may be influenced by the wetlands and the storm water detention pond east of the B37 area.

Table 1

Groundwater Elevation at B5/B37 Area Wells

Well ID	Well Type	Aquifer Zone	Top of Casing (feet, NGVD)	Depth to Water (ft below TOC)	Groundwater Elevation (ft, NGVD)	Date Measured
B5 Area Wells (Site ID: COM_68271)						
B-5	Assessment	4	32.59	4.01	28.58	9/17/18
B5-28	Assessment	4	31.07	2.68	28.39	9/17/18
B5-30B	Assessment	4	30.65	2.29	28.36	9/17/18
B5-32	Assessment	1-2	30.45	1.74	28.71	9/17/18
B5-35	Assessment	1-2	30.87	2.55	28.32	9/17/18
B5-37A	Assessment	1-2	30.01	2.11	27.90	9/17/18
B5-37B	Assessment	4	29.94	1.81	28.13	9/17/18
B5-41B	Assessment	4	34.32	5.67	28.65	9/17/18
TMW-1A	Remediation	4	31.42	3.36	28.06	9/17/18
TMW-2A	Remediation	4	31.99	3.63	28.36	9/17/18
TMW-3A	Remediation	4	32.81	4.55	28.26	9/17/18
TMW-1B	Remediation	6	31.51	8.34	23.17	9/17/18
TMW-2B	Remediation	6	31.88	8.61	23.27	9/17/18
TMW-3B	Remediation	6	29.09	2.60	26.49	9/17/18
TMW-4B	Remediation	6	32.57	7.32	25.25	9/17/18
TMW-5B	Remediation	6	33.64	5.80	27.84	9/17/18
MW 100-6	Remediation	6	31.71	8.77	22.94	9/17/18
B37 Area Wells (Site ID: COM_153864)						
B37-1	Assessment	4	28.63	0.19	28.44	9/17/18
B37-3	Assessment	4	31.17	3.92	27.25	9/17/18
B37-6	Assessment	4	32.93	5.94	26.99	9/17/18
B37-8	Assessment	4	31.23	4.92	26.31	9/17/18
B37-13	Assessment	4	31.86	4.91	26.95	9/17/18

Note: NGVD = National Geodetic Vertical Datum; TOC = Top of Casing.
NM = Not measured.

5.0 Groundwater Monitoring Results

Groundwater samples for the site assessment monitoring wells were analyzed for VOCs (Appendix I List) by Environmental Protection Agency (EPA) Method 8260. For the remediation monitoring wells, select geochemical parameters (carbon dioxide, chloride, nitrate, sodium, sulfate, ethene, ethane, and methane) were also analyzed. The parameters analyzed are presented in Table 2. The results are summarized in Tables 3 through 5. The laboratory data reports and field logs for the Assessment Monitoring and Post Remediation Status Monitoring are included in Attachments 7.

5.1 Groundwater Assessment Monitoring

To assess the groundwater quality in the B5/B37 area, groundwater analytical results were compared to the following water quality standards of the Florida Administrative Code (FAC):

- Primary Drinking Water Standard (PDWS) (62-550, FAC).
- Secondary Drinking Water Standard (SDWS) (62-550, FAC).
- Groundwater Clean-up Target Level (GCTL) (62-777, FAC).

The following sections describe the findings of the 2018 annual sampling event within the B5/B37 area. Parameters detected at concentrations above applicable standards are discussed below.

5.1.1 B5 Area

During this monitoring event of the B5 area assessment, benzene and vinyl chloride were detected at levels above the PDWS. Benzene and Vinyl Chloride were detected slightly above the PDWS in one surficial aquifer Zone 4 assessment well (B5-37B), both at 2 µg/L (Table 3). No VOCs were detected above applicable standards in the groundwater from B5-35 or B5-37A (Zone 1-2); and only chlorobenzene was detected from B5-37A slightly above the detection limit. VOC concentrations observed in Zone 1-2 and Zone 4 of the B5 area during this semiannual are shown in Figures 3 and 4, respectively. Historical laboratory analytical results for all VOC parameters detected this event in the B5 area are summarized in Attachment 2. The only other variance from groundwater standards was pH which was detected below the SDWS range (pH 6.5 – 8.5) in several wells. B5 wells have historically reported pH levels below the SDWS range, indicating a naturally acidic groundwater condition.

Table 2
Summary of Monitoring Parameters

Monitoring Type	Parameters	Field Parameters					MNA Indicating Parameters								VOCs
		pH	Specific Conductance	Temperature	Oxygen, Dissolved	Turbidity	Chloride	Carbon Dioxide	Nitrate as N	Sodium	Sulfate	Ethene	Ethane	Methane	VOCs
Assessment	B5-35	x	x	x	x	x									x
	B5-37A	x	x	x	x	x									x
	B5-37B	x	x	x	x	x									x
	B37-1	x	x	x	x	x									x
	B37-13	x	x	x	x	x									x
	B37-3	x	x	x		x									x
	B37-6	x	x	x	x	x									x
	B37-8	x	x	x	x	x									x
Post Remediation	MW 100-6	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	B5-28	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-1A	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-1B	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-2A	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-2B	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-3A	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-3B	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-4B	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	TMW-5B	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Note: x – Parameter was monitored;

Table 3
Summary of Detected Parameters – B5 Area Assessment Monitoring
Sampled September/October 2018

Parameter	Standard	B5-37A	B5-35	B5-37B	Units
		Zone 1-2		Zone 4	
Field Monitoring Parameters					
pH	6.5-8.5**	**6.36**	**6.14**	**6.26**	S.U.
Temperature	NS	24.4	25.4	23.4	Deg. C
Specific Conductance	NS	1,303	607	1,830	µS/cm
Dissolved Oxygen	NS	1.37	1.2	2.55	mg/L
Turbidity	NS	2.31	19.12	5.14	NTU
VOCs					
Benzene	1*	<0.1	<0.1	**2**	µg/L
Chlorobenzene	100*	3.8	<0.5	9.7	µg/L
cis-1,2-Dichloroethene	70*	<0.5	<0.5	0.89 I	µg/L
Toluene	40**	<0.5	<0.5	<0.5	µg/L
Vinyl chloride	1*	<0.5	<0.5	**2**	µg/L
Xylene (Total)	20**	<1.5	<1.5	<1.5	µg/L

Note: * Primary Drinking Water Standard (Chapter 62-550, F.A.C.);

** Secondary Drinking Water Standard (Chapter 62-550, F.A.C.);

Bold number indicates the result is above the standard;
I - Analyte Concentration was between the detection limit and the reporting limit;
Groundwater results for B5-25 and B5-28 are provided in Table 5.

5.1.2 B37 Area

Groundwater data collected from the five wells screened in Zone 4 (B37-1, B37-3, B37-6, B37-8, and B37-13) from the B37 area during this event are summarized in Table 4. Benzene was detected above the PDWS in four wells (B37-1 at 7.6 µg/L, B37-3 at 2.4 µg/L, B37-6 at 1.8 µg/L, and B37-13 at 5.7 µg/L). Benzene was not detected in B37-8. Other VOCs detected were below reporting limits and/or applicable standards.

Benzene concentrations in the B37 Area appear to be somewhat stable with occasional spikes and non-detects reported. Benzene concentrations in Zone 4 are depicted in Figure 4. The only other parameter detected outside the applicable standards was pH, which was measured below or slightly above the lower limit of the SDWS range (6.5 to 8.5 units) in all wells. Low pH levels in the B37 area are consistent with historical results indicating a natural acidic soil and water conditions.

Table 4
Summary of Detected Parameters – B37 Area - Assessment Monitoring
Sampled September 28 to 29, 2017

Parameter	Standard	B37-1	B37-3	B37-6	B37-8	B37-13	Units
		Zone 4					
Field Monitoring Parameters							
pH	6.5-8.5**	**6.18**	**6.38**	**6.16**	**5.48**	**6.15**	S.U.
Temperature	NS	24.1	24.3	24	25.1	24.7	Deg. C
Specific Conductance	NS	2,636	1,486	1,140	186	1,531	µS/cm
Dissolved Oxygen	NS	0.92	0.09	1.61	0.67	0.63	mg/L
Turbidity	NS	7.38	2.51	12	0.68	1.24	NTU
VOCs							
1,4-Dichlorobenzene	75*	<0.50	<0.50	<0.50	<0.50	<0.50	µg/L
Benzene	1*	**7.6**	**2.4**	**1.8**	<0.10	**5.7**	µg/L
Chlorobenzene	100*	6.5	0.94 I	1.3	<0.50	4.8	µg/L
cis-1,2-Dichloroethene	70*	<0.50	<0.50	<0.50	<0.50	<0.50	µg/L
Toluene	40**	4.3	<0.50	<0.50	<0.50	<0.50	µg/L
Vinyl chloride	1*	<0.50	<0.50	<0.50	<0.50	0.80 I	µg/L
Xylene (Total)	20**	9.8	<1.5	<1.5	<1.5	<1.5	µg/L

Note: * Primary Drinking Water Standard (Chapter 62-550, F.A.C.);
** Secondary Drinking Water Standard (Chapter 62-550, F.A.C.);
NS -No Standard has been established;
Bold number indicates the result is above the standard;
I – Analyte concentration was between the detection limit and the reporting limit.

5.2 Remediation Status Monitoring

The County is performing post-remediation annual monitoring in the B5 area to evaluate the remedial effectiveness of the implemented in-situ corrective measure. Table 5 summarizes the compounds detected in the Remediation Status Monitoring Wells during the 2018 annual sampling event, which includes an assessment well (B5-28), three remediation status monitoring wells (TMW-1A through TMW-3A) screened in Zone 4, five remediation status monitoring wells (TMW-1B through TMW-5B) screened in Zone 6, and a down gradient well (MW 100-6) screened in Zone 6.

As summarized in Table 5, the following VOCs were detected above the PDWS in the remediation monitoring wells: 1,1-dichloroethene (1,1-DCE), benzene, cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (T-1,2-DCE), trichloroethene (TCE), and vinyl chloride. These detections are consistent with the historic results. Vinyl chloride (1.9 µg/L) was detected in the downgradient well MW-100-6 above the PDWS. VOC concentrations observed in the B5 Remediation Status Monitoring Area during the 2018 annual monitoring are shown in Figure 7. A table summarizing historically detected groundwater monitoring parameters is provided in Attachment 4. Time series trend plots for commonly detected VOCs are provided in Attachment 5. Field measured pH levels were detected slightly below the lower limit of the SDWS range in samples from five remediation status monitoring wells (TMW-1B, TMW-3A, TMW-3B, TMW-4B, and TMW-5B) and a downgradient well (MW-100-6).

The following paragraphs discuss trends for parameters that exceeded the FAC applicable standards in the B5 Remediation Status Monitoring area during the 2018 annual event.

1,1-Dichloroethene

During the 2018 annual monitoring event, 1,1-DCE was detected above the PDWS of 7.0 µg/L in samples from one Zone 4 wells (TMW-1A) and three Zone 6 wells (TMW-1B, TMW-3B, and TMW-5B). The 1,1-DCE concentrations increased in TMW-1A, TMW-3B, and TMW-4B and decreased in TMW-1B, TMW-3A, and TMW-5B from the previous monitoring event; but these concentrations were still below the historic highs from the site.

Benzene

Benzene was detected above the PDWS of 1 µg/L in TMW-1A, TMW-2B, TMW-3A, TMW-3B, and TMW-5B. Concentrations increased slightly in TMW-1A, TMW-2B, and TMW-5B and decreased in TMW-1B, TMW-2A, TMW-3A, and TMW-3B. Overall, benzene concentrations appear to be stable or decreasing over time. Historical benzene concentrations and trends are presented in Attachments 4 and 5.

Cis-1,2-Dichloroethene

Cis-1,2-Dichloroethene was detected above the PDWS (70 µg/L) in one well screened in Zone 4 (TMW-1A) and three wells screened in Zone 6 (TMW-1B, TMW-3B, and TMW-4B). Concentrations increased in TMW-1A, TMW-3B, and TMW-4B and decreased in TMW-1B, TMW-2A, TMW-3A, and TMW-5B. An unusual spike of 10,900 µg/L has occurred in TMW-3B, increase over the most recent three events (2,210, 1,070, and 8,660 µg/L).

Trans-1,2-dichloroethene

Trans-1,2-Dichloroethene was detected above the PDWS (100 µg/L) only in TMW-3B during the 2018 annual monitoring event. Previous to 2017, Trans-1,2-Dichloroethene had not been detected above the PDWS in TMW-3B.

Trichloroethene

Trichloroethene was detected above the PDWS of 3 µg/L in samples collected from three wells (TMW-1A, TMW-1B, and TMW-3B) during this event. Trichloroethene concentrations have significantly decreased in the up gradient well (TMW-5B), but they have increased significantly in the downgradient well TMW-3B (Attachment 5).

Vinyl Chloride

Vinyl chloride was detected above the PDWS of 1.0 µg/L in B5-28, MW-100-6, and in all of the temporary monitoring wells except TMW-2A during this event. This is the first time vinyl chloride has exceeded the PDWS in MW-100-6, but vinyl chloride concentrations decreased in all temporary monitoring wells except TMW-1A and TMW-5B. Historical vinyl chloride concentrations are presented in Attachments 1 and 4 and time series plots of vinyl chloride concentrations are shown in Attachment 5.

Natural Attenuation Parameters

Remediation status monitoring included the collection of select natural attenuation parameters (Table 5). The natural attenuation monitoring parameters indicate that groundwater at this site is reduced and conditions are favorable for the continued natural attenuation of VOCs:

pH - Field measured pH ranged from 6.22 to 6.71 S.U. (below to slightly above the lower limit of the SDWS range (6.5-8.5 S.U.)) at all wells. These values are between the pH range of 6 and 7 S.U. and so are favorable for the anaerobic biodegradation process. These results are consistent with historical results.

Dissolved Oxygen and Redox – Dissolved oxygen levels were all below 1 mg/L except in TMW-3B (4.34 mg/L). The groundwater redox potential values are all below 0 mV, indicating that groundwater is dominated by reduced conditions, which is favorable for the reductive degradation of chlorinated VOCs.

Nitrate and Sulfate – Nitrate was reported at trace levels or below the detection limit (0.025 mg/L), and all detections were below the PDWS.
Sulfate was detected in all temporary wells except TMW-3A and TMW-5B ranging from 11.4 to 121 mg/L, all below the SDWS. The low levels of nitrate and sulfate indicate favorable conditions for reductive dechlorination.

Ethene, Ethane, and Methane – Ethane and methane were detected in all post remediation monitoring wells and ethene was detected all but two temporary wells (TMW-2A and TMW-5B). These detections indicate the presence of organic substrate for microbial activity for the reductive monitored natural attenuation process resulting in degradation of VOCs from the groundwater.

Table 5

Summary of Detected Parameters – B5 Area Post Remediation Monitoring Wells
Sampled September 18 - 24, 2018

Parameter	Standard	Detected Results										Units
		B5-28	MW 100-6	TMW 1A	TMW 1B	TMW 2A	TMW 2B	TMW 3A	TMW 3B	TMW 4B	TMW 5B	
Field Monitoring Parameters												
pH	6.5-8.5	6.41	**6.38**	6.52	**6.45**	6.71	6.57	**6.43**	6.7	**6.22**	**6.37**	S.U.
Temperature	NS	24.5	23.8	25.1	25.3	24	24.4	24.2	25.3	24.4	24.6	Deg. C
Specific Conductance	NS	1,563	711	2,238	1,321	1,808	1,811	1,721	1,741	1343	1,930	µS/cm
Dissolved Oxygen	NS	0.47	0.68	0.82	0.71	0.05	0.11	0.09	4.34	0.8	0.63	mg/L
Turbidity	NS	1.89	19.37	19.21	2.7	3.79	1.5	1.61	147	2.18	1.27	NTU
Oxidation Reduction Potential	NS	-94.4	68.4	-104.3	-76.4	-81.5	-40.3	-48.7	-67.9	-61.2	-101.8	mV
General Chemistry												
Carbon Dioxide, Free	NS	105	47.8	98.3	51.9	115	105	175	77	103	145	mg/L
Chloride	250**	47	55.4	116	115	77.2	102	131	146	100	96.8	mg/L
Ethane	NS	31.6	9.8 I	1030	33.9	154	242	89	6.4 I	53.2	61.5	µg/L
Ethene	NS	<2.9	<2.9	384	57.6	<2.9	78.2	41	26.3	99.2	<2.9	µg/L
Methane	NS	2,220	1,500	6,420	1,050	2,340	3,510	6,750	218	2,680	6,740	µg/L
Nitrogen, Nitrate	10*	0.088	<0.025	<0.025	0.025 I	<0.25	<0.12	<0.25	<0.25	0.05	<0.035	mg/L
Sodium	160*	70.8	39.1	45.7	129 J	36.5	41.2	43.7	8.1	142	104	mg/L
Sulfate	250*	<2.5	<2.5	37.3	84.6	52.5	121	<2.5	11.4	39.4	<2.5	mg/L
VOCs												
1,1-Dichloroethene	7*	<0.5	<0.5	**55**	**108**	<0.5	<0.5	**1.5**	**829**	**27.6**	<0.5	µg/L
Benzene	1*	0.38 I	<0.1	**5.4**	0.99 I	0.58 I	**1.7**	**3.3**	**3.9**	0.88 I	**2.2**	µg/L
Chlorobenzene	100*	1.6	<0.5	3.7	<0.5	1.3 J	<0.5	5.6	4.2	<0.5	6.7	µg/L
Chloroethane	12***	1.2 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L
cis-1,2-Dichloroethene	70*	2.3	1.5	**1480**	**2,450**	<0.5	27.5	17	**10,900**	**1420**	1.8	µg/L
Ethylbenzene	30**	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	0.9 I	<0.5	<0.5	µg/L
Toluene	40**	<0.5	<0.5	12.3	<0.5	<0.5	<0.5	0.57 I	3.3	3.8	<0.5	µg/L
trans-1,2-Dichloroethene	100*	<0.5	<0.5	6.4	9.1	<0.5	<0.5	<0.5	**184**	3.2	0.5	µg/L
Trichloroethene	1*	<0.5	<0.5	**5.8**	**2.2**	<0.5	<0.5	1	**4,680**	<0.5	<0.5	µg/L
Vinyl chloride	1*	**6.6**	**1.9**	**6,890**	**1,330**	0.94	**576**	**72**	**1,180**	**1,880**	**5.7**	µg/L
Xylene (Total)	20**	<1	<1	9.2	<1.5	<1.5	<1.5	<1.5	2.1 I	<1	<1	µg/L

Note:
* Primary Drinking Water Standard (Chapter 62-550, F.A.C.);
** Secondary Drinking Water Standard (Chapter 62-550, F.A.C.);
NS - No Standard;
Bold number indicates that the result is above the applicable standard;
I - Analyte concentration was between the detection limit and the reporting limit.

6.0 Quality Assurance/Quality Control

Field quality assurance/quality control (QA/QC) involves the routine collection and analysis of trip blanks, equipment blanks, and duplicate samples to verify that the sample collection and handling processes in the field have not impaired the quality of the samples. Laboratory QA/QC involves the routine collection and analysis of method reagent blanks, matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), surrogate recoveries, and duplicate samples to verify that the sample analysis procedures have not impaired the quality of the samples. These results indicate that the groundwater data meet the QA/QC requirements.

HDR performed a review of the field and laboratory QC data and reports. The results indicate that sodium and carbon dioxide were detected in B5 area post remediation status monitoring equipment blanks. No detections were noted in B5 area post remediation status monitoring trip blanks.

7.0 Conclusions and Recommendations

The groundwater quality of the assessment and post remediation monitoring wells at the B5/B37 area during the 2018 annual sampling event is generally consistent with historical results, reporting six VOCs (1,1-dichlroethene, benzene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride) above their respective PDWSs. VOC increases occurred in five of the eight temporary monitoring wells (TMW-1A, TMW-1B, TMW-3B, TMW-4B, and TMW-5B) increased during this monitoring event, but concentrations in most wells are below the historic highs. Vinyl chloride concentrations increased in only two temporary wells during this monitoring event. The VOCs detected at levels above the PDWS in the B5/B37 area only occurred in Zone 4 and Zone 6. VOCs were not detected above the PDWS in Zone 1-2. The following conclusions are based on the findings from this 2018 annual monitoring period:

- These data continue to indicate a substantial reduction of VOC levels since the in-situ chemical injections.

- Assessment Monitoring in the B-5 and B-37 area:

  - B5 Area: Benzene was detected slightly above the PDWS (1 µg/L) in one well (B5-37B).
  - B5 Area: Vinyl chloride was detected at levels above the PDWS at only one well (B5-28) in B5 assessment area monitoring wells during this event. The vinyl chloride concentration detected at B5-28 decreased significantly from the historic high and is now only slightly above the PDWS.
  - B37 Area: Benzene concentrations were above the PDWS in Zone 4 wells B37-1, B37-3, B37-6, and B37-13. Benzene levels in the B5/B37 areas fluctuate, but they are generally stable or decreasing.

- B-5 post remediation status monitoring:

  - This table helps to visualize changes in concentrations between the 2017 and 2018 annual events in the temporary monitoring wells. The table does not indicate trends which are shown in time series plots (Attachment 5). Highlights indicate above standards.

	1,1-DCE	Benzene	c12-DCE	t12-DCE	TCE	VC
TMW-1A	↑	↑	↑	↑	↑	↑
TMW-1B	↓	↓	↓	↓	↑	↓
TMW-2A	↓	↓	↓	↓	↓	↓
TMW-2B	↓	↑	↓	↓	↓	↓
TMW-3A	↓	↓	↓	↓	↓	↓
TMW-3B	↓	↓	↑	↑	↑	↓
TMW-4B	↑	↑	↑	↑	↓	↑
TMW-5B	↓	↑	↓	↓	↓	↓

  - During the 2018 annual event, 1,1-DCE, benzene, cis-1,2-DCE, trans-1,2-DCE, TCE, and vinyl chloride were detected above the PDWS.
    - 1,1-DCE decreased in TMW-1B, TMW-2A, TMW-2B, TMW-3A, TMW-3B, and TMW-5B and increased in TMW-1A and TMW-4B.
    - Benzene decreased in TMW-1B, TMW-2A, TMW-3A, and TMW-3B and increased in TMW-1A, TMW-2B, TMW-4B and TMW-5B.
    - C12-DCE decreased in TMW-1B, TMW-2A, TMW-2B, TMW-3A, and TMW-5B and increased in TMW-1A, TMW-3B, and TMW-4B.
    - T12-DCE decreased in TMW-1B, TMW-2A, TMW-2B, TMW-3A, and TMW-5B and increased in TMW-1A, TMW-3B, and TMW-4B.

- TCE decreased in, TMW-2A, TMW-2B, TMW-3A, TMW-4B and TMW-5B and increased in TMW-1A, TMW-1B, and TMW-3B.
- VC decreased in TMW-1B, TMW-2A, TMW-2B, TMW-3A, TMW-3B, and TMW-5B and increased in TMW-1A and TMW-4B.

- Overall, the detected VOC concentrations were much lower than historical highs at the site.
- A first time VOC detection (vinyl chloride) was reported above the PDWS at 1.9 µg/L in monitoring well MW-100-6.

- Consistent with most monitoring events since 2008, dissolved oxygen levels measured in the groundwater are low. The results indicate that the ORC has completed releasing oxygen into the subsurface since the second ORC injection in August 2009 and reducing conditions have been established in the groundwater as indicated by low ORP and low dissolved oxygen levels.

Recent changes to the monitoring plan including removing five monitoring sites and reducing the sampling frequency from semiannual to annual appears to provide adequate data for determining site conditions. HDR recommends to continue monitoring the site under the current plan with additional review to identify ways to improve efficiency and reduce cost.

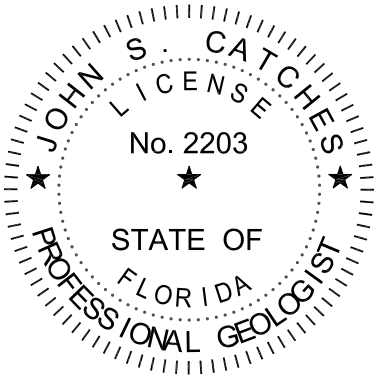
8.0 Professional Certification

This document has been prepared under my direction in substantial accordance with Florida Solid Waste Management Facility Regulations. The information contained within this report is to the best of my knowledge and belief, true, accurate, and complete.

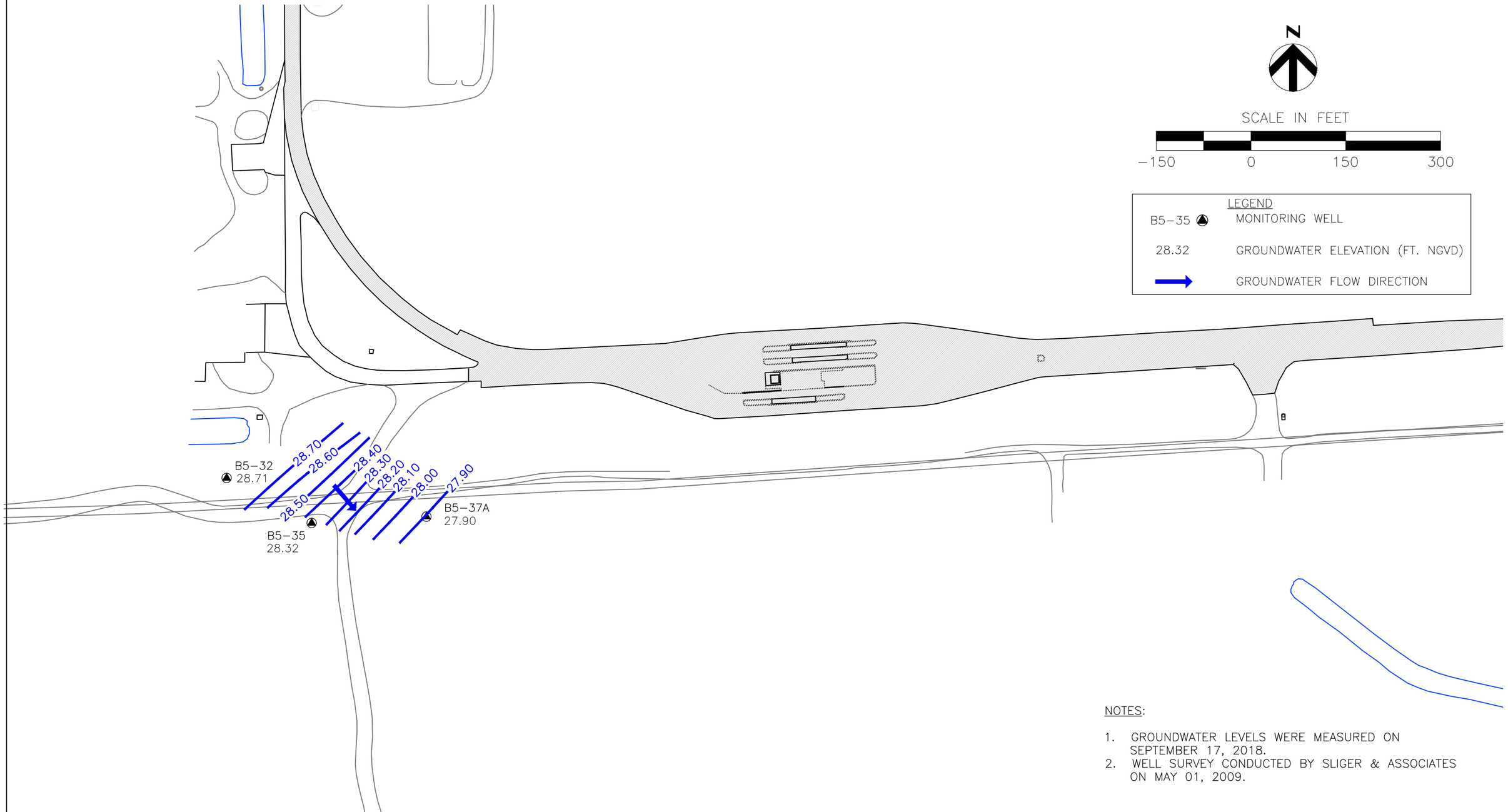
Catches, John

Digitally signed by Catches, John
DN: E=John.Catches@hdrinc.com, CN="Catches, John", OU=Users, OU=Jacksonville-200 West Forsyth St, OU=Florida, OU=United States, OU=Offices, DC=intranet, DC=hdr
Location: HDR Jacksonville
Reason: I am the author of this document
Contact Info: (904)598-8900
Date: 2018.11.29 10:47:53-05'00'

John S. Catches P.G.
HDR Engineering, Inc.
FL PG License No. 2203



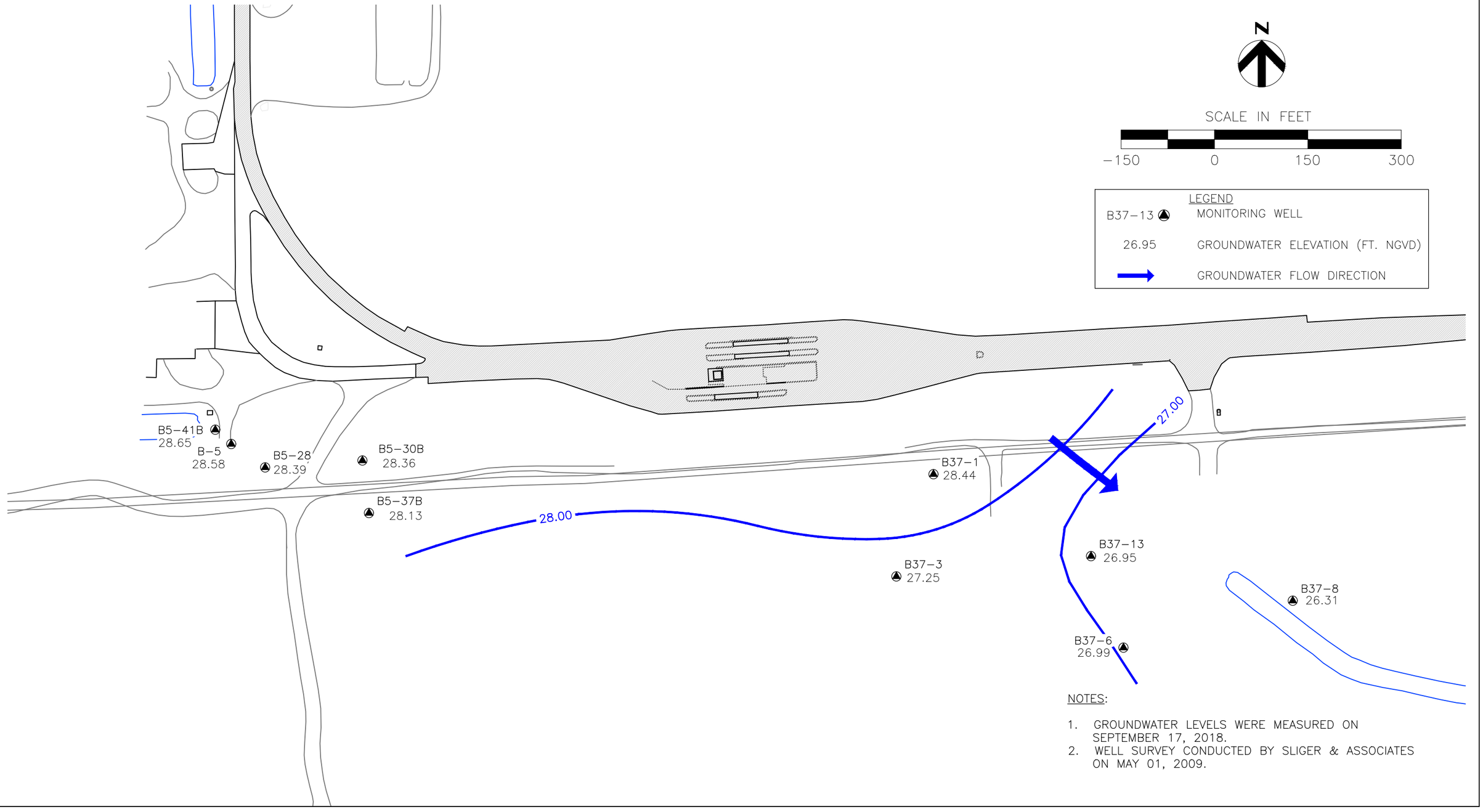
FIGURES



NOTES:

1. GROUNDWATER LEVELS WERE MEASURED ON SEPTEMBER 17, 2018.
2. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.

PROJECT TITLE: TOMOKA FARMS ROAD LANDFILL B5/B37 ASSESSMENT		PROJECT NUMBER: 10114253	REFERENCE SHEET:
SHEET TITLE: ZONES 1&2 GROUNDWATER POTENTIOMETRIC MAP 2018 ANNUAL SAMPLING EVENT		PROJECT MANAGER:	REFERENCE DOCUMENT:
		DATE: OCT. 2018	EXHIBIT NUMBER: 1



NOTES:

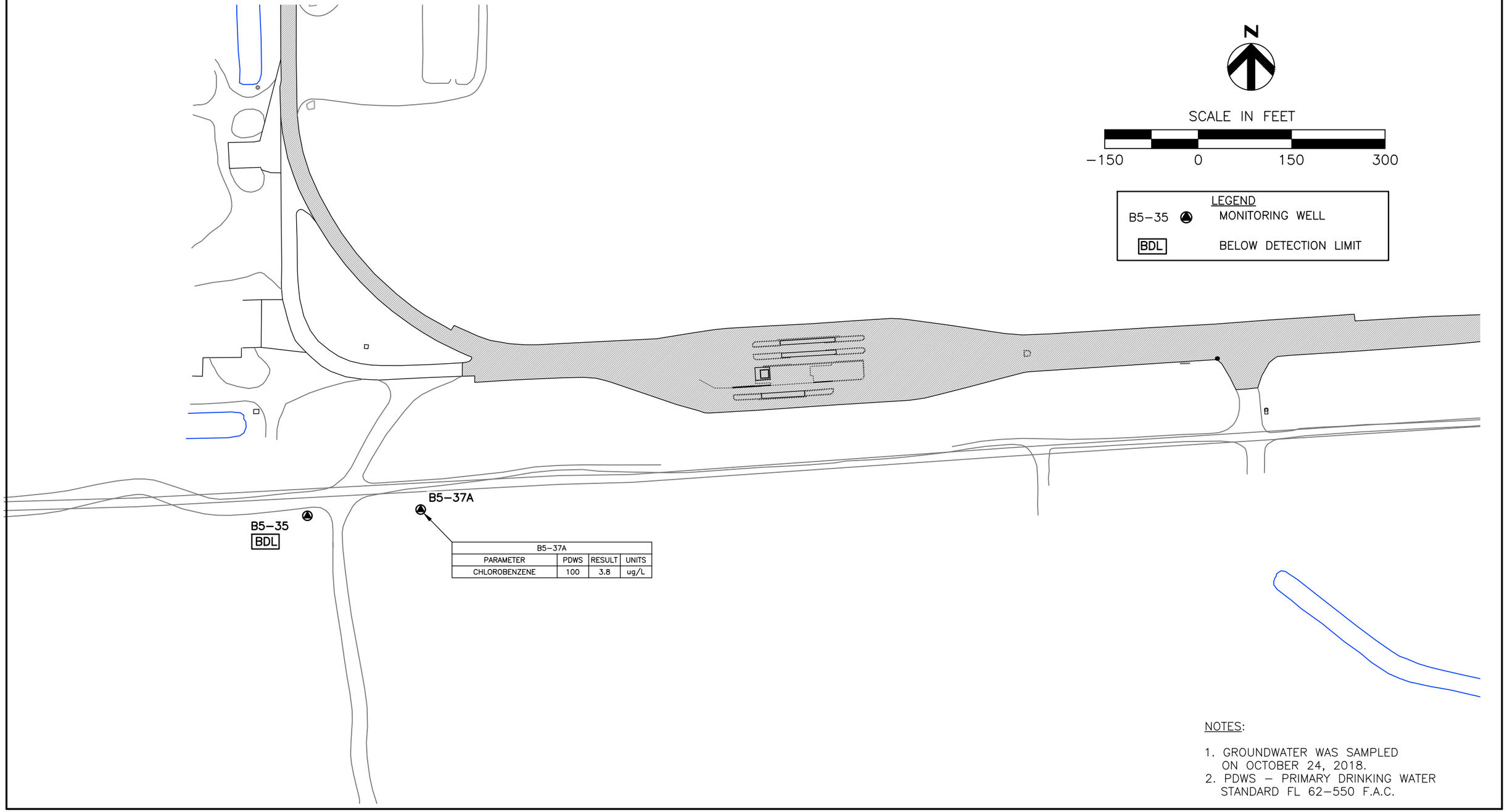
1. GROUNDWATER LEVELS WERE MEASURED ON SEPTEMBER 17, 2018.
2. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.

HDR

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL B5/B37 ASSESSMENT

SHEET TITLE
ZONE 4 GROUNDWATER POTENTIOMETRIC MAP
2018 ANNUAL SAMPLING EVENT

PROJECT NUMBER	REFERENCE SHEET
10114253	
PROJECT MANAGER	REFERENCE DOCUMENT
DATE	EXHIBIT NUMBER
OCT. 2018	2



B5−37A			
PARAMETER	PDWS	RESULT	UNITS
CHLOROBENZENE	100	3.8	ug/L

NOTES:

1. GROUNDWATER WAS SAMPLED ON OCTOBER 24, 2018.
2. PDWS – PRIMARY DRINKING WATER STANDARD FL 62−550 F.A.C.

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL B5/B37 ASSESSMENT

SHEET TITLE
ZONES 1&2 GROUNDWATER DETECTED VOC CONCENTRATION MAP
2018 ANNUAL SAMPLING EVENT

PROJECT NUMBER
10114253

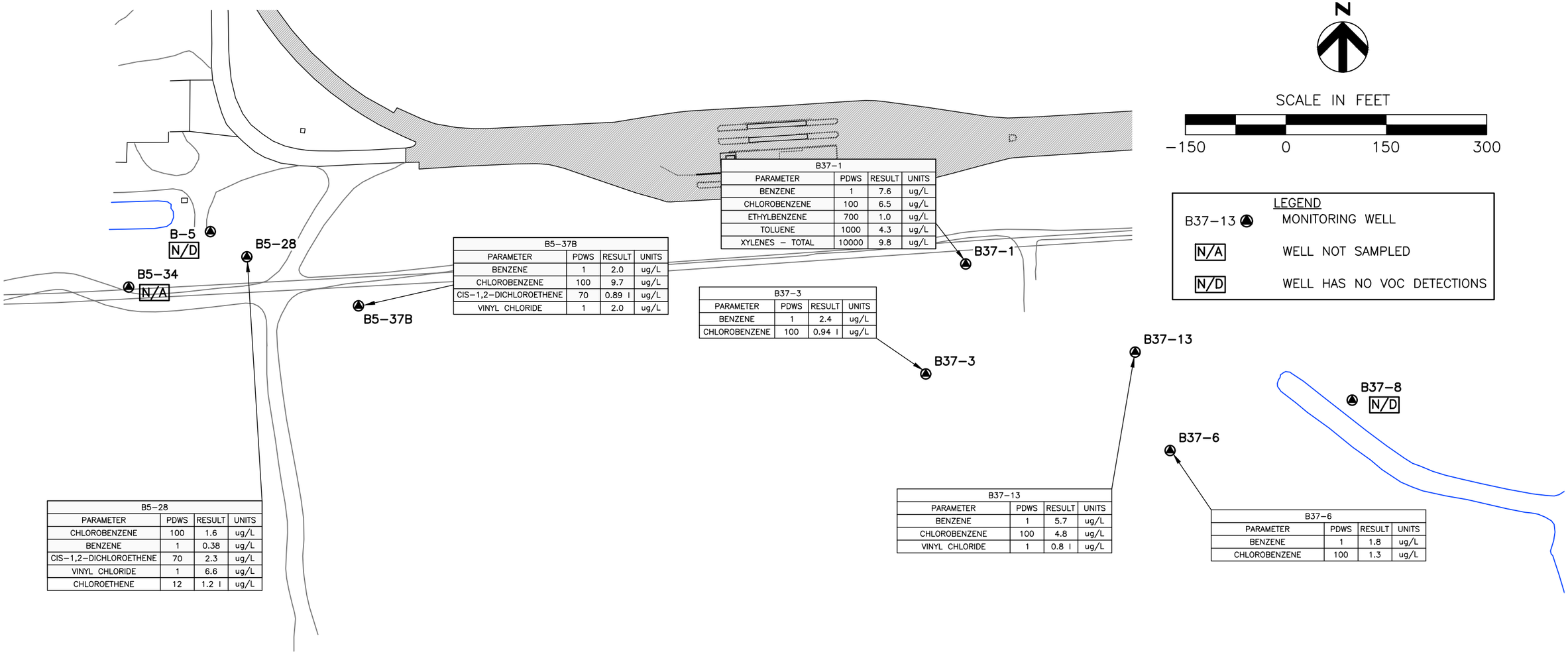
PROJECT MANAGER

DATE
NOV. 2018

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER
3



B5-37B			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	2.0	ug/L
CHLOROBENZENE	100	9.7	ug/L
CIS-1,2-DICHLOROETHENE	70	0.89 I	ug/L
VINYL CHLORIDE	1	2.0	ug/L

B37-1			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	7.6	ug/L
CHLOROBENZENE	100	6.5	ug/L
ETHYLBENZENE	700	1.0	ug/L
TOLUENE	1000	4.3	ug/L
XYLENES - TOTAL	10000	9.8	ug/L

B37-3			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	2.4	ug/L
CHLOROBENZENE	100	0.94 I	ug/L

B5-28			
PARAMETER	PDWS	RESULT	UNITS
CHLOROBENZENE	100	1.6	ug/L
BENZENE	1	0.38	ug/L
CIS-1,2-DICHLOROETHENE	70	2.3	ug/L
VINYL CHLORIDE	1	6.6	ug/L
CHLOROETHENE	12	1.2 I	ug/L

B37-13			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	5.7	ug/L
CHLOROBENZENE	100	4.8	ug/L
VINYL CHLORIDE	1	0.8 I	ug/L

B37-6			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	1.8	ug/L
CHLOROBENZENE	100	1.3	ug/L

N

SCALE IN FEET

-150 0 150 300

LEGEND

B37-13 MONITORING WELL

N/A WELL NOT SAMPLED

N/D WELL HAS NO VOC DETECTIONS

NOTES:

1. GROUNDWATER WAS SAMPLED SEPTEMBER 19-20, 2018.
2. PDWS - PRIMARY DRINKING WATER STANDARD FL 62-550 F.A.C.

PROJECT TITLE

TOMOKA FARMS ROAD LANDFILL B5/B37 ASSESSMENT

SHEET TITLE

ZONE 4 GROUNDWATER DETECTED VOC CONCENTRATION MAP
2018 ANNUAL SAMPLING EVENT

PROJECT NUMBER 10114253

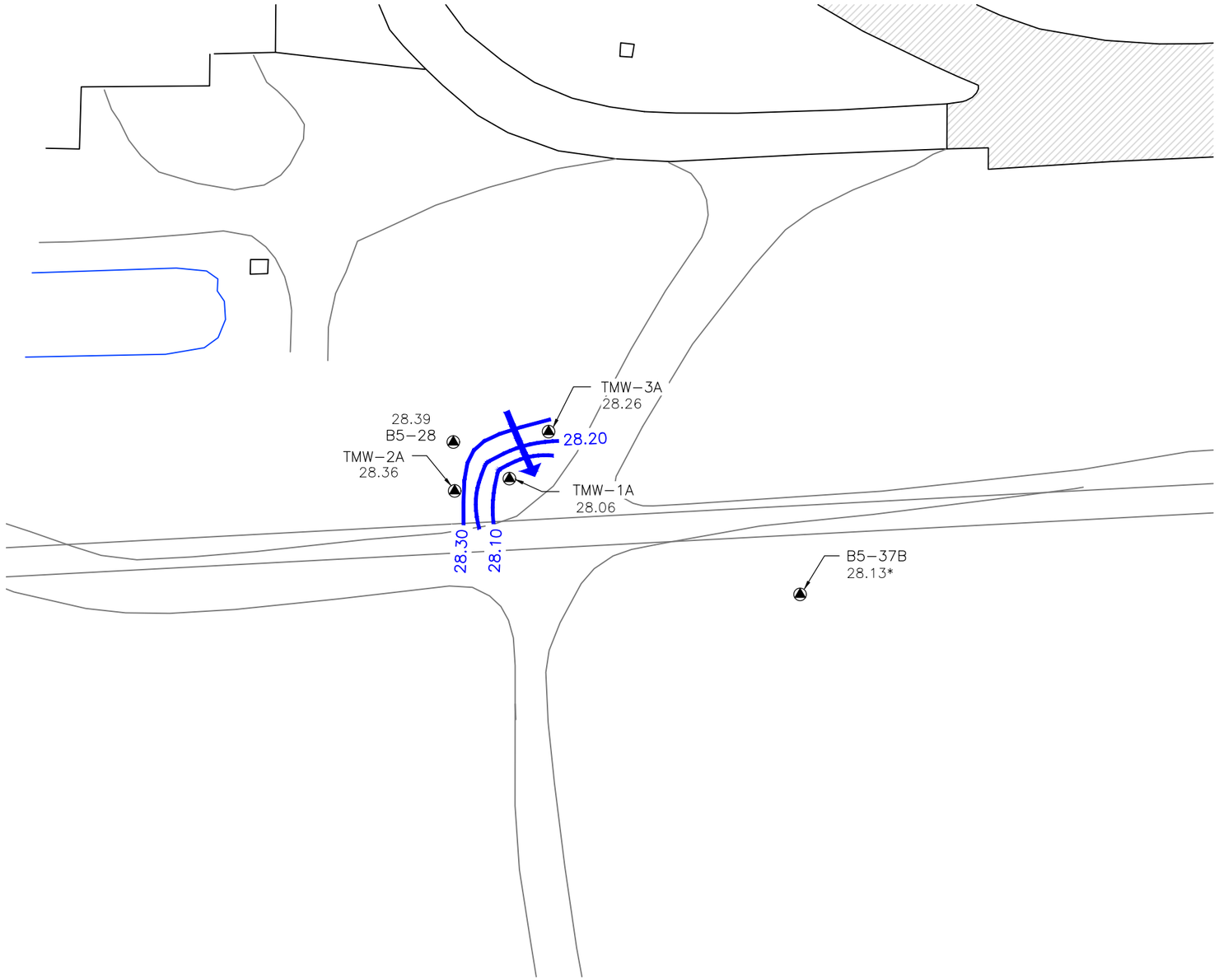
PROJECT MANAGER

DATE OCT. 2018

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER 4



N

SCALE IN FEET

−60 −30 0 60 120

LEGEND

B5–28 ▲	MONITORING WELL
28.39	GROUNDWATER ELEVATION (FT. NGVD)
28.13*	GROUNDWATER ELEVATION NOT USED FOR CONTOURING
→	GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED ON SEPTEMBER 17, 2018.
2. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL REMEDIATION STATUS MONITORING

SHEET TITLE
ZONE 4 GROUNDWATER POTENTIOMETRIC MAP
2018 ANNUAL SAMPLING EVENT

PROJECT NUMBER
10114253

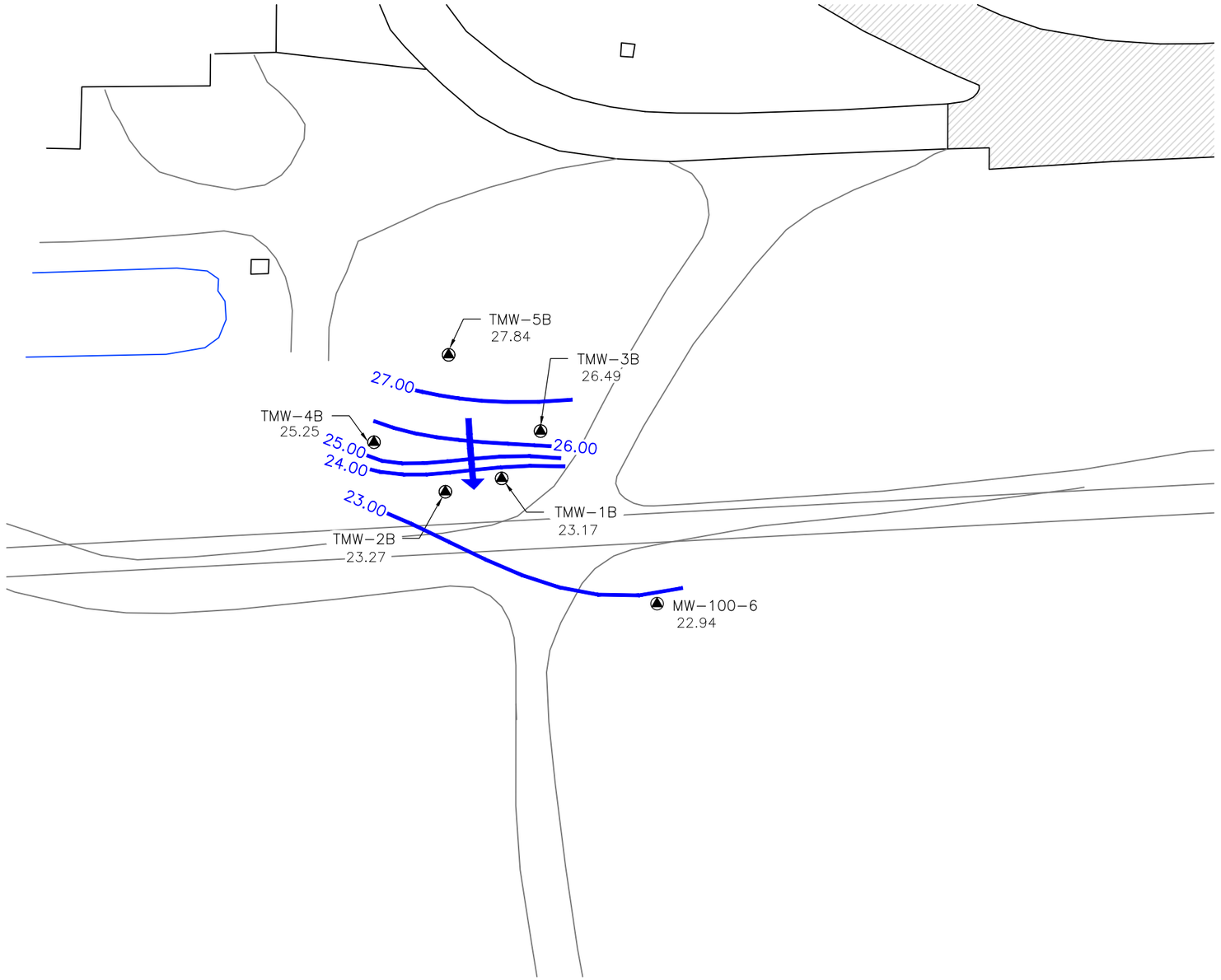
PROJECT MANAGER

DATE
OCT. 2018

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER
5



N

SCALE IN FEET

−60 −30 0 60 120

LEGEND

TMW–5B ▲	MONITORING WELL
27.84	GROUNDWATER ELEVATION (FT. NGVD)
→	GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED ON SEPTEMBER 17, 2018.
2. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL REMEDIATION STATUS MONITORING

SHEET TITLE
ZONE 6 GROUNDWATER POTENTIOMETRIC MAP
2018 ANNUAL SAMPLING EVENT

PROJECT NUMBER
10114253

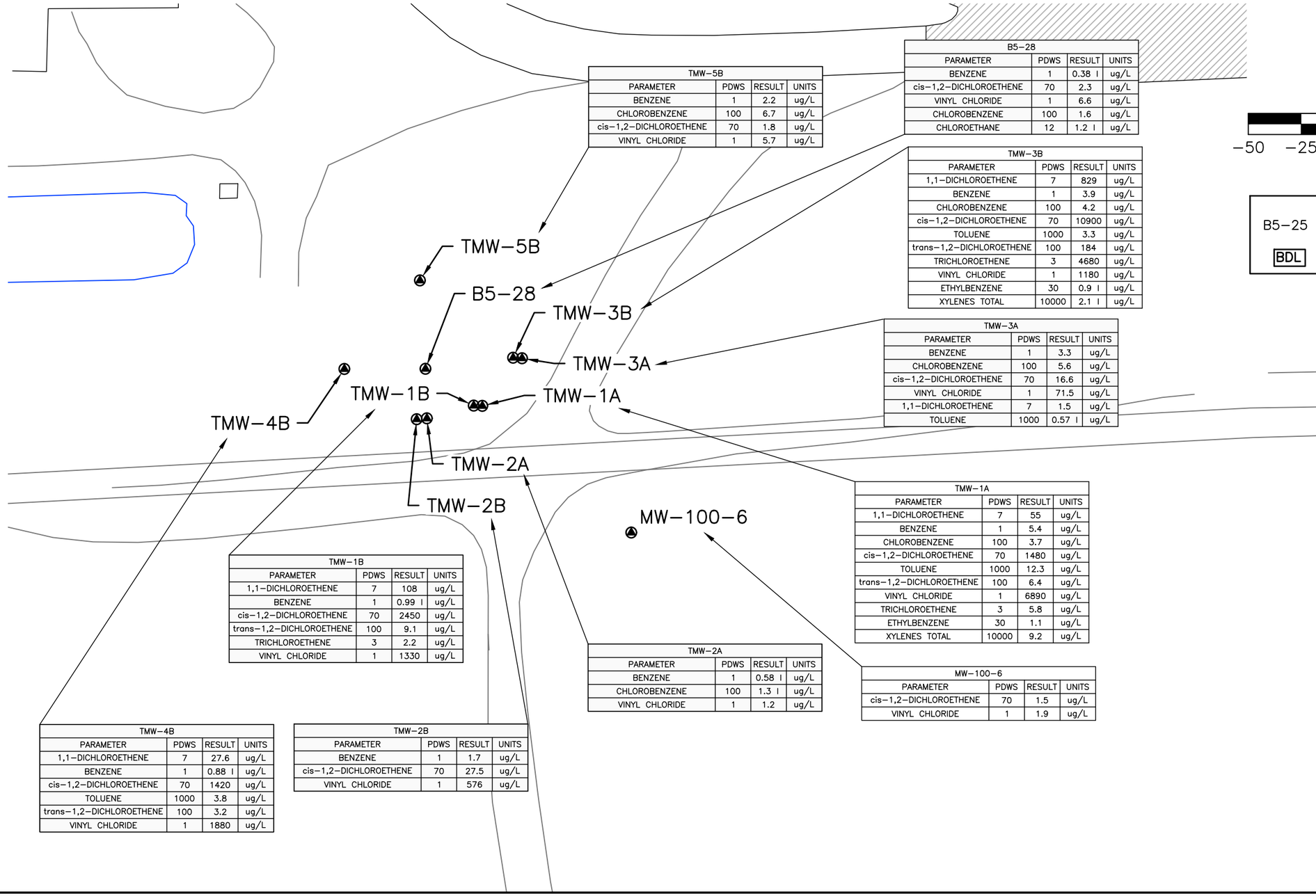
PROJECT MANAGER

DATE
OCT. 2018

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER
6



TMW–5B			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	2.2	ug/L
CHLOROBENZENE	100	6.7	ug/L
cis–1,2–DICHLOROETHENE	70	1.8	ug/L
VINYL CHLORIDE	1	5.7	ug/L

B5–28			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	0.38 I	ug/L
cis–1,2–DICHLOROETHENE	70	2.3	ug/L
VINYL CHLORIDE	1	6.6	ug/L
CHLOROBENZENE	100	1.6	ug/L
CHLOROETHANE	12	1.2 I	ug/L

TMW–3B			
PARAMETER	PDWS	RESULT	UNITS
1,1–DICHLOROETHENE	7	829	ug/L
BENZENE	1	3.9	ug/L
CHLOROBENZENE	100	4.2	ug/L
cis–1,2–DICHLOROETHENE	70	10900	ug/L
TOLUENE	1000	3.3	ug/L
trans–1,2–DICHLOROETHENE	100	184	ug/L
TRICHLOROETHENE	3	4680	ug/L
VINYL CHLORIDE	1	1180	ug/L
ETHYLBENZENE	30	0.9 I	ug/L
XYLENES TOTAL	10000	2.1 I	ug/L

TMW–3A			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	3.3	ug/L
CHLOROBENZENE	100	5.6	ug/L
cis–1,2–DICHLOROETHENE	70	16.6	ug/L
VINYL CHLORIDE	1	71.5	ug/L
1,1–DICHLOROETHENE	7	1.5	ug/L
TOLUENE	1000	0.57 I	ug/L

TMW–1A			
PARAMETER	PDWS	RESULT	UNITS
1,1–DICHLOROETHENE	7	55	ug/L
BENZENE	1	5.4	ug/L
CHLOROBENZENE	100	3.7	ug/L
cis–1,2–DICHLOROETHENE	70	1480	ug/L
TOLUENE	1000	12.3	ug/L
trans–1,2–DICHLOROETHENE	100	6.4	ug/L
VINYL CHLORIDE	1	6890	ug/L
TRICHLOROETHENE	3	5.8	ug/L
ETHYLBENZENE	30	1.1	ug/L
XYLENES TOTAL	10000	9.2	ug/L

TMW–1B			
PARAMETER	PDWS	RESULT	UNITS
1,1–DICHLOROETHENE	7	108	ug/L
BENZENE	1	0.99 I	ug/L
cis–1,2–DICHLOROETHENE	70	2450	ug/L
trans–1,2–DICHLOROETHENE	100	9.1	ug/L
TRICHLOROETHENE	3	2.2	ug/L
VINYL CHLORIDE	1	1330	ug/L

TMW–2A			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	0.58 I	ug/L
CHLOROBENZENE	100	1.3 I	ug/L
VINYL CHLORIDE	1	1.2	ug/L

MW–100–6			
PARAMETER	PDWS	RESULT	UNITS
cis–1,2–DICHLOROETHENE	70	1.5	ug/L
VINYL CHLORIDE	1	1.9	ug/L

TMW–4B			
PARAMETER	PDWS	RESULT	UNITS
1,1–DICHLOROETHENE	7	27.6	ug/L
BENZENE	1	0.88 I	ug/L
cis–1,2–DICHLOROETHENE	70	1420	ug/L
TOLUENE	1000	3.8	ug/L
trans–1,2–DICHLOROETHENE	100	3.2	ug/L
VINYL CHLORIDE	1	1880	ug/L

TMW–2B			
PARAMETER	PDWS	RESULT	UNITS
BENZENE	1	1.7	ug/L
cis–1,2–DICHLOROETHENE	70	27.5	ug/L
VINYL CHLORIDE	1	576	ug/L

N

SCALE IN FEET

−50 −25 0 50 100

LEGEND

B5–25 MONITORING WELL

BDL BELOW DETECTION LIMIT

NOTES:

1. GROUNDWATER WAS SAMPLED ON SEPTEMBER 18–20, 2018.
2. PDWS – PRIMARY DRINKING WATER STANDARD FL 62–550 F.A.C.

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL REMEDIATION STATUS MONITORING

SHEET TITLE
ZONES 4&6 GROUNDWATER DETECTED VOC CONCENTRATION MAP
2018 ANNUAL REMEDIATION MONITORING EVENT

PROJECT NUMBER
10114253

PROJECT MANAGER

DATE
OCT. 2018

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER
7

ATTACHMENTS

Attachment 1
Chronology of Post Remediation Monitoring

Attachment 1

Chronology of Post-Remediation Groundwater Monitoring

Event	Start Date	End Date	Comment
LSRAP Approval Order Issued	3/19/2009	3/19/2009	Approved LSRAP Addendum
Monitoring Well Installations	4/7/2009	4/13/2009	10 temporary monitoring wells
Groundwater Sampling Event #1	4/21/2009	4/22/2009	Baseline Groundwater Sampling
Submittal of Monitoring Well Installation Report to FDEP	6/9/2009	6/9/2009	Completed
First RegenOX™ Injection	6/22/2009	7/3/2009	Injected 5,400 lbs of RegenOX™ diluted in approximately 9,000 gallons of water.
Groundwater Sampling Event #2	7/14/2009	7/17/2009	Performed between injection events, 11-days following completion of 1st injection.
Second RegenOX™ /ORC Injection	8/10/2009	8/20/2009	Injected 5,400 lbs of RegenOX™ and 1,688 lbs of ORC diluted in approximately 9,000 gallons of water.
Submittal of 1st Remedial Action Status Report to the FDEP	8/26/2009	8/26/2009	FDEP responded on November 23, 2009 following the submittal of the 2nd remedial status report. No comments received.
Groundwater Sampling Event #3	9/2/2009	9/3/2009	13-days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #4	9/15/2009	9/17/2009	26 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #5	9/28/2009	9/30/2009	39 days following completion of 2nd injection (ORC injection).
Submittal of 2nd Remedial Action Status Report to the FDEP	10/30/2009	10/30/2009	FDEP responded on November 23, 2009 with no comments. Next remedial status report due by February 25, 2010.
Groundwater Sampling Event #6	10/14/2009	10/15/2009	53 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #7	11/10/2009	11/11/2009	80 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #8	12/8/2009	12/9/2009	108-days following completion of 2nd injection (ORC injection).
Submittal of 3rd Remedial Action Status Report to the	01/25/2010	01/25/2010	FDEP responded on April 19, 2010 with no comments. Next

FDEP			remedial status report due by May 28, 2010.
Groundwater Sampling Event #9	3/10/2010	3/11/2010	200 days following completion of 2nd injection (ORC injection).
Submittal of 4th Remedial Action Status Report to the FDEP	5/17/2010	5/17/2010	FDEP responded on June 22, 2010. FDEP requested a site map with well locations for all future status reports. Next remedial status report due by August 27, 2010.
Groundwater Sampling Event #10	6/2/2010	6/4/2010	286 days following completion of 2nd injection (ORC injection).
Submittal of 5th Remedial Action Status Report to the FDEP	8/25/2010	8/25/2010	FDEP responded with no comments on February 23, 2011. Next remedial status report due by March 25, 2011
Groundwater Sampling Event #11	9/9/2010	9/11/2010	385 days following completion of 2nd injection (ORC injection).
Submittal of 6th Remedial Action Status Report to the FDEP	10/25/2010	10/25/2010	FDEP responded with no comments on February 23, 2011. Next remedial status report due by March 25, 2011
Groundwater Sampling Event #12	12/7/2010	12/9/2010	443 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #13	3/8/2011	3/10/2011	564 days following completion of 2nd injection (ORC injection).
Submittal of 7th Remedial Action Status Report to the FDEP	06/20/2011	06/20/2011	FDEP responded with no comments on February 23, 2011. Comprehensive report due by October 22, 2011
Groundwater Sampling Event #14	7/5/2011	7/7/2011	684 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #15	09/27/2011	09/28/2011	768 days following completion of 2nd injection (ORC injection).
Request Time Extension for Comprehensive Report	10/25/2010	10/25/2010	FDEP granted extension. Comprehensive report due by November 22, 2011
Submittal of Comprehensive Report	11/22/2011	11/22/2011	FDEP responded with no comments on April 2, 2012.
Groundwater Sampling Event #16	12/27/2011	12/28/2011	859 days following completion of 2nd injection (ORC injection).
Submittal of 8th Remedial Action Status Report to the FDEP	03/26/2012	03/26/2012	Awaiting FDEP comments.
Groundwater Sampling Event #17	3/13/2012	3/14/2012	936 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #18	9/24/2012	9/25/2012	1131 days following completion of 2nd injection (ORC injection).

Groundwater Sampling Event #19	3/7/2013	3/8/2013	1295 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #20	9/18/2013	9/19/2013	1459 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #21	3/10/2014	3/13/2014	1663 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #22	9/15/2014	9/15/2014	1849 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #23	3/10/2015	3/13/2015	2027 days following completion of 2nd injection (ORC injection)
Groundwater Sampling Event #24	9/14/2015	10/1/2015	2216 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #25	3/16/2016	3/18/2016	2394 days following completion of 2nd injection (ORC injection).
Submittal: Request to Modify Monitoring Plan	9/12/2016	9/12/2016	2581 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #26	9/19/2016	9/28/2016	2588 days following completion of 2nd injection (ORC injection).
FDEP Letter	3/1/2017	3/1/2017	Reduced monitoring requirement to annually in fall each year.
Groundwater Sampling Event #27	9/28/2017	9/29/2017	2962 days following completion of 2nd injection (ORC injection).
Groundwater Sampling Event #28	10/18/2018	10/24/2018	3352 days following completion of 2nd injection (ORC injection).

Attachment 2
Historical VOCs Detected Data –B5 Area
Assessment Monitoring

Attachment 2a.
Historical 1,1-Dichloroethene (µg/L) Detected Data - B5 Area Assessment Monitoring
Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	B5-35	B5-37A	B5-28	B5-37B
Jun-04	0.1 U	0.1 U	0.26 I	0.1 U
Oct-04	0.4 U	0.4 U	11	0.4 U
Dec-04	0.4 U	0.4 U	38	0.4 U
Mar-05	0.4 U	0.4 U	2 U	0.4 U
Jun-05	0.4 U	----	----	----
Sep-05	0.4 U	0.4 U	130	0.4 U
Dec-05	0.4 U	0.4 U	23	0.4 U
Mar-06	0.4 U	0.4 U	490	0.4 U
Jun-06	0.81 U	0.81 U	460	0.81 U
Sep-06	0.81 U	4.1	800	2.2
Dec-06	0.81 U	0.81 U	1500	0.81 U
Feb-07	0.81 U	0.81 U	1300	5.7
Jun-07	0.81 U	0.81 U	1000	0.81 U
Sep-07	0.81 U	0.81 U	1200	0.81 U
Dec-07	0.81 U	0.81 U	790	0.81 U
Mar-08	0.81 U	0.81 U	370	0.81 U
Sep-08	0.5 U	0.5 U	920	0.5 U
Mar-09	0.5 U	0.5 U	680	0.5 U
Sep-09	0.29 U	0.29 U	2400	0.29 U
May-10	0.30 U	0.30 U	660	0.30 U
Sep-10	0.5 U	0.5 U	1020	0.5 U
Mar-11	0.5 U	1.0 U	123 I	0.5 U
Sep-11	0.5 U	0.5 U	0.73 I	0.5 U
Mar-12	0.5 U	0.5 U	1.4	0.5 U
Sep-12	0.5 U	0.5 U	0.5 U	0.5 U
Mar-13	0.5 U	0.5 U	3.4	0.5 U
Sep-13	0.5 U	0.5 U	0.5 U	0.5 U
Mar-14	0.5 U	0.5 U	0.5 U	0.5 U
Sep-14	0.5 U	0.5 U	1.3	0.5 U
Mar-15	----	0.5 U	1.3	0.5 U
Sep-15	0.5 U	0.5 U	0.5 U	0.5 U
Mar-16	0.5 U	0.5 U	1.10	0.5 U
Sep-16	0.5 U	0.5 U	0.5 U	0.5 U
Sep-17	0.5 U	0.5 U	0.5 U	0.1 U
Sep-18	0.5U	0.5U	0.5U	0.5 U

Notes:
U = Non-detect or below the Detection Limit.
I = Analyte detected below the Practical Quantitation Limit.
Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 7 µg/L.
µg/L = micrograms per liter.
--- = not analyzed.

Attachment 2b.

Historical Benzene (µg/L) Detected Data - B5 Area Assessment Monitoring

Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	**B5-35**	**B5-37A**	**B5-28**	**B5-37B**
Jun-04	0.31 U	1.1	3.9	8
Oct-04	0.23 U	1.2	5	6.4
Sep-10	0.5 U	0.5 U	7.9	2.7
Mar-11	0.5 U	1.0 U	75.0 U	1.7
Sep-11	0.5 U	0.5 U	1.2	2
Mar-12	0.5 U	0.5 U	1	1.3
Sep-12	0.5 U	0.5 U	0.73 I	1.3
Mar-13	0.5	0.5 U	1.1	2
Sep-13	0.1 U	0.1 U	1	1.1
Mar-14	0.1 U	0.1 U	0.85 I	1.9
Sep-14	0.3 I	0.1 U	1.1	2.4
Mar-15	----	0.11 I	1.1	2.5
Sep-15	0.1 U	0.11 I	1.3	2.8
Mar-16	0.1 U	0.1 U	1.3	2.0
Sep-16	0.1 U	0.1 U	0.78 I	2.1
Sep-17	1.5 U	0.1 U	0.28 I	0.1 U
Sep-18	0.1 U	0.1 U	0.38 I	2.0

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 1 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 2c.

Historical cis-1,2-Dichloroethene (µg/L) Detected Data - B5 Area Assessment Monitoring

Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	**B5-35**	**B5-37A**	**B5-28**	**B5-37B**
Jun-04	0.15 U	0.15 U	6.7	0.15 U
Oct-04	0.17 U	0.17 U	230	0.17 U
Dec-04	0.17 U	0.17 U	800	0.17 U
Mar-05	0.17 U	0.17 U	77	0.17 U
Jun-05	0.17 U	----	----	----
Sep-05	0.17 U	3.4	1700	7
Dec-05	0.17 U	0.17 U	390	0.17 U
Mar-06	0.17 U	0.17 U	3600	0.17 U
Jun-06	0.92 U	0.92 U	3400	0.92 U
Sep-06	0.92 U	18	5700	8.4
Dec-06	0.92 U	5.3	9000	7.3
Feb-07	0.92 U	0.92 U	6700	26
Jun-07	0.92 U	0.92 U	7100	0.92 U
Sep-07	0.92 U	0.92 U	10000	0.92 U
Dec-07	0.92 U	0.92 U	7000	0.92 U
Mar-08	0.92 U	0.92 U	4700	0.92 U
Sep-08	0.5 U	0.5 U	7700	0.5 U
Mar-09	0.5 U	0.5 U	7400	0.5 U
Sep-09	0.28 U	0.28 U	14000	0.28 U
May-10	0.28 U	0.28 U	4200	0.28 U
Sep-10	0.5 U	0.5 U	4490	0.50 U
Mar-11	0.8 I	1.0 U	780	0.5 U
Sep-11	0.5 U	0.5 U	6.8	0.5 U
Mar-12	0.5 U	0.5 U	15	0.5 U
Sep-12	0.5 U	0.5 U	8.1	0.5 U
Mar-13	0.5 U	0.5 U	72.7	0.5 U
Sep-13	0.5 U	0.5 U	5.4	0.5 U
Mar-14	0.5 U	0.5 U	1.4	0.5 U
Sep-14	0.5 U	0.5 U	4.5	0.93 I
Mar-15	----	0.5 U	22.1	0.77 I
Sep-15	0.5 U	0.5 U	44.1	0.84 I
Mar-16	0.5 U	0.5 U	59.3	0.61 I
Sep-16	0.5 U	0.5 U	0.59 I	0.5 U
Sep-17	0.5 U	0.5 U	0.83 I	0.1 U
Sep-18	0.5 U	0.5 U	2.3	0.89 I

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 70 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 2d.

HistoricalTrichloroethene (µg/L) Detected Data - B5 Area Assessment Monitoring

Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	B5-37A	B5-35	B5-28	B5-37B
Jun-04	0.15 U	0.15 U	0.15 U	0.15 U
Oct-04	0.27 U	0.27 U	0.79 I	0.27 U
Dec-04	0.27 U	0.27 U	2.4	0.27 U
Mar-05	0.27 U	0.27 U	1.4 U	0.27 U
Jun-05	----	0.27 U	----	----
Sep-05	0.27 U	0.27 U	0.82 I	0.27 U
Dec-05	0.27 U	0.27 U	0.33 I	0.27 U
Mar-06	0.27 U	0.27 U	82	0.27 U
Jun-06	0.61 U	0.61 U	34	0.61 U
Sep-06	0.67 I	0.61 U	110	0.61 U
Dec-06	0.61 U	0.61 U	57	0.61 U
Feb-07	0.61 U	0.61 U	250	0.68 I
Jun-07	0.61 U	0.61 U	330	0.61 U
Sep-07	0.61 U	0.61 U	4.9 U	0.61 U
Dec-07	0.61 U	0.61 U	61 U	0.61 U
Mar-08	0.61 U	0.61 U	61 U	0.61 U
Sep-08	0.5 U	0.5 U	25 U	0.5 U
Mar-09	0.5 U	0.5 U	50 U	0.5 U
Sep-09	0.36 U	0.36 U	640	0.36 U
May-10	0.36 U	0.36 U	36	0.36 U
Sep-10	0.5 U	0.5 U	23.1	0.5 U
Mar-11	0.5 U	1.0 U	75 U	0.5 U
Sep-11	0.5 U	0.5 U	0.5 U	0.5 U
Mar-12	0.5 U	0.5 U	0.5 U	0.5 U
Sep-12	0.5 U	0.5 U	0.5 U	0.5 U
Mar-13	0.5 U	0.5 U	72.1	0.5 U
Sep-13	0.5 U	0.5 U	0.5 U	0.5 U
Mar-14	0.5 U	0.5 U	0.5 U	0.5 U
Sep-14	0.5 U	0.5 U	21.6	0.5 U
Mar-15	0.5 U	----	0.5 U	0.5 U
Sep-15	0.5 U	0.5 U	0.5 U	0.5 U
Mar-16	0.5 U	0.5 U	0.5 U	0.5 U
Sep-16	0.5 U	0.5 U	0.5 U	0.5 U
Sep-17	0.5 U	0.5 U	0.5 U	0.1 U
Sep-18	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 3 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 2e.
Historical Vinyl Chloride (µg/L) Detected Data - B5 Area Assessment Monitoring
Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	**B5-35**	**B5-37A**	**B5-28**	**B5-37B**
Jun-04	0.14 U	0.14 U	520	0.14 U
Oct-04	0.43 U	0.43 U	2600	0.43 U
Dec-04	0.43 U	0.43 U	3000	0.43 U
Mar-05	0.43 U	0.87 I	500	1.1
Jun-05	0.43 U	----	----	----
Sep-05	0.43 U	3.7	3000	7.4
Dec-05	0.43 U	0.43 U	550	0.43 U
Mar-06	0.43 U	0.43 U	2700	0.43 U
Jun-06	0.37 U	0.37 U	2000	0.37 U
Sep-06	0.37 U	8.5	4800	3.7
Dec-06	0.37 U	0.91 I	6100	1.2
Feb-07	0.37 U	0.37 U	5800	18
Jun-07	0.37 U	0.37 U	12000	0.37 U
Sep-07	0.37 U	0.37 U	10000	0.37 U
Dec-07	0.37 U	0.37 U	11000	0.37 U
Mar-08	0.37 U	0.37 U	6600	0.37 U
Sep-08	0.53 U	0.53 U	11000	0.53 U
Mar-09	0.53 U	0.53 U	12000	0.53 U
Sep-09	0.37 U	0.37 U	8500	0.37 U
May-10	0.40 U	0.40 U	2000	0.40 U
Sep-10	0.5 U	0.5 U	2460	0.5 U
Mar-11	0.58 I	1.0 U	596	0.5 U
Sep-11	0.5 U	0.5 U	185	0.5 U
Mar-12	0.5 U	0.5 U	48.2	0.5 U
Sep-12	0.5 U	0.5 U	45.3	0.5 U
Mar-13	33.3	0.5 U	341	0.5 U
Sep-13	11.2	0.5 U	112	0.5 U
Mar-14	0.64 I	0.5 U	23.7	0.5 U
Sep-14	2.1	0.5 U	13.8	0.5 U
Mar-15	----	0.5 U	57.5	0.5 U
Sep-15	0.5 U	0.5 U	290 J	0.5 U
Mar-16	0.5 U	0.5 U	651 L	0.5 U
Sep-16	0.5 U	0.5 U	**4.6**	0.5 U
Sep-17	0.5 U	0.5 U	**3.9**	0.1 U
Sep-18	0.5 U	0.5 U	**6.6**	**2**

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

J = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

L = Off-scale high and the actual value is known to be higher than the value given.

Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 1 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 2f.

Historical Xylenes (µg/L) Detected Data- B5 Area Assessment Monitoring

Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 1-2		Zone 4	
Date	B5-35	B5-37A	B5-28	B5-37B
Jun-04	0.72 I	0.65 I	22	1.5
Oct-04	0.32 U	0.65 I	46	1.1
Dec-04	0.32 U	0.32 U	33	1.1
Mar-05	0.32 U	0.32 U	3.6 I	0.32 U
Jun-05	0.32 U	----	----	----
Sep-05	0.32 U	0.68 I	14	1.3
Dec-05	0.32 U	0.32 U	2.6	0.32 I
Mar-06	0.32 U	0.32 U	12	0.86 I
Jun-06	0.32 U	0.32 U	6.4	0.48 I
Sep-06	0.32 U	0.43 I	15	0.57 I
Dec-06	0.77 I	0.37 I	25	0.78 I
Feb-07	0.32 U	0.32 U	19	0.32 U
Jun-07	0.32 U	0.32 U	34	0.72 I
Sep-07	0.32 U	0.32 U	53	0.32 U
Dec-07	0.32 U	0.32 U	32 U	0.32 U
Mar-08	0.32 U	0.32 U	32 U	1.6
Sep-08	1 U	1 U	50 U	1 U
Mar-09	1 U	1 U	100 U	1 U
Sep-09	0.63 I	0.59 U	23	0.59 U
May-10	0.63 U	0.63 U	8.7	0.96 I
Sep-10	0.5 U	0.5 U	9.9	1.2
Mar-11	1.8	1.0 U	75	2.4
Sep-11	0.5 U	0.60 I	0.5 U	1.3
Mar-12	0.5 U	0.87 I	0.93 I	1.4
Sep-12	0.5 U	0.58 I	0.5 U	0.86 I
Mar-13	1.7	0.5	0.5 U	1.1
Sep-13	0.5 U	0.5 U	0.5 U	0.76 I
Mar-14	0.5 U	0.5 U	0.5 U	0.93 I
Sep-14	0.67 I	0.5 U	0.5 U	0.93 I
Mar-15	----	0.5 U	0.5 U	0.5 U
Sep-15	0.5 U	0.5 U	0.5 U	0.5 U
Mar-16	1.5 U	1.5 U	1.5 U	1.5 U
Sep-16	1.5 U	1.5 U	1.5 U	1.5 U
Sep-17	1.5 U	1.5 U	1.5 U	0.1 U
Sep-18	1.5 U	1.5 U	1.5 U	1.5 U

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

Yellow Highlight = Exceeded Groundwater Cleanup Target Level (62-777 F.A.C.) of 20 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 3
Historical Benzene Detected Data – B37 Area Assessment Monitoring

Attachment 3.

Historical Benzene (µg/L) Detected Data - B37 Area Assessment Monitoring

Tomoka Farms Road Landfill, Volusia County, Florida

Aquifer Zone	Zone 4				
Date	**B37-1**	**B37-3**	**B37-6**	**B37-8**	**B37-13**
Jun-04	13	6.9	4.5	0.31 U	0.31 U
Oct-04	13	6.2	0.23 U	0.23 U	8.8
Dec-04	9.3	6.3	1.1	0.23 U	5
Mar-05	4.5	3.7	0.23 U	0.23 U	7.7
Jun-05	8.8	3.5	0.23 U	0.23 U	6.9
Mar-11	10.8	5	9.3	0.5 U	12.2
Sep-11	11.4	4.2	7.4	0.5 U	14.2
Mar-12	10	3	7.8	0.5 U	10.1
Sep-12	9.1	0.1 U	0.1 U	0.1 U	5.1
Mar-13	9.6	3.3	8.2	0.1 U	13.2
Sep-13	9.5	0.1 U	0.1 U	0.1 U	3.9
Mar-14	2.4	2.7	1.6	0.1 U	3.9
Sep-14	11.4	2.6	6.6	0.1 U	13.1
Mar-15	10.1	2.3	4.9	0.1 U	4.0
Sep-15	10.6	2.7	4.6	0.1 U	12.6
Mar-16	11.1	3.6	5.1	0.1 U	6.5
Sep-16	8.8	11.9	3.7	0.1 U	0.1 U
Sep-17	4.2	2.7	2.8	0.1 U	10.1
Sep-18	7.6	2.4	1.8	0.1 U	5.7

Notes:

U = Non-detect or below the Detection Limit.

I = Analyte detected below the Practical Quantitation Limit.

Yellow Highlight = Exceeded Primary Drinking Water Standard (62-550 F.A.C.) of 1 µg/L.

µg/L = micrograms per liter.

--- = not analyzed.

Attachment 4
Historical Detected
Groundwater VOCs Data
- Post Remediation Status Monitoring

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
1,1-Dichloroethane	10/20/08	µg/L	70***	<0.5	----	----	----	----	----	----	----	----	----
1,1-Dichloroethane	04/20/09	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.87 I
1,1-Dichloroethane	07/13/09	µg/L	70***	<1.0	----	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<3.0
1,1-Dichloroethane	09/01/09	µg/L	70***	<0.63	----	<0.21	<0.21	<21	<21	<0.21	<42	<2.1	<42
1,1-Dichloroethane	09/14/09	µg/L	70***	<21	----	<10	<4.2	<100	<21	<0.21	<42	<2.1	<42
1,1-Dichloroethane	09/28/09	µg/L	70***	<21	----	<10	<4.2	<100	<21	<0.21	<42	<2.1	<42
1,1-Dichloroethane	10/14/09	µg/L	70***	<21	----	<10	<4.2	<100	<21	<0.21	<42	<2.1	<42
1,1-Dichloroethane	11/09/09	µg/L	70***	<21	----	<10	<4.2	<100	<21	<0.21	<42	<2.1	<42
1,1-Dichloroethane	12/07/09	µg/L	70***	<21	----	<2.1	<4.2	<100	<21	<0.63	<10	<2.1	<100
1,1-Dichloroethane	03/09/10	µg/L	70***	<21	----	<0.21	<0.21	<100	<21	<0.42	<10	<2.1	<100
1,1-Dichloroethane	06/02/10	µg/L	70***	<21	----	<10	<4.2	<100	<21	<0.63	<10	<2.1	<100
1,1-Dichloroethane	09/09/10	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	12/06/10	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	03/07/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	07/07/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/27/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	12/28/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	03/14/12	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/24/12	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	03/07/13	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/18/13	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	03/12/14	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/15/14	µg/L	70***	<0.5	----	----	----	----	----	----	----	<0.5	<0.5
1,1-Dichloroethane	03/10/15	µg/L	70***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/15/15	µg/L	70***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
1,1-Dichloroethane	11/10/15	µg/L	70***	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	----	----	----
1,1-Dichloroethane	03/16/16	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/27/16	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/28/17	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	09/18/18	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	10/20/08	µg/L	7*	510	----	----	----	----	----	----	----	----	----
1,1-Dichloroethene	04/20/09	µg/L	7*	1,900	----	8.1	4.6	2,400	50	32	450	<0.5	410
1,1-Dichloroethene	07/13/09	µg/L	7*	1,900	----	37	1.8	860	42	5.8	240	<10	880
1,1-Dichloroethene	09/01/09	µg/L	7*	2,400	----	58	1.9	910	76 I	10	150 I	<2.9	1,200
1,1-Dichloroethene	09/14/09	µg/L	7*	2,600	----	62	<5.0	760	380	9.8	120 I	<2.9	1,400
1,1-Dichloroethene	09/28/09	µg/L	7*	1,900	----	130	<5.0	820	320	12	170 I	<2.9	1,800
1,1-Dichloroethene	10/14/09	µg/L	7*	2,000	----	94	<5.0	730	250	19	160 I	<2.9	2,000
1,1-Dichloroethene	11/09/09	µg/L	7*	1,800	----	<14	130	1,200	350	16	190 I	<2.9	2,100
1,1-Dichloroethene	12/07/09	µg/L	7*	1,700	----	230	<5.0	1,200	290	13	140	<2.9	1,600
1,1-Dichloroethene	03/09/10	µg/L	7*	740	----	160	3	1,400	350	1.3 I	240	<3	2,300
1,1-Dichloroethene	06/02/10	µg/L	7*	1,500	----	50	8.4 I	540	160	<0.9	130	<3	2,800
1,1-Dichloroethene	09/09/10	µg/L	7*	483	----	22.3	55.6	282	155	1.4	70.8	<0.5	3,020
1,1-Dichloroethene	12/06/10	µg/L	7*	155	----	5.8	138	401	288	3	27.3	<0.5	3,060

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
1,1-Dichloroethene	03/07/11	µg/L	7*	342	----	4.9	150	289	290	1	15.9	0.51 **I**	2,780
1,1-Dichloroethene	07/07/11	µg/L	7*	2.4	----	313	192	2	247	<0.5	11.8	0.66 I	2,100
1,1-Dichloroethene	09/27/11	µg/L	7*	1.9	----	<0.5	200	90.6	117	<0.5	5.7	0.58 I	1,320 **J**
1,1-Dichloroethene	12/28/11	µg/L	7*	1.4 **J**	----	1.1 **J**	336	131 **J**	122 **J**	<0.5	3.2 **J**	6.2 **J**	2,940 **J**
1,1-Dichloroethene	03/14/12	µg/L	7*	<0.5	----	<0.5	236	157	95.5	<0.5	55.3	<0.5	1,210
1,1-Dichloroethene	09/24/12	µg/L	7*	<1	----	<0.5	207	171	57.1	<0.5	63.6	4.6	1,430
1,1-Dichloroethene	03/07/13	µg/L	7*	3.4	----	0.79	24.7	51.4	22.6	<0.5	1.8	0.85	916
1,1-Dichloroethene	09/18/13	µg/L	7*	<0.5	----	<0.5	253 J	174	0.85 I	<0.5	0.92 I	<0.5	174
1,1-Dichloroethene	03/11/14	µg/L	7*	<0.5	----	4.2	118	35	2.6	2.9	9.1	<0.5	1,450
1,1-Dichloroethene	09/15/14	µg/L	7*	1.3	----	----	----	----	----	----	----	6.1	1,050
1,1-Dichloroethene	03/10/15	µg/L	7*	1.3	----	----	----	----	----	----	174	<0.5	312
1,1-Dichloroethene	09/15/15	µg/L	7*	<0.5	----	<0.5	2.3	4.9	2.3	----	163	0.83 I	245
1,1-Dichloroethene	11/10/15	µg/L	7*	----	<0.5	299	2	4.9	3.2	<0.5	----	----	----
1,1-Dichloroethene	03/16/16	µg/L	7*	1.1	<0.5	4.2	362 L	1.1	2.3	<0.5	139	2.3	74.2
1,1-Dichloroethene	09/27/16	µg/L	7*	<0.5	<0.5	2.8	598	<0.5	4.1	7.3	101	2.9	9.9
1,1-Dichloroethene	09/28/17	µg/L	7*	<0.5	<0.5	11.2	229	<0.5	4	645	1,290	2	2.3
1,1-Dichloroethene	09/18/18	µg/L	7*	<0.5	<0.5	55	108	<0.5	<0.5	1.5	829	27.6	<0.5
Benzene	10/20/08	µg/L	1*	11	----	----	----	----	----	----	----	----	----
Benzene	04/20/09	µg/L	1*	10	----	7.3	1.3	10	<0.5	3.6	<0.5	<0.5	4.4
Benzene	07/13/09	µg/L	1*	11	----	6.9	<1.0	7.4	<1.0	3.6	1.2 I	<10	3.8
Benzene	09/01/09	µg/L	1*	6.4	----	7.4	0.41 I	<21	<21	4.1	<42	<2.1	<42
Benzene	09/14/09	µg/L	1*	<21	----	<10	<4.2	<100	<21	3.9	<42	<2.1	<42
Benzene	09/28/09	µg/L	1*	<21	----	<10	<4.2	<100	<21	3.6	<42	<2.1	<42
Benzene	10/14/09	µg/L	1*	<21	----	<10	<4.2	<100	<21	3.9	<42	<2.1	<42
Benzene	11/09/09	µg/L	1*	<21	----	<10	4.8 I	<100	<21	3.5	<42	<2.1	<42
Benzene	12/07/09	µg/L	1*	<21	----	6.2 I	<4.2	<100	<21	3.2	<10	<2.1	<100
Benzene	03/09/10	µg/L	1*	<30	----	7.6	<0.3	<150	<30	3.7	<15	<3	<150
Benzene	06/02/10	µg/L	1*	<30	----	<15	<6	<150	<30	2.5 I	<15	<3	<150
Benzene	09/09/10	µg/L	1*	7.4	----	7	<0.5	11.4	1.3	4.7	3.5	<0.5	9.2
Benzene	12/06/10	µg/L	1*	5.6	----	6.9	<0.5	13.4	<2.5	3.7	3.5	<0.5	6.8
Benzene	03/07/11	µg/L	1*	2.8	----	6	<0.5	12.1	1.2	4.1	3.7	<0.5	2.5
Benzene	07/07/11	µg/L	1*	1.3	----	13.6	1	6.8	1.8	4.5	4.6	<0.5	5.4
Benzene	09/27/11	µg/L	1*	1	----	4.7	1.1	10.8	2	4.5	3.1	<0.5	7.1
Benzene	12/28/11	µg/L	1*	1.4	----	6.4	1.7	13.7	2.6	4.8	4.2 J	<0.5	8.6
Benzene	03/14/12	µg/L	1*	<0.5	----	3.4	<0.5	12	<0.5	<0.5	1.9	<0.5	2.2
Benzene	09/24/12	µg/L	1*	0.58	----	3.9	1.6	9.7	1.7	3.5	4.3	0.35	5.2
Benzene	03/07/13	µg/L	1*	1.1	----	5.2	0.55	12.4	0.92	5.9	2.3	0.15	5.5
Benzene	09/18/13	µg/L	1*	1	----	5.2	1.3 J	14.8	0.11 I	6.5	3.8	0.17 I	0.32 I
Benzene	03/11/14	µg/L	1*	0.85 I	----	5.6	2	12.3	<0.1	<0.1	2.9	<0.1	4.8
Benzene	09/15/14	µg/L	1*	1.1	----	----	----	----	----	----	----	0.13 I	4.8
Benzene	03/10/15	µg/L	1*	1.1	----	----	----	----	----	----	3.8	<0.1	3.8 I
Benzene	09/15/15	µg/L	1*	1.3	----	----	----	----	----	----	4.1	0.21 I	3.3
Benzene	11/10/15	µg/L	1*	----	<0.1	2	<0.1	4.3	2.4	3.4	----	----	----

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Benzene	03/16/16	µg/L	1*	1.3	<0.1	5.0	2.4	4.4	2.8	4.9	3.8	0.31 I	1.8
Benzene	09/27/16	µg/L	1*	0.78 I	<0.1	4.6	2.5	2.7	2.6	5.5	3.5	<0.1	1.3
Benzene	09/28/17	µg/L	1*	0.28 I	<0.1	3.9	1.5	0.99 I	0.78 I	6.2	4.7	0.33 I	1.4
Benzene	09/18/18	µg/L	1*	0.38 I	<0.1	5.4	0.99 I	0.58 I	1.7	3.3	3.9	0.88 I	2.2
Chlorobenzene	10/20/08	µg/L	100*	2.1	----	----	----	----	----	----	----	----	----
Chlorobenzene	04/20/09	µg/L	100*	2	----	1.5	<5.0	<5.0	<5.0	3.3	<5.0	<5.0	<5.0
Chlorobenzene	07/13/09	µg/L	100*	2.3	----	2	<1.0	0.78 I	<1.0	4.8	<3.0	<10	1.5 I
Chlorobenzene	09/01/09	µg/L	100*	1.5 I	----	2.3	<0.23	<23	<23	5.6	<46	<2.3	<46
Chlorobenzene	09/14/09	µg/L	100*	<23	----	<12	<4.6	<120	<23	5.2	<46	<2.3	<46
Chlorobenzene	09/28/09	µg/L	100*	<23	----	<12	<4.6	<120	<23	5.3	<46	<2.3	<46
Chlorobenzene	10/14/09	µg/L	100*	<23	----	<12	<4.6	<120	<23	5.6	<46	<2.3	<46
Chlorobenzene	11/09/09	µg/L	100*	<23	----	<12	<4.6	<120	<23	5.7	<46	<2.3	<46
Chlorobenzene	12/07/09	µg/L	100*	<23	----	<2.3	<4.6	<120	<23	4.8	<12	<2.3	<120
Chlorobenzene	03/09/10	µg/L	100*	<23	----	2.7	<0.23	<120	<23	5.9	<12	<2.3	<120
Chlorobenzene	06/02/10	µg/L	100*	<23	----	<12	<4.6	<120	<23	3.9	<12	<2.3	<120
Chlorobenzene	09/09/10	µg/L	100*	1.7	----	2.4	<0.5	1.6	<0.5	6.3	3	<0.5	2.9
Chlorobenzene	12/06/10	µg/L	100*	2.3	----	2.7	<0.5	1.7	<2.5	6.1	3.3	<0.5	3
Chlorobenzene	03/07/11	µg/L	100*	<0.5	----	<0.5	<0.5	<0.5	<0.5	6.1	<0.5	<0.5	<0.5
Chlorobenzene	07/07/11	µg/L	100*	2.7	----	2.3	<0.5	3.2	<0.5	8.2	7.2	<0.5	5
Chlorobenzene	09/27/11	µg/L	100*	2.7	----	2.3	<0.5	1.8	<0.5	6.1	5.4	<0.5	4.2
Chlorobenzene	12/28/11	µg/L	100*	4	----	3	<0.5	<0.5	<0.5	7.4	<0.5	<0.5	5
Chlorobenzene	03/14/12	µg/L	100*	0.54 I	----	<0.5	<0.5	<0.5	<0.5	1.8	3.9	<0.5	0.99 I
Chlorobenzene	09/24/12	µg/L	100*	2.4	----	2.2	<0.5	2	<0.5	5.5	4.9	<0.5	3.8
Chlorobenzene	03/07/13	µg/L	100*	3	----	3.9	<0.5	2.7	<0.5	6.3	3	<0.5	3.7
Chlorobenzene	09/18/13	µg/L	100*	2.4	----	2.9	<0.5	2.4	<0.5	<0.5	2.7	<0.5	4
Chlorobenzene	04/11/14	µg/L	100*	2.7	----	3.7	<0.5	2.4	<0.5	7	3	<0.5	4.4
Chlorobenzene	09/15/14	µg/L	100*	1.8	----	----	----	----	----	----	----	<0.5	3.7
Chlorobenzene	03/10/15	µg/L	100*	1.6	----	----	----	----	----	----	3.5	<0.5	<0.5
Chlorobenzene	09/15/15	µg/L	100*	1.4	----	----	----	----	----	----	4.3	<0.5	5.1
Chlorobenzene	11/10/15	µg/L	100*	----	<0.5	0.7 I	3.4	1.8	<0.5	5.6	----	----	----
Chlorobenzene	03/16/16	µg/L	100*	<0.5	<0.5	3.5	0.71 I	1.5	0.58 I	5.9	4.6	<0.5	5.2
Chlorobenzene	09/27/16	µg/L	100*	1.8	<0.5	3.2	0.71 I	1.2	<0.5	5.3	3.6	<0.5	6.7
Chlorobenzene	09/28/17	µg/L	100*	1.9	<0.5	2.9	<0.5	1.3	<0.5	5.9	5.1	<0.5	7.1
Chlorobenzene	09/29/18	µg/L	100*	1.6	<0.5	3.7	<0.5	1.3 J	<0.5	5.6	4.2	<0.5	6.7
Chloroethane	09/24/12	µg/L	12***	<1	----	<0.5	<0.5	<0.5	13.4	<0.5	<0.5	<0.5	<0.5
Chloroethane	03/07/13	µg/L	12***	<0.5	----	<0.5	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	<0.5
Chloroethane	04/11/14	µg/L	12***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	09/15/14	µg/L	12***	<0.5	----	----	----	----	----	----	----	<0.5	<0.5
Chloroethane	03/10/15	µg/L	12***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Chloroethane	09/15/15	µg/L	12***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Chloroethane	11/10/15	µg/L	12***	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	----	----	----
Chloroethane	03/16/16	µg/L	12***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	09/27/16	µg/L	12***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Chloroethane	09/28/17	µg/L	12***	<0.5	<0.5	1.31 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	09/18/18	µg/L	12***	1.2 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	10/20/08	µg/L	70***	<0.5	----	----	----	----	----	----	----	----	----
Chloroform	04/20/09	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	07/13/09	µg/L	70***	<0.26	----	<0.26	<0.26	<0.78	<0.26	<0.26	<0.78	<2.6	2.3 I
Chloroform	09/01/09	µg/L	70***	6	----	<0.26	<0.26	<26	<26	<0.26	<5.02	3.6 I	<5.02
Chloroform	09/14/09	µg/L	70***	<26	----	<13	<5.0.2	<130	<26	<0.26	<5.02	<2.6	<5.02
Chloroform	09/28/09	µg/L	70***	<26	----	<13	<5.0.2	<130	<26	<0.26	<5.02	<2.6	<5.02
Chloroform	10/14/09	µg/L	70***	<26	----	<13	<5.0.2	<130	<26	<0.26	<5.02	<2.6	<5.02
Chloroform	11/09/09	µg/L	70***	<26	----	<13	<5.0.2	<130	<26	<0.26	<5.02	<2.6	<5.02
Chloroform	12/07/09	µg/L	70***	<26	----	<2.6	<5.0.2	<130	<26	<0.78	<13	<2.6	<130
Chloroform	03/09/10	µg/L	70***	<36	----	<0.36	<0.36	<180	<36	<0.72	<18	<3.6	<180
Chloroform	06/02/10	µg/L	70***	<36	----	<18	<7.2	<180	<36	<1.1	<18	<3.6	<180
Chloroform	09/09/10	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	12/06/10	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<0.5	<0.5
Chloroform	03/07/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	07/07/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/27/11	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	12/28/11	µg/L	70***	<0.5	----	<0.5	<0.5 J	<0.5	0.77 I	<0.5	<0.5 J	<0.5	<0.5
Chloroform	03/14/12	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/24/12	µg/L	70***	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	03/07/13	µg/L	70***	<0.5	----	<0.5	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	04/11/14	µg/L	70***	<0.5	----	<0.5	<0.5	1.53	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/15/14	µg/L	70***	<0.5	----	----	----	----	----	----	----	<0.5	<0.5
Chloroform	03/10/15	µg/L	70***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Chloroform	09/15/15	µg/L	70***	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Chloroform	11/10/15	µg/L	70***	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	----	----	----
Chloroform	03/16/16	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/27/16	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/28/17	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	09/18/18	µg/L	70***	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	10/20/08	µg/L	2.7***	<0.5	----	----	----	----	----	----	----	----	----
Chloromethane	04/20/09	µg/L	2.7***	<1.0	----	<1.0	<1.0	<1.0	<1.0	3.3	<1.0	<1.0	<1.0
Chloromethane	07/13/09	µg/L	2.7***	<1.0	----	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<3.0
Chloromethane	09/01/09	µg/L	2.7***	<0.87	----	<0.29	<0.29	<29	<29	<0.29	<5.0	<2.9	<5.08
Chloromethane	09/14/09	µg/L	2.7***	<29	----	<14	<5.0	<140	<29	0.41 I	<5.0	<2.9	<5.08
Chloromethane	09/28/09	µg/L	2.7***	<29	----	<14	<5.0	<140	<29	<0.29	<5.0	<2.9	<5.08
Chloromethane	10/14/09	µg/L	2.7***	<29	----	<14	<5.0	<140	<29	<0.29	<5.0	<2.9	<5.08
Chloromethane	11/09/09	µg/L	2.7***	<29	----	<14	<5.0	<140	<29	<0.29	<5.0	<2.9	<5.08
Chloromethane	12/07/09	µg/L	2.7***	<29	----	<2.9	<5.0	<140	<29	<0.87	<14	<2.9	<140
Chloromethane	03/09/10	µg/L	2.7***	<60	----	<0.6	<0.6	<300	<60	<1.2	<30	<6	<300
Chloromethane	06/02/10	µg/L	2.7***	<60	----	<30	<12	<300	<60	<1.8	<30	<6	<300
Chloromethane	09/09/10	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Chloromethane	12/06/10	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<3.1	<0.62	<0.62	<0.62	<0.62
Chloromethane	03/07/11	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	07/07/11	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/27/11	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	0.86 I	<0.62
Chloromethane	12/28/11	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	03/14/12	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/24/12	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	03/07/13	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	03/08/13	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	03/11/14	µg/L	2.7***	<0.62	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/15/14	µg/L	2.7***	<0.62	----	----	----	----	----	----	----	<0.62	<0.62
Chloromethane	03/10/15	µg/L	2.7***	<0.62	----	----	----	----	----	----	<0.62	<0.62	<0.62
Chloromethane	09/15/15	µg/L	2.7***	<0.62	----	----	----	----	----	----	<0.62	<0.62	<0.62
Chloromethane	11/10/15	µg/L	2.7***	----	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	----	----	----
Chloromethane	03/16/16	µg/L	2.7***	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/27/16	µg/L	2.7***	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/28/17	µg/L	2.7***	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Chloromethane	09/18/18	µg/L	2.7***	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
cis-1,2-Dichloroethene	10/20/08	µg/L	70*	5,600	----	----	----	----	----	----	----	----	----
cis-1,2-Dichloroethene	04/20/09	µg/L	70*	6,500	----	1,500	930	13,000	3,900	310	15,000	13	3,500
cis-1,2-Dichloroethene	07/13/09	µg/L	70*	15,000	----	650	240	7,400	880	78	4,400	29	8,400
cis-1,2-Dichloroethene	09/01/09	µg/L	70*	14,000	----	1,100	220	7,900	1,800	85	1,700	40	13,000
cis-1,2-Dichloroethene	09/14/09	µg/L	70*	15,000	----	900	240	4,700	4,900	89	1,800	42	14,000
cis-1,2-Dichloroethene	09/28/09	µg/L	70*	10,000	----	1,600	200	4,500	3,400	97	1,700	39	16,000
cis-1,2-Dichloroethene	10/14/09	µg/L	70*	11,000	----	1,300	190	3,600	3,000	140	1,700	48	19,000
cis-1,2-Dichloroethene	11/09/09	µg/L	70*	8,500	----	56	1,500	5,500	4,900	120	1,400	40	22,000
cis-1,2-Dichloroethene	12/07/09	µg/L	70*	7,600	----	2,700	99	7,200	5,000	100	860	35	20,000
cis-1,2-Dichloroethene	03/09/10	µg/L	70*	4,100	----	2,000	100	7,200	3,700	15	1,400	28	25,000
cis-1,2-Dichloroethene	06/02/10	µg/L	70*	9,300	----	680	230	3,300	2,200	7.7	800	22	24,000
cis-1,2-Dichloroethene	09/09/10	µg/L	70*	2,800	----	371	1,180	1,890	2,250	13.9	504 **J**	18.8	19,700
cis-1,2-Dichloroethene	12/06/10	µg/L	70*	926	----	154	2760	2450	3600	28.8	240	17.2	20000
cis-1,2-Dichloroethene	03/07/11	µg/L	70*	1840	----	126	3120	1840	<0.50	12.8	150	28	19800
cis-1,2-Dichloroethene	07/07/11	µg/L	70*	30.2	----	2750	5290	97	4650	2	170	52	17000
cis-1,2-Dichloroethene	09/27/11	µg/L	70*	23.5	----	30.3	5490	1240	3960	1.8	112	87.9	13400 **J**
cis-1,2-Dichloroethene	12/28/11	µg/L	70*	10.1	----	30.8	5300	845 **J**	4050	3.3	52.7 **J**	141	20600
cis-1,2-Dichloroethene	03/14/12	µg/L	70*	8.9	----	50.2	5990	903	3570	0.88 **I**	633	111	9400
cis-1,2-Dichloroethene	09/24/12	µg/L	70*	1	----	26.3	4,150	1,720	2,730	0.56	746	359	11,200
cis-1,2-Dichloroethene	03/07/13	µg/L	70*	72.7	----	59.4	629	1,700	759	5	34	124	6,500
cis-1,2-Dichloroethene	09/18/13	µg/L	70*	5.4	----	124	11,70 QJ	955 Q	38.4	1.2	114	99.5	15,200
cis-1,2-Dichloroethene	03/11/14	µg/L	70*	1.4	----	172	2,110	545	28.9	5.2	108	4.8	8,910
cis-1,2-Dichloroethene	09/15/14	µg/L	70*	0.5 U	----	----	----	----	----	----	----	0.91 I	165
cis-1,2-Dichloroethene	03/10/15	µg/L	70*	22.1	----	----	----	----	----	----	<3.1	35.9	1,600
cis-1,2-Dichloroethene	09/15/15	µg/L	70*	44.1	----	----	----	----	----	----	2,420	190	733

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
cis-1,2-Dichloroethene	01/10/15	µg/L	70*	----	<0.5	6230	108	123	189	<0.5	----	----	----
cis-1,2-Dichloroethene	03/16/16	µg/L	70*	59.3	<0.5	215 L	4,790 L	29.3	237 L	7.5	2,210	403	215 Q
cis-1,2-Dichloroethene	09/27/16	µg/L	70*	0.59 I	<0.5	167	9640	1.2	291	152	1070	438	35.7
cis-1,2-Dichloroethene	09/28/17	µg/L	70*	0.83 I	0.81 I	351	5,180	1.9	275	3600	8660	293	8.1
cis-1,2-Dichloroethene	09/28/17	µg/L	70*	2.3	1.5	1480	2450	<0.5	27.5	16.6	10900	1420	1.8
Ethylbenzene	09/24/12	µg/L	700*	<1	----	----	----	----	----	----	<0.5	<0.5	2.1
Ethylbenzene	03/07/13	µg/L	700*	<0.5	----	----	----	----	----	----	<0.5	<0.5	1.3
Ethylbenzene	09/18/13	µg/L	700*	<0.5	----	----	----	----	----	----	<0.5	<0.5	1
Ethylbenzene	03/11/14	µg/L	700*	<0.5	----	----	----	----	----	----	<0.5	<0.5	1.2
Ethylbenzene	09/15/14	µg/L	700*	<0.5	----	----	----	----	----	----	----	<0.5	0.51 I
Ethylbenzene	03/10/15	µg/L	700*	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Ethylbenzene	09/15/15	µg/L	700*	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Ethylbenzene	11/10/15	µg/L	700*	----	<0.5	0.68 I	<0.5	<0.5	<0.5	<0.5	----	----	----
Ethylbenzene	03/16/16	µg/L	700*	<0.5	<0.5	<0.5	1.0	<0.5	0.54 I	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	09/27/16	µg/L	700*	<0.5	<0.5	<0.5	1.3	<0.6	<0.5	1.7	<0.5	<0.5	<0.5
Ethylbenzene	09/28/17	µg/L	700*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	1.3	<0.5	<0.5
Ethylbenzene	09/18/18	µg/L	700*	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	0.9 I	<0.5	<0.5
Tetrachloroethene	10/20/08	µg/L	3*	<0.5	----	----	----	----	----	----	----	----	----
Tetrachloroethene	04/20/09	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	07/13/09	µg/L	3*	0.84 I	----	<0.5	<0.5	<1.0	<0.5	<1.0	<3.0	<10	<3.0
Tetrachloroethene	09/01/09	µg/L	3*	<1.1	----	<0.36	<0.36	<36	<36	<0.36	<72	<3.6	<72
Tetrachloroethene	09/14/09	µg/L	3*	<36	----	<18	<7.2	<180	<36	<0.36	<72	<3.6	<72
Tetrachloroethene	09/28/09	µg/L	3*	<36	----	<18	<7.2	<180	<36	<0.36	<72	<3.6	<72
Tetrachloroethene	10/14/09	µg/L	3*	<36	----	<18	<7.2	<180	<36	<0.36	<72	<3.6	<72
Tetrachloroethene	11/09/09	µg/L	3*	<36	----	<18	<7.2	<180	<36	<0.36	<72	<3.6	<72
Tetrachloroethene	12/07/09	µg/L	3*	<36	----	<3.6	<7.2	<180	<36	<1.1	<18	<3.6	<180
Tetrachloroethene	03/09/10	µg/L	3*	<82	----	<0.82	<0.82	<410	<82	<1.6	<41	<8.2	<410
Tetrachloroethene	06/02/10	µg/L	3*	<82	----	<41	<16	<410	<82	<2.5	<41	<8.2	<410
Tetrachloroethene	09/09/10	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	12/06/10	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	03/07/11	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1
Tetrachloroethene	07/07/11	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/27/11	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	12/28/11	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54 I
Tetrachloroethene	03/14/12	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/24/12	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	0.70 I	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	03/07/13	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/18/13	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	03/11/14	µg/L	3*	<0.5	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/15/14	µg/L	3*	<0.5	----	----	----	----	----	----	----	<0.5	<0.5
Tetrachloroethene	03/10/15	µg/L	3*	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Tetrachloroethene	09/15/15	µg/L	3*	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Tetrachloroethene	03/16/16	µg/L	3*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Tetrachloroethene	09/27/16	µg/L	3*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/28/17	µg/L	3*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	09/18/18	µg/L	3*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	10/20/08	µg/L	40**	110	----	----	----	----	----	----	----	----	----
Toluene	04/20/09	µg/L	40**	74	----	68	34	480	28	0.58 I	13	0.58 I	2.6
Toluene	07/13/09	µg/L	40**	79	----	54	31	160	40	<1.0	5.7	<10	8.7
Toluene	09/01/09	µg/L	40**	38	----	33	32	77 I	29 I	<0.28	<5.06	<2.8	<5.06
Toluene	09/14/09	µg/L	40**	39 I	----	22 I	24	<140	41 I	0.31 I	<5.06	<2.8	<5.06
Toluene	09/28/09	µg/L	40**	<28	----	33 I	21	<140	<28	<0.28	<5.06	<2.8	<5.06
Toluene	10/14/09	µg/L	40**	29 I	----	22 I	17 I	<140	28 I	0.29 I	<5.06	<2.8	<5.06
Toluene	11/09/09	µg/L	40**	<28	----	<14	18 I	<140	49 I	<0.28	<5.06	<2.8	<5.06
Toluene	12/07/09	µg/L	40**	<28	----	28	11 I	<140	61 I	<0.84	<14	<2.8	<140
Toluene	03/09/10	µg/L	40**	<28	----	18	1.8	<140	40 I	<0.56	<14	<2.8	<140
Toluene	06/02/10	µg/L	40**	<28	----	<14	<5.0	<140	40 I	<0.84	<14	<2.8	<140
Toluene	09/09/10	µg/L	40**	13.7	----	10.5	1.9	21.3	43.3	0.84 I	1.7	2.3	9.2
Toluene	12/06/10	µg/L	40**	5.1	----	6.2	4.8	21.2	54.6	0.51 I	1.2	1.4	7.9
Toluene	03/07/11	µg/L	40**	3	----	9.3	5.3	21.1	41.8	<0.5	0.59 I	0.87 I	5.6
Toluene	07/07/11	µg/L	40**	<0.5	----	28.3	8.4	7.9	63.1	<0.5	0.70 I	0.86 I	7.2
Toluene	09/27/11	µg/L	40**	<0.5	----	4.5	7.6	11.9	55.3	<0.5	<0.5	0.69 I	7
Toluene	12/28/11	µg/L	40**	<0.5	----	5.2	11.4	9.4 J	57.4	<0.5	<0.5	0.74 I	10.3
Toluene	03/14/12	µg/L	40**	<0.5	----	2.9	11.7	18.1	67.1	<0.5	<0.5	<0.5	2
Toluene	09/24/12	µg/L	40**	<1	----	2.9	8.3	15.3	25.2	<0.5	2.1	2	4.3
Toluene	03/07/13	µg/L	40**	3.5	----	1.3	28.3	10.2	0.51	0.95	<0.5	0.81	<0.5
Toluene	09/18/13	µg/L	40**	<0.5	----	3.4	4.3	31.1	0.68 I	<0.5	0.7 I	<0.5	2.7
Toluene	03/11/14	µg/L	40**	<0.5	----	6.2	10	21.4	<0.5	<0.5	<0.5	<0.5	3.1
Toluene	09/15/14	µg/L	40**	<0.5	----	----	----	----	----	----	----	<0.5	1.8
Toluene	03/10/15	µg/L	40**	<0.5	----	----	----	----	----	----	1.2	<0.5	2.8
Toluene	09/15/15	µg/L	40**	0.84 I	----	----	----	----	----	----	1.2	1.3 I	0.63
Toluene	11/10/15	µg/L	40**	----	<0.5	14.2	2.6	2.2	14.3	<0.5	----	----	----
Toluene	03/16/16	µg/L	40**	1.7	<0.5	3.7	14.7	1.3	14.7	<0.5	1.7	1.7	0.71 I
Toluene	09/27/16	µg/L	40**	<0.5	<0.5	3.2	12.7	<0.5	12.7	9.5	2.2	1.8	<0.5
Toluene	09/28/17	µg/L	40**	<0.5	<0.5	9.3	4.3	<0.5	<0.5	5	5.1	1.2	<0.5
Toluene	09/18/18	µg/L	40**	<0.5	<0.5	12.3	<0.5	<0.5	<0.5	0.57 I	3.3	3.8	<0.5
trans-1,2-Dichloroethene	10/20/08	µg/L	100*	33	----	----	----	----	----	----	----	----	----
trans-1,2-Dichloroethene	04/20/09	µg/L	100*	75	----	<0.5	0.83 I	77	4.3	2.2	50	<0.5	61
trans-1,2-Dichloroethene	07/13/09	µg/L	100*	160	----	1.2	<0.5	69	9.4	<1.0	21	<10.0	160
trans-1,2-Dichloroethene	09/01/09	µg/L	100*	110	----	9.3	1.7	130	<40	0.42 I	<80	<4	270
trans-1,2-Dichloroethene	09/14/09	µg/L	100*	140	----	<20	<8	<200	<40	<0.4	<80	<4	<80
trans-1,2-Dichloroethene	09/28/09	µg/L	100*	<74	----	<20	<8.0	<200	<40	0.44 I	<80	<4.0	300
trans-1,2-Dichloroethene	10/14/09	µg/L	100*	76 I	----	<20	<8.0	<200	<40	1	<80	<4.0	310
trans-1,2-Dichloroethene	11/09/09	µg/L	100*	71 I	----	<20	<8	<200	49 I	0.79 I	<80	<4	360
trans-1,2-Dichloroethene	12/07/09	µg/L	100*	74 I	----	11	<8	<200	59 I	<1.2	<20	<4	300 I
trans-1,2-Dichloroethene	03/09/10	µg/L	100*	<40	----	5.4	<0.4	<200	<40	<0.8	<20	<4	390 I

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
trans-1,2-Dichloroethene	06/02/10	µg/L	100*	<40	----	<20	<8	<200	<40	<1.2	<20	<4	560
trans-1,2-Dichloroethene	09/09/10	µg/L	100*	14.6	----	0.94 I	3.8	14.8	15.4	<0.5	2	<0.5	592
trans-1,2-Dichloroethene	12/06/10	µg/L	100*	5.4	----	<0.5	12.7	15.9	20.9	<0.5	0.76 I	<0.5	530
trans-1,2-Dichloroethene	03/07/11	µg/L	100*	17.5	----	<0.5	15.2	9.7	26.7	<0.5	0.71 I	<0.5	465
trans-1,2-Dichloroethene	07/07/11	µg/L	100*	<0.5	----	18	35.6	<0.5	40.1	<0.5	<0.5	<0.5	406
trans-1,2-Dichloroethene	09/27/11	µg/L	100*	<0.5	----	<0.5	40.9	5.6	12.5	<0.5	<0.5	<0.5	340 J
trans-1,2-Dichloroethene	12/28/11	µg/L	100*	<0.5	----	<0.5	50.6 J	5.8	24	<0.5	<0.5	1.8	577
trans-1,2-Dichloroethene	03/14/12	µg/L	100*	<0.5	----	<0.5	42.5	8.3	22.1	<0.5	6	<0.5	226
trans-1,2-Dichloroethene	09/24/12	µg/L	100*	<1	----	<0.5	42.9	7.8	9.2	<0.5	7.1	0.78	262
trans-1,2-Dichloroethene	03/07/13	µg/L	100*	0.75	----	<0.5	9.3	23	7.7	<0.5	<0.5	<0.5	184
trans-1,2-Dichloroethene	09/18/13	µg/L	100*	<0.5	----	<0.5	9.8	6.7	<0.5	<0.5	<0.5	<0.5	43.9
trans-1,2-Dichloroethene	03/11/14	µg/L	100*	<0.5	----	0.61 I	22.3	2.9	<0.5	<0.5	0.67 I	<0.5	231
trans-1,2-Dichloroethene	09/15/14	µg/L	100*	<0.5	----	----	----	----	----	----	----	0.91 I	165
trans-1,2-Dichloroethene	03/10/15	µg/L	100*	<0.5	----	----	----	----	----	----	10	<0.5	47.5
trans-1,2-Dichloroethene	09/15/15	µg/L	100*	<0.5	----	----	----	----	----	----	8.6	<0.5	25.2
trans-1,2-Dichloroethene	11/10/15	µg/L	100*	----	<0.5	216	<0.5	0.58 I	<0.5	<0.5	----	----	----
trans-1,2-Dichloroethene	03/16/16	µg/L	100*	<0.5	<0.5	0.78 I	111	<0.5	0.71 I	<0.5	8.8	0.91 I	3.7
trans-1,2-Dichloroethene	09/27/16	µg/L	100*	<0.5	<0.5	<0.5	28	<0.5	0.63 I	<0.5	4.2	1.0 I	<0.5
trans-1,2-Dichloroethene	09/28/17	µg/L	100*	<0.5	<0.5	1.2	15.6	<0.5	0.73 I	65.4	150	0.63 I	<0.6
trans-1,2-Dichloroethene	09/18/18	µg/L	100*	<0.5	<0.5	6.4	9.1	<0.5	<0.5	<0.5	184	3.2	<0.5
Trichloroethene	10/20/08	µg/L	3*	1.5	----	----	----	----	----	----	----	----	----
Trichloroethene	04/20/09	µg/L	3*	23	----	<0.5	1	56	5.4	50	2100	1.8	2,000
Trichloroethene	07/13/09	µg/L	3*	150	----	<0.5	<0.5	400	0.52	2	450	6.4 I	11,000
Trichloroethene	09/01/09	µg/L	3*	640	----	<0.36	<0.36	390	<36	3.5	140 I	<3.6	14,000
Trichloroethene	09/14/09	µg/L	3*	720	----	<18	<7.2	<180	160	1.9	76 I	<3.6	14,000
Trichloroethene	09/28/09	µg/L	3*	240	----	<18	<7.2	<180	100	4.2	<72	<3.6	23,000
Trichloroethene	10/14/09	µg/L	3*	220	----	<18	<7.2	<180	100	7.3	130 I	<3.6	25,000
Trichloroethene	11/09/09	µg/L	3*	170	----	<18	<7.2	<180	200	5.6	130 I	<3.6	26,000
Trichloroethene	12/07/09	µg/L	3*	160	----	5.2 I	<7.2	400 I	280	3.6	100	<3.6	24,000
Trichloroethene	03/09/10	µg/L	3*	<36	----	<0.36	<0.36	<180	140	<0.72	170	<3.6	30,000
Trichloroethene	06/02/10	µg/L	3*	<36	----	<18	<7.2	<180	<36	<1.1	47 I	<3.6	43,000
Trichloroethene	09/09/10	µg/L	3*	9.1	----	<0.5	<0.5	5.8	117	<0.5	2.9 J	<0.5	44,400
Trichloroethene	12/06/10	µg/L	3*	3.6	----	<0.5	1.1	4.3	49.3	<0.5	0.84 I	<0.5	41,300
Trichloroethene	03/07/11	µg/L	3*	8.8	----	<0.5	2.4	1.9	32.6	<0.5	0.9 I	1.9	34,800
Trichloroethene	07/07/11	µg/L	3*	10.4	----	3.1	10.2	<0.5	16.8	<0.5	<0.5	3.2	35,700
Trichloroethene	09/27/11	µg/L	3*	20.3	----	<0.5	19.3	<0.5	6.4	0.67 I	<0.5	5.5	16,100 J
Trichloroethene	12/28/11	µg/L	3*	9.5	----	<0.5	<0.5	<0.5	1.6	<0.5	0.68 IJ	<0.5	50,300
Trichloroethene	03/14/12	µg/L	3*	5.6	----	<0.5	29	<0.5	2.5	<0.5	69.2	<0.5	992
Trichloroethene	09/24/12	µg/L	3*	<1	----	<0.5	5	<0.5	<0.5	<0.5	60.9	<0.5	24,200
Trichloroethene	03/07/13	µg/L	3*	72.1	----	<0.5	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	9,110
Trichloroethene	09/18/13	µg/L	3*	<0.5	----	0.74 I	3 J	<0.5	<0.5	0.92 I	1.5	10.6	21,700
Trichloroethene	03/11/14	µg/L	3*	<0.5	----	15.1	21.7	27.9	13.7	50.7	38.1	<0.5	14,400
Trichloroethene	09/15/14	µg/L	3*	21.6	----	----	----	----	----	----	----	133	8,930

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Trichloroethene	03/10/15	µg/L	3*	<0.5	----	----	----	----	----	----	72.8	7 I	2,130
Trichloroethene	09/15/15	µg/L	3*	<0.5	----	----	----	----	----	----	16.5	<0.5	583
Trichloroethene	11/10/15	µg/L	3*	----	<0.5	0.81 I	<0.5	<0.5	<0.5	<0.5	----	----	----
Trichloroethene	03/16/16	µg/L	3*	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	14.1	<0.5	61.7
Trichloroethene	09/27/16	µg/L	3*	<0.5	<0.5	<0.5	3.1	<0.5	<0.5	<0.5	11.4	<0.5	3.5
Trichloroethene	09/28/17	µg/L	3*	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	1310	1560	3.5	3.6
Trichloroethene	09/18/18	µg/L	3*	<0.5	<0.5	5.8	2.2	<0.5	<0.5	<0.5	4680	<0.5	<0.5
Vinyl chloride	10/20/08	µg/L	1*	8,700	----	----	----	----	----	----	----	----	----
Vinyl chloride	04/20/09	µg/L	1*	7,000	----	3,700	1,600	16,000	8,800	280	2,200	270	1,700
Vinyl chloride	07/13/09	µg/L	1*	10,000	----	3,400	880	9,400	2,400	100	870	290	1,500
Vinyl chloride	09/01/09	µg/L	1*	8,500	----	3,700	1,300	8,500	2,200	130	500	480	1,600
Vinyl chloride	09/14/09	µg/L	1*	8,600	----	2,700	1,300	6,200	4,900	170	530	580	2,200
Vinyl chloride	09/28/09	µg/L	1*	7,000	----	4,500	1,300	7,500	3,700	140	610	610	2,600
Vinyl chloride	10/14/09	µg/L	1*	6,200	----	2,700	1,200	7,400	3,900	190	520	800	2,700
Vinyl chloride	11/09/09	µg/L	1*	4,800	----	430	2,700	8,700	5,900	160	380	670	2,600
Vinyl chloride	12/07/09	µg/L	1*	2,300	----	4,400	610	10,000	5,300	120	160	380	1,600
Vinyl chloride	03/09/10	µg/L	1*	1,600	----	2,500	370	7,700	5,000	47	410	350	1,500
Vinyl chloride	06/02/10	µg/L	1*	4,200	----	1,200	480	4,700	4,100	41	400	300	1,300
Vinyl chloride	09/09/10	µg/L	1*	1,930	----	1,030	1,010	2,280	3,080	57	428 J	350	909
Vinyl chloride	12/06/10	µg/L	1*	593	----	633	1,720	2,470	3,960	79	360	229	839
Vinyl chloride	03/07/11	µg/L	1*	875	----	856	2,190	2,690	3,640	42	418	459	748
Vinyl chloride	07/07/11	µg/L	1*	367	----	2,650	2,590	513	3,960	13	367	454	703
Vinyl chloride	09/27/11	µg/L	1*	163	----	163 J	2,470	1,550	3,770	18	208	509	618 J
Vinyl chloride	12/28/11	µg/L	1*	51.6	----	809	4300	2420 J	<0.5	44.3	256 J	770	1,620
Vinyl chloride	03/14/12	µg/L	1*	33.5	----	658	3,420	1,390	3,690	16.6	452	304	672
Vinyl chloride	09/24/12	µg/L	1*	15.7	----	431	2,990	3,830	4,440	7.1	363	709	1,160
Vinyl chloride	03/07/13	µg/L	1*	341	----	410	689	3,380	1,180	18.4	62.3	271	1,140
Vinyl chloride	09/18/13	µg/L	1*	112	----	812	474 Q	2,510 Q	24.8	1.4	480	1,000	91.5
Vinyl chloride	03/11/14	µg/L	1*	23.7	----	819	1,420	3,030	7	1.2	295	6.4	768
Vinyl chloride	09/15/14	µg/L	1*	13.8	----	----	----	----	----	----	----	297	523
Vinyl chloride	03/10/15	µg/L	1*	57.5	----	----	----	----	----	----	321	465	151
Vinyl chloride	09/15/15	µg/L	1*	290 J	----	----	----	----	----	----	566	926	202
Vinyl chloride	11/10/15	µg/L	1*	----	<0.5	7,990	727	870	2,430	13.4	----	----	----
Vinyl chloride	03/16/16	µg/L	1*	651 L	<0.5	1,090 L	4,670 L	406 L	2,940 L	8.1	714	1,250	92.9
Vinyl chloride	09/27/16	µg/L	1*	4.6	<0.5	1,430	7,890	15.7	3,280	303	1,570	1,250	45.6
Vinyl chloride	09/28/17	µg/L	1*	3.9	0.89 I	2,450	3,070	1.4	1,110	1,060	1,940	1,080	9.9
Vinyl chloride	09/18/18	µg/L	1*	6.6	1.9	6890	1330	1.2	576	71.5	1180	1880	5.7
Xylenes, Total	10/20/08	µg/L	20**	59	----	----	----	----	----	----	----	----	----
Xylenes, Total	04/20/09	µg/L	20**	49	----	16	3.4	120	7.5	<1.0	3.6	<1.0	1.5 I
Xylenes, Total	07/13/09	µg/L	20**	57	----	14	<1.0	95	3.1	<3.0	<9.0	<30	<9.0
Xylenes, Total	09/01/09	µg/L	20**	23	----	9.9	0.63 I	<5.09	<5.09	<0.59	<120	<5.0.9	<120
Xylenes, Total	09/14/09	µg/L	20**	<5.09	----	<30	<12	<300	<5.09	<0.59	<120	<5.0.9	<120
Xylenes, Total	09/28/09	µg/L	20**	<5.09	----	<30	<12	<300	<5.09	<0.59	<120	<5.0.9	<120

Attachment 4
Historical Organic Compounds Detected in Groundwater
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Xylenes, Total	10/14/09	µg/L	20**	<5.09	----	<30	<12	<300	<5.09	<0.59	<120	<5.0.9	<120
Xylenes, Total	11/09/09	µg/L	20**	<5.09	----	<30	<12	<300	<5.09	<0.59	<120	<5.0.9	<120
Xylenes, Total	12/07/09	µg/L	20**	<5.09	----	9 I	<12	<300	<5.09	<1.8	<30	<5.0.9	<300
Xylenes, Total	03/09/10	µg/L	20**	<63	----	9.9	<0.63	<320	<63	<1.3	<32	<6.3	<320
Xylenes, Total	06/02/10	µg/L	20**	<63	----	<32	<13	<320	<63	<1.9	<32	<6.3	<320
Xylenes, Total	09/09/10	µg/L	20**	7.5	----	7.7	0.53 I	60.5	5.6	1	0.93 I	1	7.6
Xylenes, Total	12/06/10	µg/L	20**	3.7	----	5.4	<0.5	57.8	5.1	0.77 I	0.76 I	0.77 I	6.3
Xylenes, Total	03/07/11	µg/L	20**	7.5	----	11.5	5.5	55.8	8.8	5.7	5.8	5.4	9
Xylenes, Total	07/07/11	µg/L	20**	0.75 I	----	51.6	1.3	7.9	7.1	0.93 I	1.1	<0.5	6.1
Xylenes, Total	09/27/11	µg/L	20**	<0.5	----	3.7	1	23.6	6.1	0.87 I	<0.5	<0.5	7.4
Xylenes, Total	12/28/11	µg/L	20**	1.5	----	4.8	2.9	33.8	7.9	1.8	5.9	1.4	6.3
Xylenes, Total	03/14/12	µg/L	20**	<0.5	----	1.6	0.78 I	33.8	6.4	<0.5	<0.5	<0.5	1.5
Xylenes, Total	09/24/12	µg/L	20**	<1	----	2.7	2.5	32.6	6.6	0.56	<0.5	<0.5	6.8
Xylenes, Total	03/07/13	µg/L	20**	<0.6	----	1.1	<0.6	51.5	1.6	0.56	0.57	<0.6	1.2
Xylenes, Total	09/18/13	µg/L	20**	<0.5	----	2.3	0.85 I	50.1	1.4	0.53 I	0.54 I	<0.5	2.6
Xylenes, Total	03/12/14	µg/L	20**	<0.5	----	2.5	25	<0.5	<0.5	<0.5	<0.5	<0.5	2.2
Xylenes, Total	09/15/14	µg/L	20**	<0.5	----	----	----	----	----	----	----	<0.5	1.4
Xylenes, Total	03/10/15	µg/L	20**	<0.5	----	----	----	----	----	----	<0.5	<5	<12.5
Xylenes, Total	09/15/15	µg/L	20**	<0.5	----	----	----	----	----	----	<0.5	<0.5	<0.5
Xylenes, Total	11/10/15	µg/L	20**	----	<1.5	6.3	1.8 I	<1.5	7.9	1.9 I	----	----	----
Xylenes, Total	03/16/16	µg/L	20**	<1.5	<1.5	3.2	7.0	<1.5	6.9	<1.5	<1.5	<1.5	<1.5
Xylenes, Total	09/27/16	µg/L	20**	<1.5	<1.5	3.6	7.7	<1.5	5.7	7.3	<1.5	<1.5	<1.5
Xylenes, Total	09/28/17	µg/L	20**	<1.5	<1.5	4.3	<1.5	<1.5	<1.5	7.2	3.8	<1.5	<1.5
Xylenes, Total	09/18/18	µg/L	20**	<1	<1	9.2	<1.5	<1.5	<1.5	<1	2.1 I	<1	<1

NOTES:

NS = No Standard.

--- = Parameter not analyzed ; ug/l = micrograms per liter.

J - Estimated value. Laboratory quality contral was outside control limits.

I = Indicates a result greater or equal to the MDL but less than the reporting limit (RL)

L - Off scale high and the actual concentration is known to be higher than the value given.

V = Parameter detected in the associated Method Blank.

Q = Sample held beyond the accepted holding time.

*PDWS = Primary Drinking Water Standard (Chapter 62-550, F.A.C.)

**SDWS = Secondary Drinking Water Standard (Chapter 62-550, F.A.C.)

***GCTL = Groundwater Cleanup Target Level (Chapter 62-777, F.A.C.)

The October 20, 2008 sample was collected at well B5-28 prior to performing the pilot test, which was performed on the same day simulating an actual RegenOx injection.

The samples collected the week of April 20, 2009 were collected prior to the RegenOx injection events (except the pilot test) and are considered the baseline concentrations.

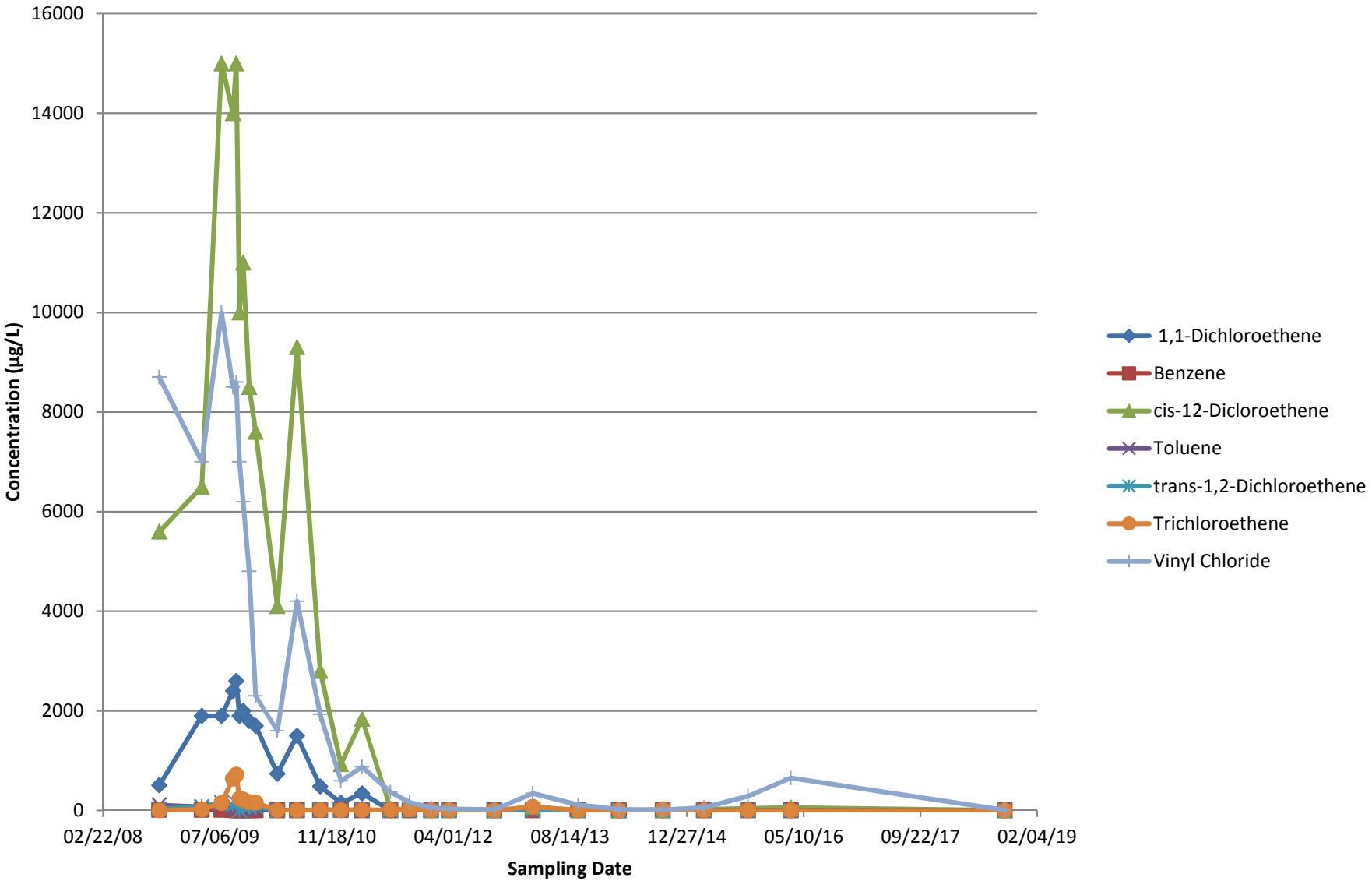
The first round of chemical injections of RegenOx were performed June 22 through July 3, 2009.

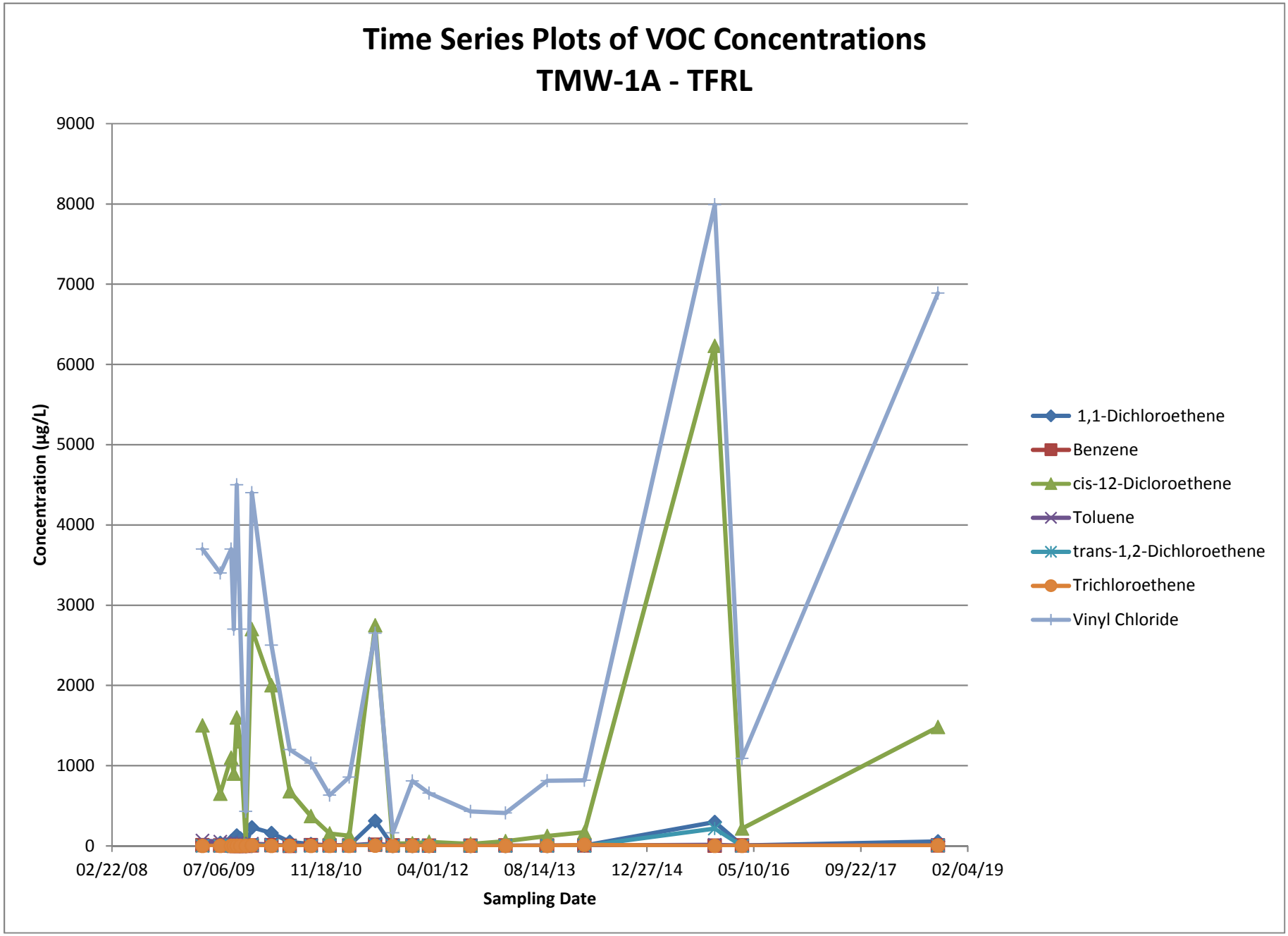
The second round of chemical injections of RegenOx & ORC were performed August 10 through 20, 2009.

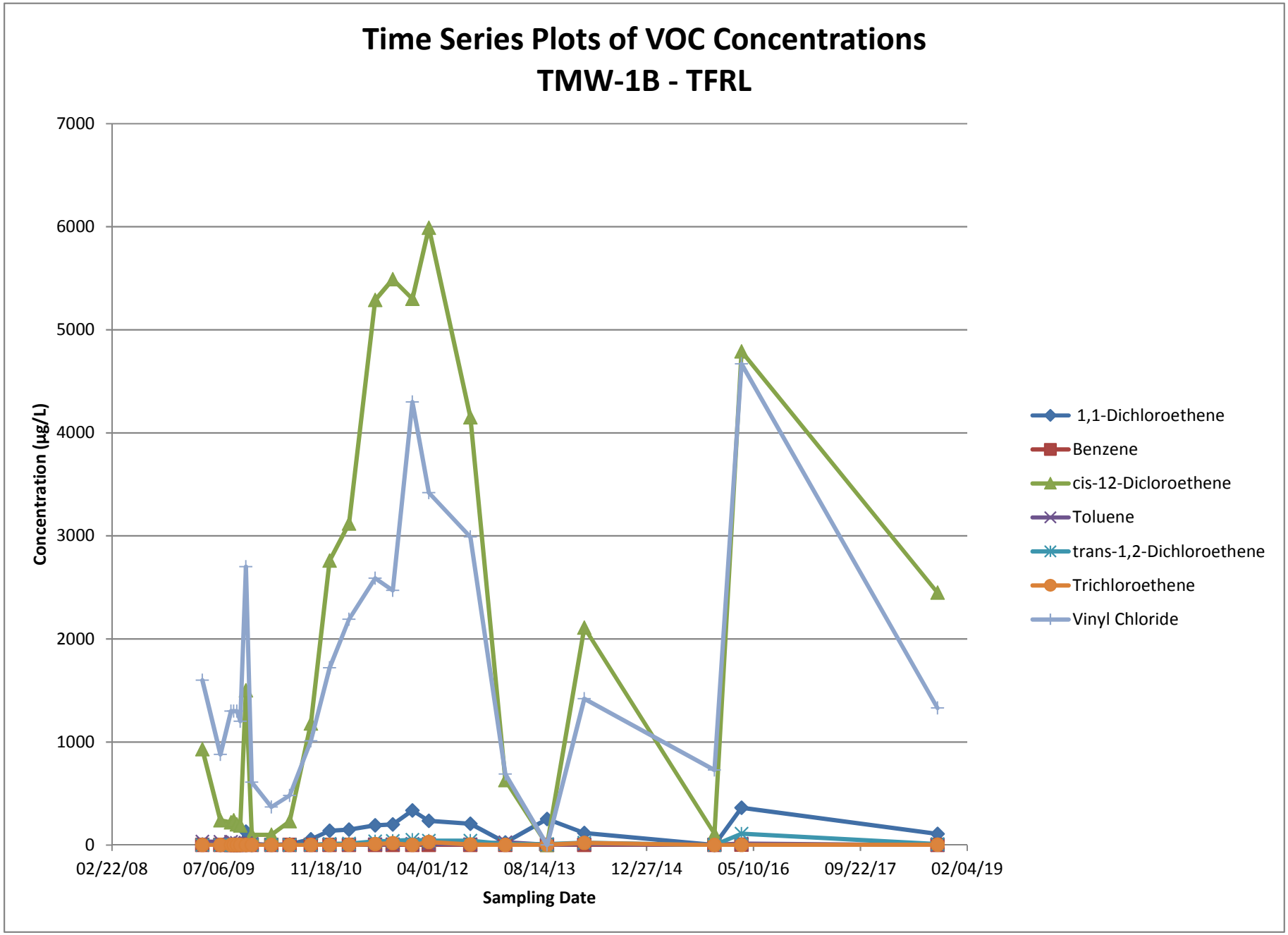
A yellow high-lighted cell indicates the result is above the respective standard.

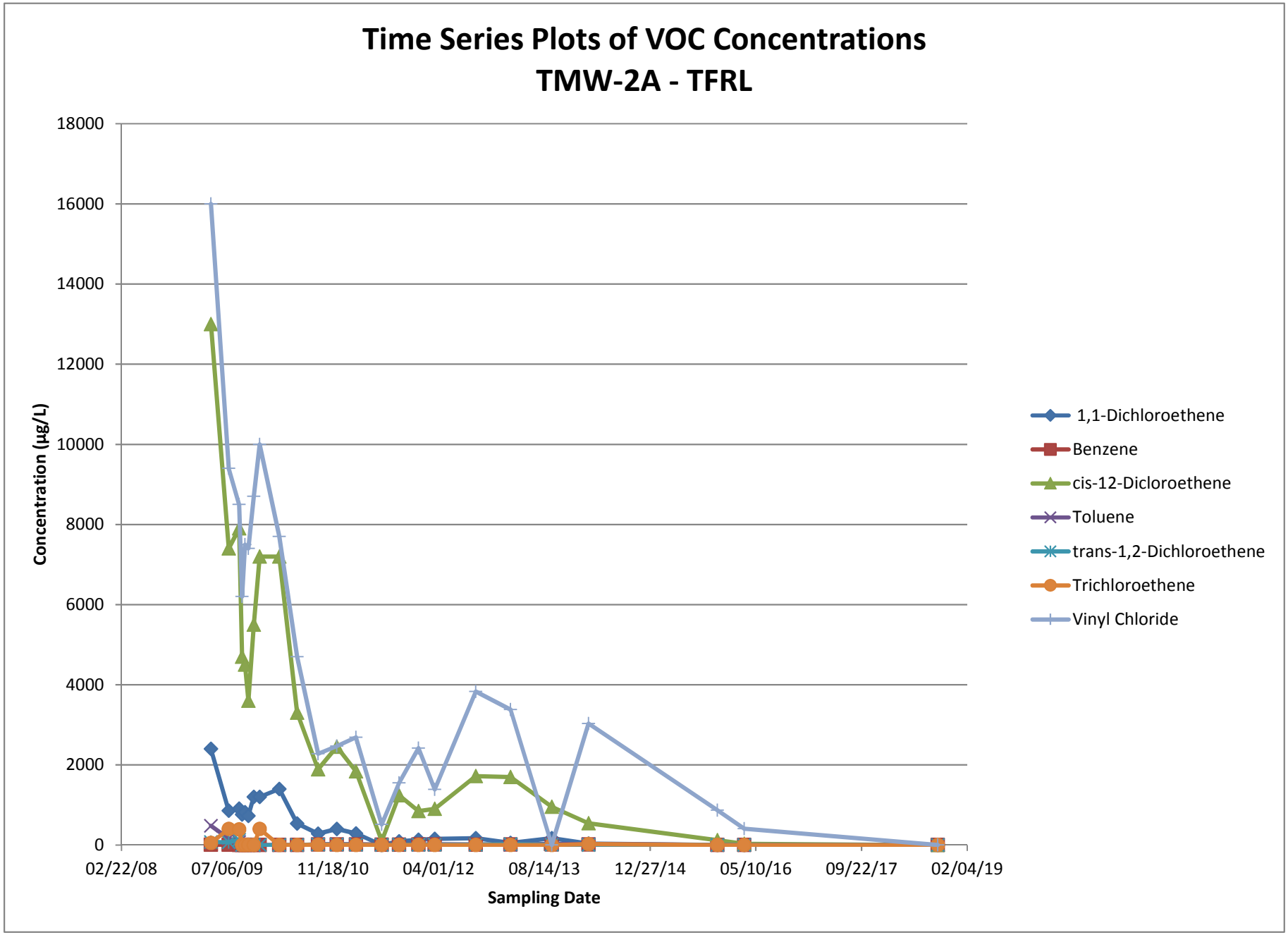
Attachment 5
Time Series Plots of VOC Concentrations
- Post Remediation Status Monitoring

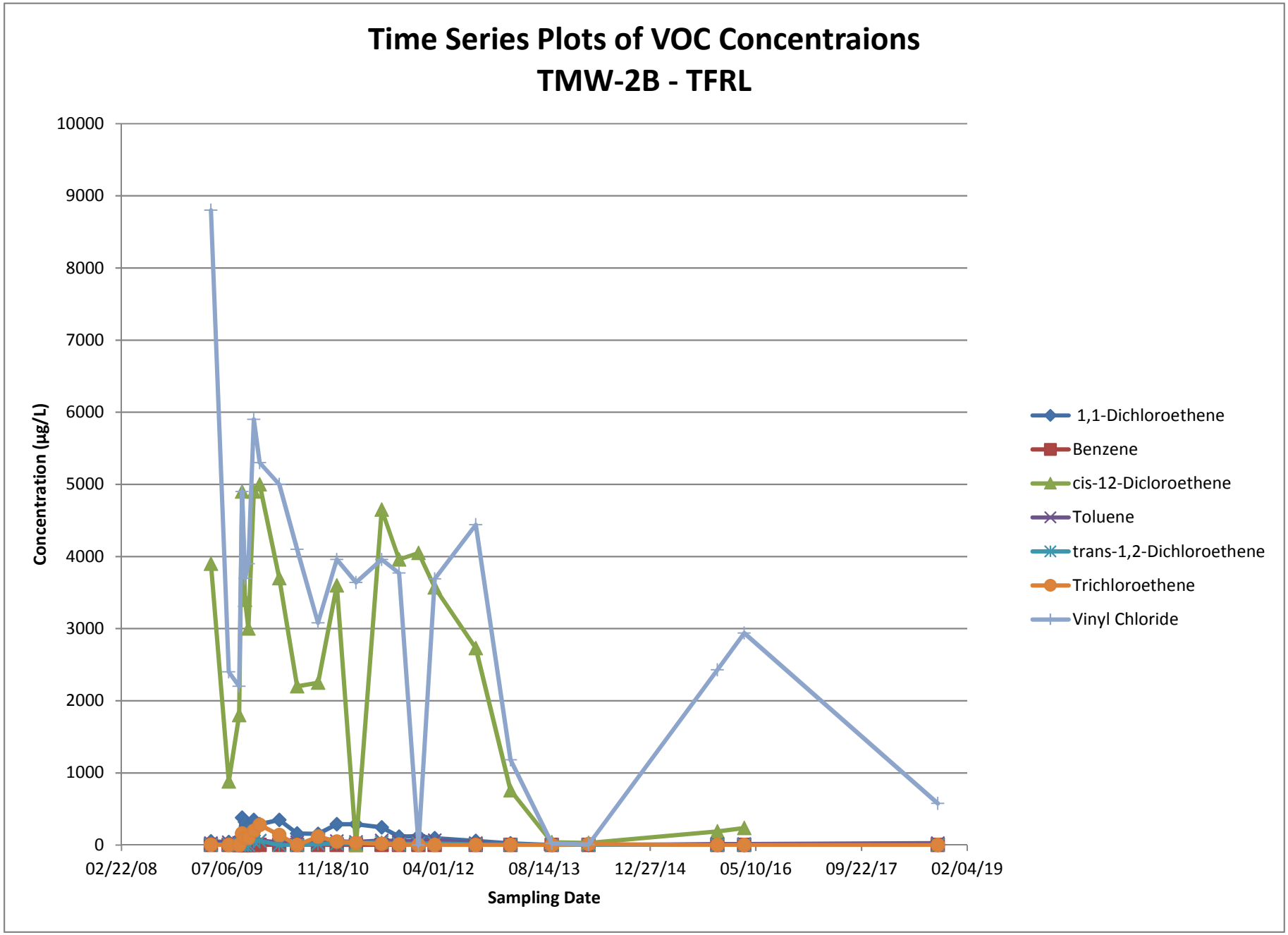
Time Series Plots of VOC Concentrations
B5-28 - TFRL

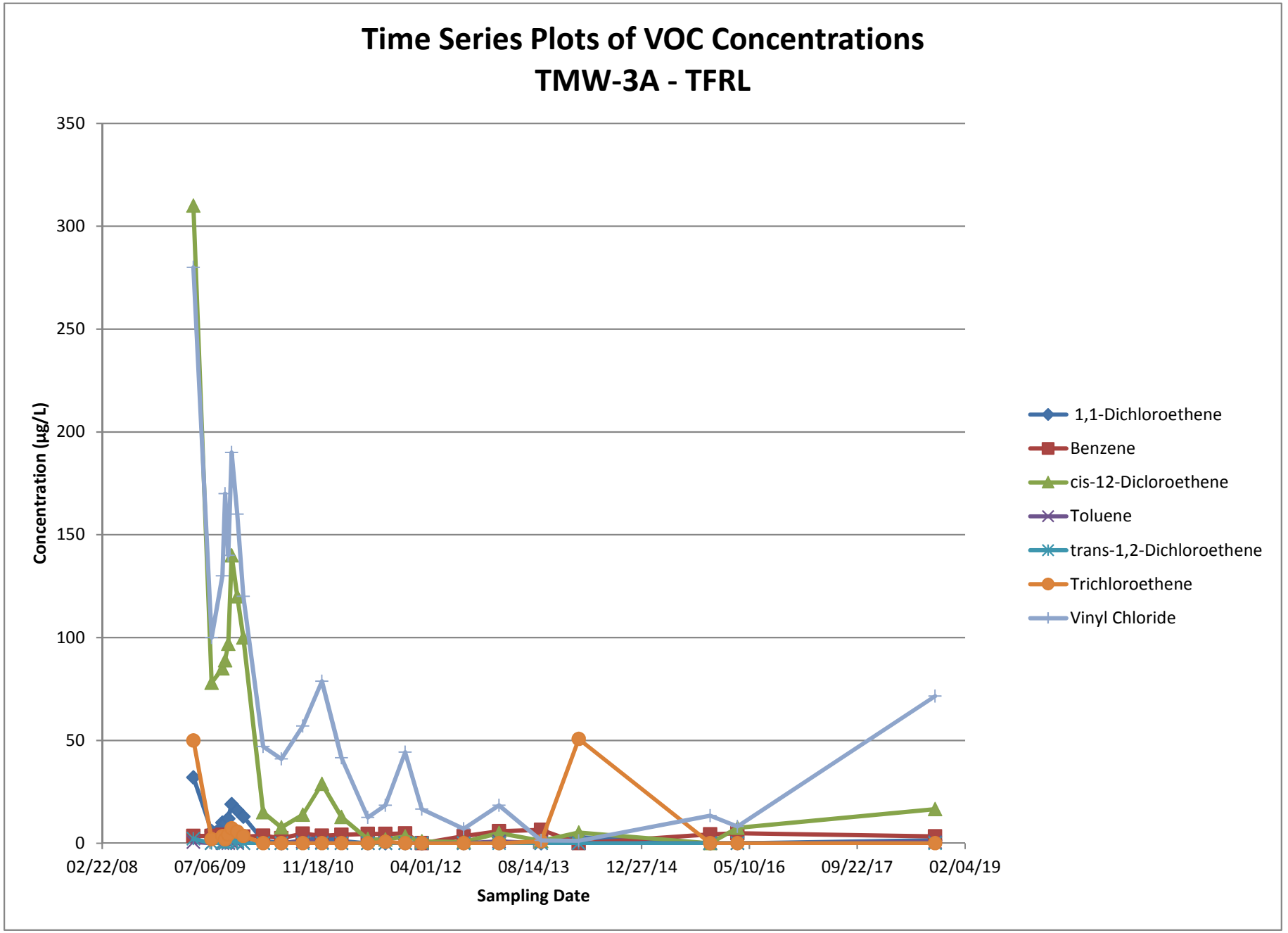


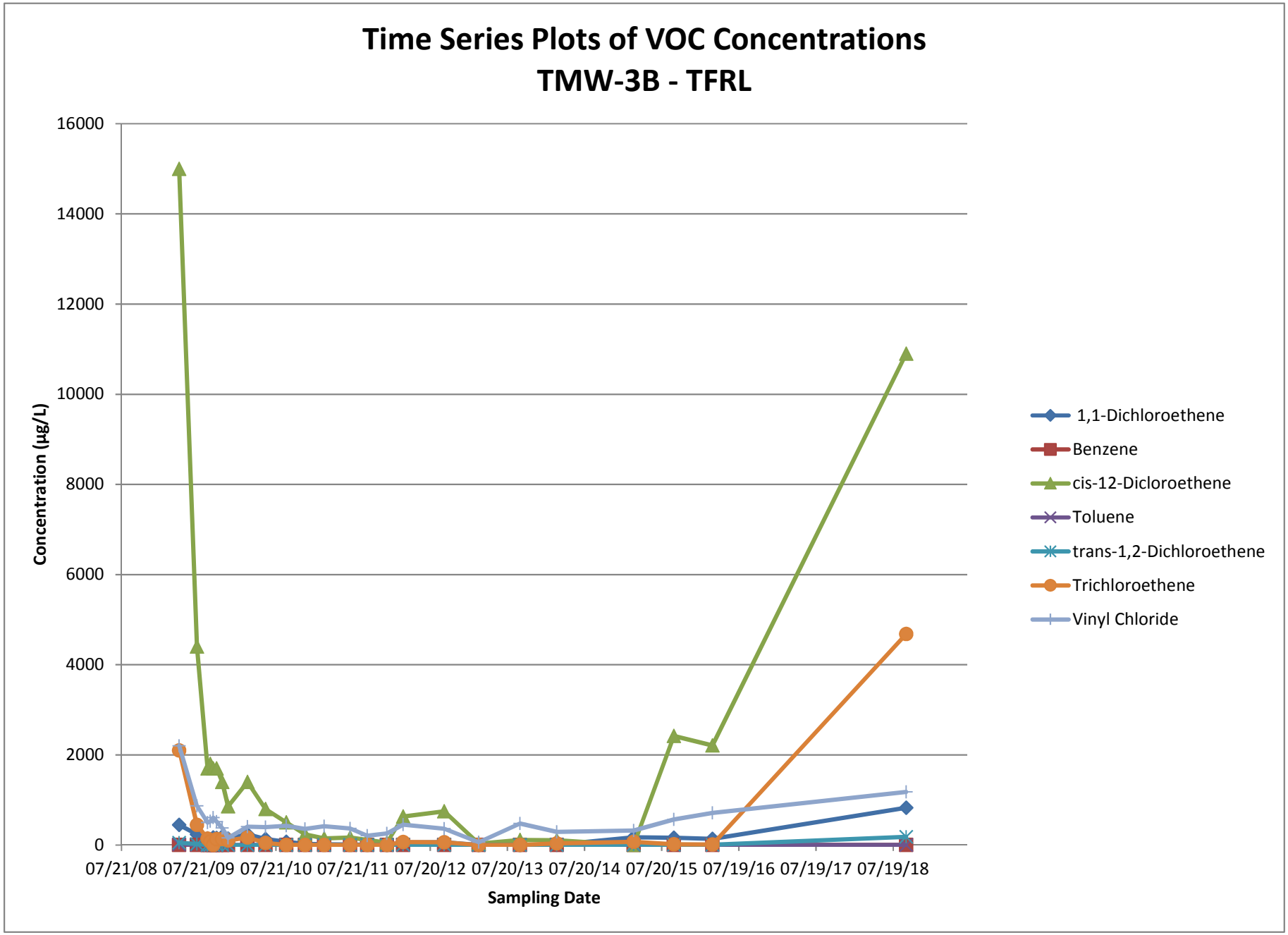

Time Series Plots of VOC Concentrations
TMW-1A - TFRL
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration (µg/L)
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride


Time Series Plots of VOC Concentrations
TMW-1B - TFRL
Concentration (µg/L)
7000
6000
5000
4000
3000
2000
1000
0
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride

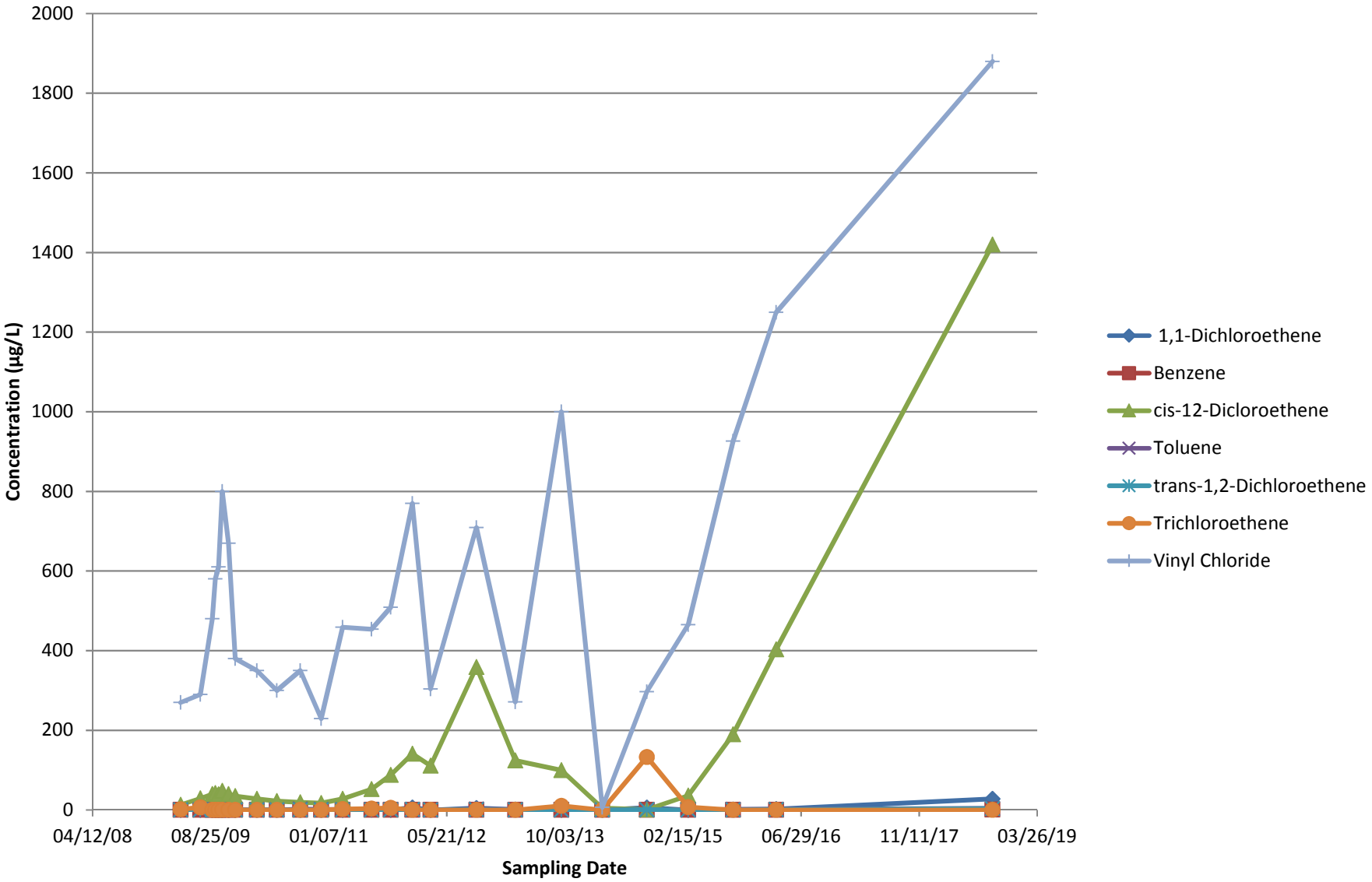

Time Series Plots of VOC Concentrations
TMW-2A - TFRL
Concentration (µg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride

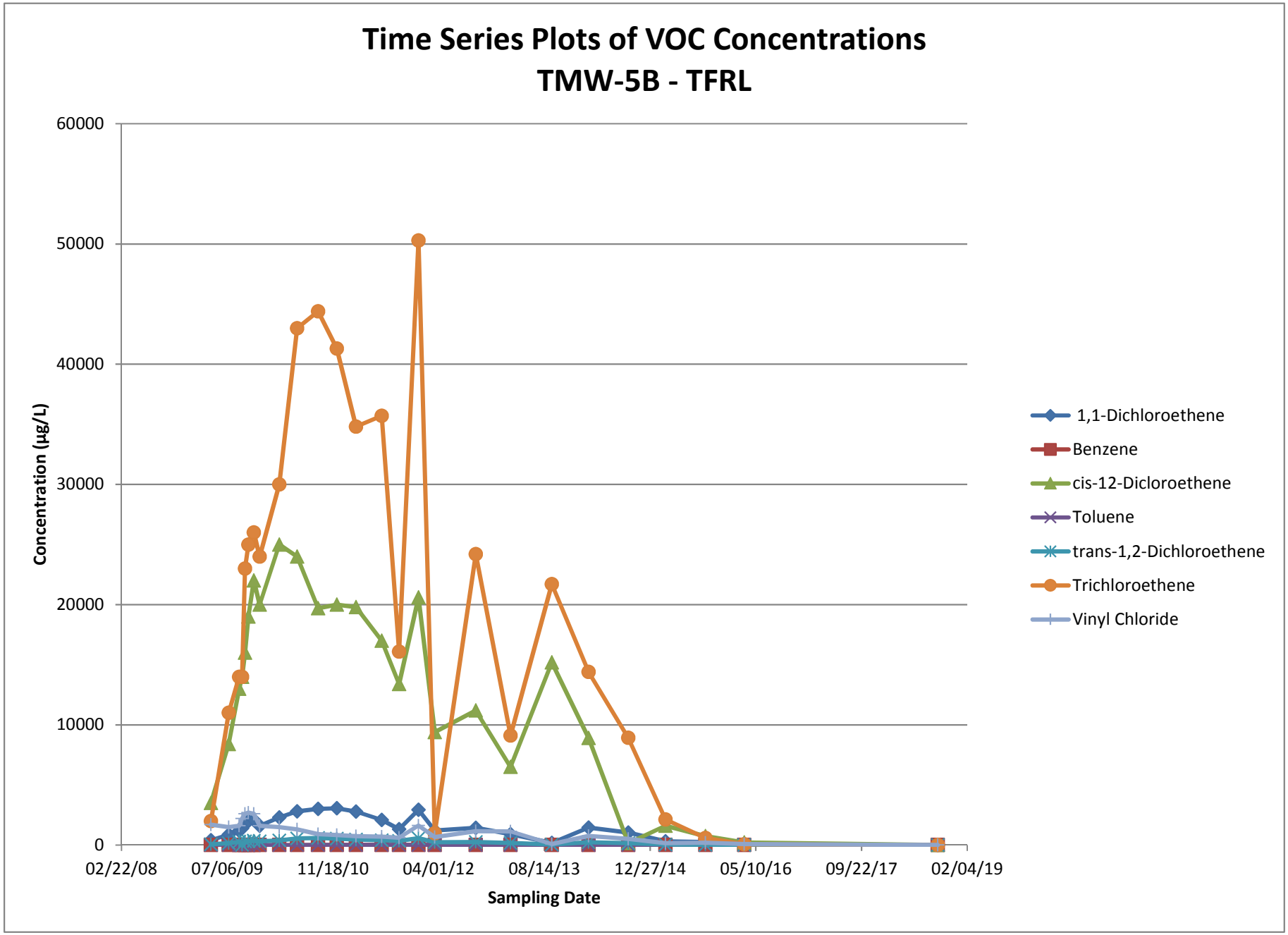

Time Series Plots of VOC Concentraions
TMW-2B - TFRL
Concentration (µg/L)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride


Time Series Plots of VOC Concentrations
TMW-3A - TFRL
Concentration (µg/L)
350
300
250
200
150
100
50
0
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride


Time Series Plots of VOC Concentrations
TMW-3B - TFRL
16000
14000
12000
10000
8000
6000
4000
2000
0
Concentration (µg/L)
07/21/08
07/21/09
07/21/10
07/21/11
07/20/12
07/20/13
07/20/14
07/20/15
07/19/16
07/19/17
07/19/18
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride

Time Series Plots of VOC Concentrations
TMW-4B - TFRL




Time Series Plots of VOC Concentrations
TMW-5B - TFRL
60000
50000
40000
30000
20000
10000
0
Concentration (µg/L)
02/22/08
07/06/09
11/18/10
04/01/12
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
Sampling Date
1,1-Dichloroethene
Benzene
cis-12-Dicloroethene
Toluene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride

Attachment 6
Summary of Historical Results
MNA Parameters
October 2008 through September 2018

Attachment 6. Summary of Historical Results - MNA Monitoring Parameters
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW-100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Carbon Dioxide (Total)	09/01/09	mg/L	NS	2,300	----	620	340	1,600	1,300	630	2,400	2,800	2,400
Carbon Dioxide (Total)	09/14/09	mg/L	NS	2,600	----	940	440	1,600	1,800	910	2,200	3,700	3,300
Carbon Dioxide (Total)	09/28/09	mg/L	NS	<5.0	----	920	380	1,400	1,100	870	<5.0	<5.0	<5.0
Carbon Dioxide (Total)	10/14/09	mg/L	NS	2,800	----	1,500	410	1,300	930	890	1,400	3,500	2,700
Carbon Dioxide (Total)	11/09/09	mg/L	NS	2,400	----	340	900	1,100	910	870	1,200	3,100	2,100
Carbon Dioxide (Total)	12/07/09	mg/L	NS	1,800	----	830	330	1,100	730	860	1,000	2,600	2,000
Carbon Dioxide (Total)	03/09/10	mg/L	NS	1,300	----	920	310	990	630	760	940	1,900	1,200
Carbon Dioxide (Total)	06/02/10	mg/L	NS	1,000	----	900	330	1,000	570	830	830	1,900	1,100
Carbon Dioxide (Total)	09/09/10	mg/L	NS	49	----	201	56.6	271	25.5	193	120	0.1	25.7
Carbon Dioxide (Total)	12/06/10	mg/L	NS	83.4	----	181	74.1	265	28	167	75.8	0.14	64.2
Carbon Dioxide (Total)	03/07/11	mg/L	NS	74	----	216	49.8	102	22.5	91.4	81.4	0.22	37
Carbon Dioxide (Total)	07/07/11	mg/L	NS	86.7	----	401	81.9	244	45.2	249	229	0.45	150
Carbon Dioxide (Total)	09/27/11	mg/L	NS	176	----	274	99.5	379	47.9	258	202	2.8	232
Carbon Dioxide (Total)	12/28/11	mg/L	NS	50.2	----	202	78.7	185	51.4	163	154	5.1	98.1
Carbon Dioxide (Total)	03/14/12	mg/L	NS	57.3	----	261	92.2	227	34.2	87.6	120	8.8	56.1
Carbon Dioxide (Total)	09/24/12	mg/L	NS	63.3	----	177	122	255	65	163	158	20.1	184
Carbon Dioxide (Total)	03/07/13	mg/L	NS	64.1	----	122	25.5	167	22.5	84.2	26.8	7.6	200
Carbon Dioxide (Total)	3/11/20114	mg/L	NS	81.6	----	280	73.3	312	37.4	171	160	10.6	118
Carbon Dioxide (Total)	09/15/14	mg/L	NS	208	----	----	----	----	----	----	----	52.6	290
Carbon Dioxide (Total)	03/10/15	mg/L	NS	196	----	----	----	----	----	----	200	39.4	247
Carbon Dioxide (Total)	09/25/15	mg/L	NS	286	----	----	----	----	----	----	298	102	366
Carbon Dioxide (Total)	11/10/15	mg/L	NS	----	----	169	175	207	203	223	----	----	----
Carbon Dioxide (Total)	03/16/16	mg/L	NS	145	40.2	122	128	177	145	210	169	79.3	265
Carbon Dioxide (Total)	09/27/16	mg/L	NS	53.1	12.4	53.9	57.1	86.1	61.1	96.4	88.8	55.7	146
Carbon Dioxide (Total)	09/28/17	mg/L	NS	5.6	2.9	9.6	3.8	6.9	5.1	6.7	6.6	3.3	7.8
Carbon Dioxide (Total)	09/18/18	mg/L	NS										
Chloride	04/20/09	mg/L	250**	140	----	140	66	210	64	150	73	47	170
Chloride	07/13/09	mg/L	250**	140	----	120	49	160	54	140	88	67	130
Chloride	09/01/09	mg/L	250**	140	----	140	56	170	38	150	100	85	150
Chloride	09/14/09	mg/L	250**	130	----	140	58	170	73	160	110	88	140
Chloride	09/28/09	mg/L	250**	120	----	140	54	170	63	160	120	120	150
Chloride	10/14/09	mg/L	250**	120	----	110	61	170	70	140	120	95	130
Chloride	11/09/09	mg/L	250**	110	----	110	49	160	68	130	110	84	140
Chloride	12/07/09	mg/L	250**	100	----	130	47	190	77	140	130	79	120
Chloride	03/09/10	mg/L	250**	120	----	140	51	200	80	160	140	90	140
Chloride	06/02/10	mg/L	250**	120	----	130	53	190	79	160	140	72 I	130
Chloride	09/09/10	mg/L	250**	104	----	107	52.9	155	82.9 I	141	149	58.7	136
Chloride	12/06/10	mg/L	250**	80.1	----	120	63.2	162	78	139	133	53.5 I	128
Chloride	03/07/11	mg/L	250**	54	----	127	65.4	188	78.1	135	141	58.4	115
Chloride	07/07/11	mg/L	250**	59.3	----	188	80.9 J	147	94.9	167	158	67.4	134
Chloride	09/27/11	mg/L	250**	74.2	----	130	78.9	169	84.4	150	149	63.4	142
Chloride	12/28/11	mg/L	250**	67.5	----	150	96.6	189	112	160	157	75.7	162
Chloride	03/14/12	mg/L	250**	45.4	----	137	85.4	181	101	144	155	57	131
Chloride	09/24/12	mg/L	250**	40.5	----	120	103	165	96.4	145	144	70.2	136
Chloride	03/07/13	mg/L	250**	28.3	----	122	80.4	169	88.8	142	131	76.3	148
Chloride	09/18/13	mg/L	250**	29.4	----	113	86	141	175	124	148	68.8	75.2
Chloride	03/11/14	mg/L	250**	30.7	----	116	82.8	141	141	128	134	69.1	94.9
Chloride	09/15/14	mg/L	250**	59	----	----	----	----	----	----	----	70.2	158
Chloride	03/10/15	mg/L	250**	62.9	----	----	----	----	----	----	157	74.8	164
Chloride	09/15/15	mg/L	250**	57.3	----	----	----	----	----	----	161	76.8	154
Chloride	11/10/15	mg/L	250**	----	53.9	144	119	118	116	251	----	----	----
Chloride	03/16/16	mg/L	250**	52.2	55.3	146	121	118	116	148	144	79.8 J	147
Chloride	09/27/16	mg/L	250**	32.1	49.9	125	104	83.3	100	132	140	76.5	111

Attachment 6. Summary of Historical Results - MNA Monitoring Parameters
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW-100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Chloride	09/28/17	mg/L	250**	24.7	49	112	98.7	63.7	92.9	133	136	79.5	89.3
Chloride	09/18/18	mg/L	250**	47	55.4	116	115	77.2	102	131	146	100	96.8
Ethane	10/20/08	µg/L	NS	3,400	----	----	----	----	----	----	----	----	----
Ethane	04/20/09	µg/L	NS	2,100	----	860	420	2,900	99	24	8.3	39	98
Ethane	07/13/09	µg/L	NS	2,250	----	623	41.5	3,140	55.2	18.9	2,250	57.1	57.1
Ethane	09/01/09	µg/L	NS	1,220	----	436	38.9	3,640	24.3	27.3	18.4	103	52.1
Ethane	09/14/09	µg/L	NS	1,240	----	619	75.3	3,770	68.8	29.6	18.4	111	58.5
Ethane	09/28/09	µg/L	NS	1,340	----	501	51.9	3,520	107	31.3	20.8	102	63.4
Ethane	10/14/09	µg/L	NS	883	----	294	44.4	1,490	95	32.1	20.6	99	84.5
Ethane	11/09/09	µg/L	NS	1,050	----	41.4	640	4,210	110	31.9	10.9	91.9	89.4
Ethane	12/07/09	µg/L	NS	887	----	441	31.9	3,400	130	29.3	21.3	87.1	122
Ethane	03/09/10	µg/L	NS	1,510	----	466	26.4	3,540	114	27.3	45.8	70.6	104
Ethane	06/02/10	µg/L	NS	1,870	----	405	30	3860	158	30	56	69	110
Ethane	09/09/10	µg/L	NS	2,200	----	460	48	5,200	180	30	55	55	110
Ethane	12/06/10	µg/L	NS	2200	----	410	56	4800	230	30	50	45	99
Ethane	03/07/11	µg/L	NS	700	----	650	72	5800	270	37	45	46	86
Ethane	07/07/11	µg/L	NS	1500	----	630	94	4900	400	32	54	52	79
Ethane	09/27/11	µg/L	NS	1800	----	530	130	4400	590	32	43	53	110
Ethane	12/28/11	µg/L	NS	1300	----	560	220	4800	910	34	38	54	90
Ethane	03/14/12	µg/L	NS	590	----	550	210	3300	770	35	45	24	44
Ethane	09/24/12	µg/L	NS	760	----	540	200	2700	630	53	48	97	100
Ethane	03/07/13	µg/L	NS	229	----	810	32.1	2450	219	45.4	20.5	14.7	124
Ethane	09/18/13	µg/L	NS	244	----	1110	<50	<50	<0.5	30.9	10.2	18.5	76.7
Ethane	03/11/14	µg/L	NS	1.4	----	1140	37.2	2200	11.1	37.8	26.2	43.6	78.5
Ethane	09/15/14	µg/L	NS	376	----	----	----	----	----	----	----	66.9	102
Ethane	03/10/15	µg/L	NS	294	----	----	----	----	----	----	44.4	81.2	103
Ethane	09/15/15	µg/L	NS	207	----	----	----	----	----	----	54.5	138	87.2
Ethane	11/10/15	µg/L	NS	----	----	244	816	1960	615	34.2	----	----	----
Ethane	03/16/16	µg/L	NS	138	10.3	1220	225	1580	479	106	39.1	92.6	95.1
Ethane	09/27/17	µg/L	NS	80.8	18.1	2130	272	772	466	416	56.4	112	98.1
Ethane	09/28/17	µg/L	NS	64	36.6	3380	239	495	187	719	661	136	149
Ethane	09/18/18	µg/L	NS	31.6	9.8 I	1030	33.9	154	242	89	6.4 I	53.2	61.5
Ethene	10/20/08	µg/L	NS	3,000	----	----	----	----	----	----	----	----	----
Ethene	04/20/09	µg/L	NS	1,600	----	510	160	3,300	820	49	190	260	130
Ethene	07/13/09	µg/L	NS	1,650	----	511	205	2,560	721	24.4	1,650	77.5	77.5
Ethene	09/01/09	µg/L	NS	884	----	625	217	2,330	92.2	24.2	26.5	205	63.5
Ethene	09/14/09	µg/L	NS	925	----	926	358	2,340	534	32.6	32.3	239	71.5
Ethene	09/28/09	µg/L	NS	803	----	878	285	2,370	412	31.6	30.8	237	74.5
Ethene	10/14/09	µg/L	NS	513	----	512	229	1,130	420	28.9	21.4	272	104
Ethene	11/09/09	µg/L	NS	514	----	235	796	3,410	483	33.2	10	278	88.1
Ethene	12/07/09	µg/L	NS	345	----	685	174	3,170	581	34.2	12	264	115
Ethene	03/09/10	µg/L	NS	270	----	533	115	3,460	523	27.6	30.5	237	76.8
Ethene	06/02/10	µg/L	NS	782	----	691	59.8	3,560	1,160	31.2	59.6	318	71.6
Ethene	09/09/10	µg/L	NS	470	----	690	87	3,700	1,400	31	67	330	68
Ethene	12/06/10	µg/L	NS	290	----	160	120	3700	960	38	60	280	68
Ethene	03/07/11	µg/L	NS	120	----	640	220	3800	770	33	75	320	63
Ethene	07/07/11	µg/L	NS	55	----	640	230	2700	840	15	75	420	69
Ethene	09/27/11	µg/L	NS	41	----	550	370	1600	920	19	57	520	100
Ethene	12/28/11	µg/L	NS	26	----	440	410	1800	970	17	75	410	100
Ethene	03/14/12	µg/L	NS	1.1	----	380	400	2100	750	17	61	210	54
Ethene	09/24/12	µg/L	NS	0.67	----	270	400	1900	720	12	76	450	120
Ethene	03/07/13	µg/L	NS	13.5	----	80	48.8	2080	174	7.6	6.2	19.4	144
Ethene	09/18/13	µg/L	NS	3.8 I	----	65				<0.86	11	67.7	82.6

Attachment 6. Summary of Historical Results - MNA Monitoring Parameters
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW-100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Ethene	03/11/14	µg/L	NS	<3.1	----	62.6	29.6	632		<3.1	11.2	<3.1	96.9
Ethene	09/15/14	µg/L	NS	<3.1	----	----	----	----	----	----	----	27	73.7
Ethene	03/10/15	µg/L	NS	<3.1	----	----	----	----	----	----	35.3	170	31.8
Ethene	09/15/15	µg/L	NS	12.1	----	----	----	----	----	----	25.2	309	18.7
Ethene	11/10/15	µg/L	NS	----	----	536	81.8	109	424	9 I	----	----	----
Ethene	03/16/16	µg/L	NS	42.9	<0.47	86.7	469	57.7	315	3.5 I	15.8	178	<0.47
Ethene	09/27/16	µg/L	NS	<0.77	<0.77	100	429	2.2	243	223	<0.77	115	5.6
Ethene	09/28/17	µg/L	NS	<10	<10	470	430	<10	79.7	549	741	125	<100
Ethene	09/18/18	µg/L	NS	<2.9	<2.9	384	57.6	<2.9	78.2	41	26.3	99.2	<2.9
Methane	04/20/09	µg/L	NS	8,500	----	7,500	3,000	6,900	2,900	74	3,000	2,900	5,700
Methane	07/13/09	µg/L	NS	9,110	----	5,560	2,160	6,980	1,880	6,600	9,110	5,350	5,350
Methane	09/01/09	µg/L	NS	5,110	----	8,850	2,180	6,860	1,760	7,950	1,340	1,800	3,440
Methane	09/14/09	µg/L	NS	4,880	----	9,850	3,280	7,410	1,760	10,700	1,790	2,200	4,610
Methane	09/28/09	µg/L	NS	4,740	----	8,520	3,100	7,260	2,420	10,300	2,620	1,950	5,010
Methane	10/14/09	µg/L	NS	3,110	----	8,910	3,260	4,230	3,480	13,600	3,920	3,640	5,030
Methane	11/09/09	µg/L	NS	3,450	----	2,580	8,750	9,420	2,060	11,200	887	1,880	5,680
Methane	12/07/09	µg/L	NS	2,710	----	8,520	2,620	8,600	2,310	9,310	1,170	1,930	7,000
Methane	03/09/10	µg/L	NS	4,630	----	9,040	2,480	8,230	2,000	8,370	3,750	1,580	6,680
Methane	06/02/10	µg/L	NS	6,360	----	9,420	2,890	8,630	2,360	8,760	5,120	1,830	7,330
Methane	09/09/10	µg/L	NS	8,200	----	14,000	4,800	14,000	3,700	17,000	10,000	2,800	12,000
Methane	12/06/10	µg/L	NS	9,300	----	13,000	5,000	14,000	4,700	15,000	12,000	2,000	11,000
Methane	03/07/11	µg/L	NS	4,500	----	13,000	4,700	15,000	3,700	14,000	9,600	2,100	8,800
Methane	07/07/11	µg/L	NS	6,600	----	13,000	4,400	13,000	3,800	15,000	13,000	2,800	9,100
Methane	09/27/11	µg/L	NS	9,500	----	13,000	5,200	12,000	4,200	14,000	13,000	3,200	12,000
Methane	12/28/11	µg/L	NS	9,200	----	14,000	7,000	14,000	5,400	14,000	10,000	2,800	11,000
Methane	03/14/12	µg/L	NS	6,900	----	11,000	6,500	11,000	5,200	7,100	12,000	1,200	4,600
Methane	09/24/12	µg/L	NS	5,300	----	9,900	5,700	11,000	4,600	13,000	12,000	3,900	10,000
Methane	03/07/13	µg/L	NS	3,320	----	10,800	1,170	12,600	1,540	12,700	2,760	192	11,400
Methane	09/18/13	µg/L	NS	3,860	----	11600 L				13900 L	2,260	910	7700 L
Methane	03/11/14	µg/L	NS	2,780	----	10,600	951	11,100	28	14,000	5,980	27	7,370
Methane	09/15/14	µg/L	NS	5,040	----	----	----	----	----	----	----	3,130	11400 L
Methane	03/10/15	µg/L	NS	4,440	----	----	----	----	----	----	6,490	2,750	11800 L
Methane	09/15/15	µg/L	NS	4,530	----	----	----	----	----	----	8,480	370	11,000
Methane	11/10/15	µg/L	NS	----	----	6,300	6,590	8,680	6,840	14,600	----	----	----
Methane	03/16/16	µg/L	NS	2,690	2,750	6,420	4,590	7,060	4,740	9,340	4,380	2,350	11,100
Methane	09/27/16	µg/L	NS	2,940	3,770	9,730	5,330	6,560	6,280	12,400	7,130	4,040	12,700
Methane	09/28/17	µg/L	NS	4,570	7,650	26,300	12,000	11,900	4,960	32,200	31,500	8,180	31,900
Methane	09/18/18	µg/L	NS	2220	1500	6420	1050	2340	3510	6750	218	2680	6740
Nitrogen, Nitrate	10/20/08	mg/L	10*	<0.058	----	----	----	----	----	----	----	----	----
Nitrogen, Nitrate	04/20/09	mg/L	10*	<0.05	----	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.029 I	<0.05
Nitrogen, Nitrate	07/13/09	mg/L	10*	0.51	----	0.93	<0.05	0.55	0.26	0.83	0.93	0.29	0.52
Nitrogen, Nitrate	09/01/09	mg/L	10*	<0.078	----	<0.078	0.21	<0.078	<0.078	<0.078	0.78	<0.078	0.22
Nitrogen, Nitrate	09/14/09	mg/L	10*	<0.078	----	0.61	0.3	0.85	0.28	0.19	1.8	<0.078	0.22
Nitrogen, Nitrate	09/28/09	mg/L	10*	1.9	----	<0.16	0.39	0.99	0.99	<0.16	1.9	<2.0	<2.0
Nitrogen, Nitrate	10/14/09	mg/L	10*	<0.078	----	1.9	<0.78	<0.78	<0.78	<0.78	<0.78	<2.0	<0.078
Nitrogen, Nitrate	11/09/09	mg/L	10*	<0.78	----	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.78	<0.078
Nitrogen, Nitrate	12/07/09	mg/L	10*	<0.78	----	0.55	<0.16	<0.16	<0.78	<0.39	<0.39	2.5	<0.78
Nitrogen, Nitrate	03/09/10	mg/L	10*	<0.78	----	<0.078	<0.078	<0.078	<0.16	<0.078	<0.16	<0.78	<0.39
Nitrogen, Nitrate	06/02/10	mg/L	10*	<0.21	----	0.41	<0.043	<0.085	<0.21	<0.043	<0.085	<0.43	<0.21
Nitrogen, Nitrate	09/09/10	mg/L	10*	1.3	----	<0.5 J	<0.05	<0.12	<0.5	<0.12	<0.12	<0.5	1.1
Nitrogen, Nitrate	12/06/10	mg/L	10*	1.2	----	<0.12	<.025	<0.12	<0.12	<0.12	<0.12	<0.5	1.2
Nitrogen, Nitrate	03/07/11	mg/L	10*	0.67	----	<0.12	<0.050	<0.12	<0.12	<0.12	0.67	<0.25	<0.12
Nitrogen, Nitrate	07/07/11	mg/L	10*	0.34	----	0.27	<.025	<0.05	<0.12	<0.05	<0.05	<0.12	<0.05

Attachment 6. Summary of Historical Results - MNA Monitoring Parameters
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW-100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Nitrogen, Nitrate	09/27/11	mg/L	10*	0.32	----	<0.050	<0.050	<0.050	<0.12	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate	12/28/11	mg/L	10*	0.14	----	<0.05	<0.025	<0.05	<0.05	<0.025	<0.025	<0.025	<0.025
Nitrogen, Nitrate	03/14/12	mg/L	10*	<0.12	----	<0.05	<0.05 J	<0.05	<0.05	<0.05	<0.12	<0.12	<0.25
Nitrogen, Nitrate	09/24/12	mg/L	10*	<0.12	----	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Nitrogen, Nitrate	03/07/13	mg/L	10*	<0.12	----	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Nitrogen, Nitrate	09/18/13	mg/L	10*	<0.05	----	<0.12	<0.05	<0.12	0.46	<0.05	<0.05	<0.025	<0.12
Nitrogen, Nitrate	03/11/14	mg/L	10*	0.12	----	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Nitrogen, Nitrate	09/15/14	mg/L	10*	<0.025	----	----	----	----	----	----	----	<0.025	<0.025
Nitrogen, Nitrate	03/10/15	mg/L	10*	0.17	----	----	----	----	----	----	<0.025	<0.025	<0.025
Nitrogen, Nitrate	09/15/15	mg/L	10*	0.026 I	----	----	----	----	----	----	<0.025	<0.025	0.11
Nitrogen, Nitrate	11/10/15	mg/L	10*	----	----	<0.025	<0.025	<0.025	<0.025	0.094 I			
Nitrogen, Nitrate	03/16/16	mg/L	10*	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.039 I	<0.025	0.051 I
Nitrogen, Nitrate	09/27/16	mg/L	10*	<0.025	<0.025	<0.025	<0.025	<0.075	<0.025	<0.075	0.12	<0.025	<0.025
Nitrogen, Nitrate	09/28/17	mg/L	10*	<0.025	<0.025	<0.025	<0.025	<0.025	0.025 I	<0.025	<0.025	<0.025	<0.025
Nitrogen, Nitrate	09/18/18	mg/L	10*	0.088	<0.025	<0.025	0.025 I	<0.25	<0.12	<0.25	<0.25	0.05	0.035 I
Sodium	04/20/09	mg/L	160*	250	----	76	38	72	31	69	37	29	68
Sodium	07/13/09	mg/L	160*	450	----	91	41	630	29	130	1,900	7,100	2,400
Sodium	09/01/09	mg/L	160*	2,100 V	----	79 V	130 V	970 V	1,400	99	3,300	4,000	2,800
Sodium	09/14/09	mg/L	160*	2,200	----	74	160	760	2,400	92	2,900	4,600	4,000
Sodium	09/28/09	mg/L	160*	2,700 V	----	80 V	170 V	520 V	1,000 V	100 V	2,200 V	3,800 V	3,800 V
Sodium	10/14/09	mg/L	160*	3,000 V	----	89 V	150 V	360 V	900 V	130 V	1,500 V	3,600 V	3,000 V
Sodium	11/09/09	mg/L	160*	2,200	----	160	110	290	1,000	130	1,300	2,800	1,700
Sodium	12/07/09	mg/L	160*	1,800	----	110	140	210	800	110	760	3,000	2,100
Sodium	03/09/10	mg/L	160*	1,000	----	120	96	190	600	100	280	2,200	820
Sodium	06/02/10	mg/L	160*	440	----	91	96	160	530	89	210	1,700	550
Sodium	09/09/10	mg/L	160*	299	----	88.2	94.4	118	427	87.3	164	1,120	376
Sodium	12/06/10	mg/L	160*	263	----	103	108	131	457	94.4	154	860	350
Sodium	03/07/11	mg/L	160*	248	----	118	109	115	336	109	149	650	380
Sodium	07/07/11	mg/L	160*	144	----	122	108	122 J	403	104	125	480	264
Sodium	09/27/11	mg/L	160*	119	----	113	115	105	368	94.4	104	323	196
Sodium	12/28/11	mg/L	160*	131	----	131	116	114	374	90.1	95.1	301	186
Sodium	03/14/12	mg/L	160*	134	----	152 J	108	111	324	67.4	99.1	224	217 J
Sodium	09/24/12	mg/L	160*	103	----	168	127	116	361	80.7	95.5	222	164
Sodium	03/07/13	mg/L	160*	108	----	172	77.3	127	206	88.2	95.2	177	180
Sodium	09/18/13	mg/L	160*	105	----	189	93.9	146	104	87.5	98.4	145	142
Sodium	03/11/14	mg/L	160*	111	----	173	99.1	149	104	89.8	104	137	164
Sodium	09/15/14	mg/L	160*	108	----	----	----	----	----	----	----	133	148
Sodium	03/10/15	mg/L	160*	96.6	----	----	----	----	----	----	106	156	134
Sodium	09/15/15	mg/L	160*	79.6	----	----	----	----	----	----	90.8	142	129
Sodium	11/10/15	mg/L	160*	----	41.1	455	174	364	324	83.5	----	----	----
Sodium	03/16/16	mg/L	160*	95.9	39.4	450	187	327	311	76.6	99.9	183	120
Sodium	09/27/16	mg/L	160*	105	40	447	187	237	285	88.4	109	133	121
Sodium	09/28/17	mg/L	160*	74.2	34.6	**395**	134	**197**	**233**	87.3	102	115	99.2
Sodium	09/18/18	mg/L	160*	70.8	39.1	45.7	129 J	36.5	41.2	43.7	8.1	142	104
Sulfate	10/20/08	mg/L	250**	<0.28	----	----	----	----	----	----	----	----	----
Sulfate	04/20/09	mg/L	250**	46	----	<0.5	2.8	<0.5	0.36 I	<0.5	1.5	0.38 I	1.4
Sulfate	07/13/09	mg/L	250**	100	----	6.8	11	120	2.7	18	590	1,300	590
Sulfate	09/01/09	mg/L	250**	480	----	4.5	65	330	430	81	1,100	1,000	970
Sulfate	09/14/09	mg/L	250**	620	----	4.5	79	300	650	37	1,100	1,100	1,200
Sulfate	09/28/09	mg/L	250**	840	----	6.5	69	220	730	71	910	900	1,100
Sulfate	10/14/09	mg/L	250**	720	----	22	68	140	790	57	660	540	860
Sulfate	11/09/09	mg/L	250**	670	----	23	50	83	700	36	420	860	570
Sulfate	12/07/09	mg/L	250**	570	----	25	41	79	660	31	250	890	680

Attachment 6. Summary of Historical Results - MNA Monitoring Parameters
B5 Area Remediation, Tomoka Farms Landfill, Volusia County, Florida
October 2008 through October 2018

Parameter	Date	Units	Standard	B5-28	MW-100-6	TMW-1A	TMW-1B	TMW-2A	TMW-2B	TMW-3A	TMW-3B	TMW-4B	TMW-5B
Sulfate	03/09/10	mg/L	250**	330	----	29	37	76	640	16	75	850	310
Sulfate	06/02/10	mg/L	250**	140	----	13	34	52	650	6.6 I	63	620	140
Sulfate	09/09/10	mg/L	250**	75.5	----	<5	30.9	19.3	491	<12.5	36	470	67.1
Sulfate	12/06/10	mg/L	250**	45.5	----	17.9	32.5	19.8	446	<12.5	14.8 I	284	44.8 i
Sulfate	03/07/11	mg/L	250**	62.8	----	35.5	34.9	19.4	381	16.3	15.6	214	49.3
Sulfate	07/07/11	mg/L	250**	37.8	----	22.9	38.2 J	33.4	392 J	8.3	8.8	180	39
Sulfate	09/27/11	mg/L	250**	18.2	----	24.1	37.7	16.7	300	5.4	4.7 I	113	25.5
Sulfate	12/28/11	mg/L	250**	12.8	----	32.5	44.3	25.7	275	3.4 I	<2.5	112	28.9
Sulfate	03/14/12	mg/L	250**	10.4	----	48.2	43.2	31.7	254	<5.0	3.9 I	67.7	33.9
Sulfate	09/24/12	mg/L	250**	26.3	----	59	77	38.2	237	<0.5	5	67.4	22.4
Sulfate	03/07/13	mg/L	250**	24.3	----	58.8	24.1	40.7	111	<2.5	3.1	58.6	19.8
Sulfate	09/18/13	mg/L	250**	17.4	----	84	43.7	49.2	40.3	<5	<5	36.1	15.8 I
Sulfate	03/11/14	mg/L	250**	20.8	----	68	46.4	46.7	20.5	<2.5	6	38.6	17.6
Sulfate	09/15/14	mg/L	250**	14.5	----	----	----	----	----	----	----	24.3	5.7
Sulfate	03/10/15	mg/L	250**	10.4	----	----	----	----	----	----	11	25.3	2.6 I
Sulfate	09/15/15	mg/L	250**	10	----	----	----	----	----	----	10.2	21.2	<2.5
Sulfate	11/10/15	mg/L	250**	----	----	119	129	76.7	182	6.3	----	----	----
Sulfate	03/16/16	mg/L	250**	7.4	<2.5	102	136	69.7	180	<2.5	9	19.9	<2.5
Sulfate	09/27/16	mg/L	250**	5.8	<2.5	68.8	115	62.9	162	<2.5	11.1	19.6	<2.5
Sulfate	09/28/17	mg/L	250**	4.4 I	<2.5	36.9	77	46.6	122	<2.5	9.8	21.8	<2.5
Sulfate	09/18/18	mg/L	250**	<2.5	<2.5	37.3	84.6	52.5	121	<2.5	11.4	39.4	<2.5

NOTES:

NS = No Standard; mg/L = Milligrams per liter; mV = millivolts.

--- = Parameter not analyzed ; ug/L = Micrograms per liter.

J - Estimated value. Laboratory quality contral was outside control limits.

I = Indicates a result greater or equal to the MDL but less than the reporting limit (RL)

V = Parameter detected in the associated Method Blank.

*PDWS = Primary Drinking Water Standard (Chapter 62-550, F.A.C.)

**SDWS = Secondary Drinking Water Standard (Chapter 62-550, F.A.C.)

The October 20, 2008 sample was collected at well B5-28 prior to performing the pilot test, which was performed on the same day simulating an actual RegenOx injection.

The samples collected the week of April 20, 2009 were collected prior to the RegenOx injection events (except the pilot test) and are considered the baseline concentrations.

The first round of chemical injections of RegenOx were performed June 22 through July 3, 2009.

The second round of chemical injections of RegenOx & ORC were performed August 10 through 20, 2009.

A yellow high-lighted cell indicates the result is above the respective standard.

Attachment 7
Laboratory Report and Field Data Sheets
Post Remediation Status Monitoring and Assessment Monitoring

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

September 28, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on September 20, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35419087001	**B37-13**	Water	09/20/18 12:02	09/20/18 16:00

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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35419087001	**B37-13**	EPA 8011	SMH	2	PASI-O
		EPA 8260	SK1	48	PASI-O

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SUMMARY OF DETECTION

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35419087001	**B37-13**					
	Field pH	6.15	Std. Units		09/20/18 12:02	
	Field Temperature	24.7	deg C		09/20/18 12:02	
	Field Specific Conductance	1531	umhos/cm		09/20/18 12:02	
	Oxygen, Dissolved	0.63	mg/L		09/20/18 12:02	
	REDOX	-71.7	mV		09/20/18 12:02	
	Turbidity	1.24	NTU		09/20/18 12:02	
	Depth to Water	4.97	feet		09/20/18 12:02	
EPA 8260	Benzene	5.7	ug/L	1.0	09/26/18 02:53	
EPA 8260	Chlorobenzene	4.8	ug/L	1.0	09/26/18 02:53	
EPA 8260	Vinyl chloride	0.80	ug/L	1.0	09/26/18 02:53	I

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Sample: B37-13 **Lab ID: 35419087001** Collected: 09/20/18 12:02 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.15**	Std. Units			1		09/20/18 12:02		
Field Temperature	**24.7**	deg C			1		09/20/18 12:02		
Field Specific Conductance	**1531**	umhos/cm			1		09/20/18 12:02		
Oxygen, Dissolved	**0.63**	mg/L			1		09/20/18 12:02	7782-44-7	
REDOX	**-71.7**	mV			1		09/20/18 12:02		
Turbidity	**1.24**	NTU			1		09/20/18 12:02		
Depth to Water	**4.97**	feet			1		09/20/18 12:02		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/26/18 16:03	09/27/18 13:24	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0098	0.0074	1	09/26/18 16:03	09/27/18 13:24	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 02:53	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	107-13-1	
Benzene	**5.7**	ug/L	1.0	0.10	1		09/26/18 02:53	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 02:53	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 02:53	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 02:53	56-23-5	
Chlorobenzene	**4.8**	ug/L	1.0	0.50	1		09/26/18 02:53	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 02:53	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 02:53	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 02:53	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 02:53	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 02:53	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 02:53	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 02:53	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 02:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 02:53	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	100-42-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Sample: B37-13 **Lab ID: 35419087001** Collected: 09/20/18 12:02 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 02:53	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 02:53	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 02:53	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 02:53	108-05-4	
Vinyl chloride	**0.80 I**	ug/L	1.0	0.50	1		09/26/18 02:53	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/26/18 02:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		09/26/18 02:53	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/26/18 02:53	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/26/18 02:53	2037-26-5	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

QC Batch: 480547 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35419087001

METHOD BLANK: 2601665 Matrix: Water
Associated Lab Samples: 35419087001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/25/18 22:30	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/25/18 22:30	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Acetone	ug/L	10.0 U	20.0	10.0	09/25/18 22:30	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Benzene	ug/L	0.10 U	1.0	0.10	09/25/18 22:30	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/25/18 22:30	
Bromoform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/25/18 22:30	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/25/18 22:30	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Chloroform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/25/18 22:30	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/25/18 22:30	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/25/18 22:30	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/25/18 22:30	
Styrene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Toluene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

METHOD BLANK: 2601665 Matrix: Water
Associated Lab Samples: 35419087001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/25/18 22:30	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/25/18 22:30	
1,2-Dichloroethane-d4 (S)	%	111	70-130		09/25/18 22:30	
4-Bromofluorobenzene (S)	%	97	70-130		09/25/18 22:30	
Toluene-d8 (S)	%	108	70-130		09/25/18 22:30	

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.5	82	70-130	
1,1,1-Trichloroethane	ug/L	20	19.7	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	68-125	
1,1,2-Trichloroethane	ug/L	20	18.8	94	70-130	
1,1-Dichloroethane	ug/L	20	21.8	109	70-130	
1,1-Dichloroethene	ug/L	20	21.5	107	66-133	
1,2,3-Trichloropropane	ug/L	20	18.9	94	62-127	
1,2-Dichlorobenzene	ug/L	20	19.3	96	70-130	
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	
1,2-Dichloropropane	ug/L	20	19.8	99	70-130	
1,4-Dichlorobenzene	ug/L	20	19.3	97	70-130	
2-Butanone (MEK)	ug/L	40	38.8	97	47-143	
2-Hexanone	ug/L	40	34.3	86	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.9	92	57-132	
Acetone	ug/L	40	41.5	104	46-148	
Acrylonitrile	ug/L	200	203	101	60-143	
Benzene	ug/L	20	20.2	101	70-130	
Bromochloromethane	ug/L	20	21.0	105	70-130	
Bromodichloromethane	ug/L	20	17.0	85	70-130	
Bromoform	ug/L	20	15.6	78	49-126	
Bromomethane	ug/L	20	16.6	83	10-165	
Carbon disulfide	ug/L	20	16.7	84	60-141	
Carbon tetrachloride	ug/L	20	18.4	92	63-126	
Chlorobenzene	ug/L	20	19.3	97	70-130	
Chloroethane	ug/L	20	18.6	93	71-142	
Chloroform	ug/L	20	20.7	104	70-130	
Chloromethane	ug/L	20	17.4	87	40-140	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	70-130	
cis-1,3-Dichloropropene	ug/L	20	16.7	83	70-130	
Dibromochloromethane	ug/L	20	15.9	80	62-118	
Dibromomethane	ug/L	20	19.7	98	70-130	
Ethylbenzene	ug/L	20	20.2	101	70-130	
Iodomethane	ug/L	40	29.4	73	10-164	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	20.8	104	65-136	
Styrene	ug/L	20	17.9	89	70-130	
Tetrachloroethene	ug/L	20	16.6	83	64-134	
Toluene	ug/L	20	19.8	99	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	68-127	
trans-1,3-Dichloropropene	ug/L	20	15.5	78	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	14.1	70	42-129	
Trichloroethene	ug/L	20	19.7	99	70-130	
Trichlorofluoromethane	ug/L	20	20.5	103	65-135	
Vinyl acetate	ug/L	20	18.0	90	60-144	
Vinyl chloride	ug/L	20	17.7	89	68-131	
Xylene (Total)	ug/L	60	61.4	102	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	11.8	59	70-130	J(M1)
1,1,1-Trichloroethane	ug/L	0.50 U	20	15.4	77	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	13.3	66	68-125	J(M1)
1,1,2-Trichloroethane	ug/L	0.50 U	20	13.8	69	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	16.8	84	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	16.9	84	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	13.1	65	62-127	
1,2-Dichlorobenzene	ug/L	0.50 U	20	13.4	67	70-130	J(M1)
1,2-Dichloroethane	ug/L	0.50 U	20	14.0	70	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	14.2	71	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	13.6	68	70-130	J(M1)
2-Butanone (MEK)	ug/L	5.0 U	40	28.0	70	47-143	
2-Hexanone	ug/L	5.0 U	40	23.9	60	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	24.4	61	57-132	
Acetone	ug/L	10.0 U	40	29.2	73	46-148	
Acrylonitrile	ug/L	5.0 U	200	173	87	60-143	
Benzene	ug/L	0.54 I	20	15.6	75	70-130	
Bromochloromethane	ug/L	0.50 U	20	15.2	76	70-130	
Bromodichloromethane	ug/L	0.27 U	20	12.2	61	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	11.5	58	49-126	
Bromomethane	ug/L	0.50 U	20	14.1	70	10-165	
Carbon disulfide	ug/L	5.0 U	20	13.9	67	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	14.2	71	63-126	
Chlorobenzene	ug/L	1.3	20	15.0	68	70-130	J(M1)
Chloroethane	ug/L	0.50 U	20	17.1	85	71-142	
Chloroform	ug/L	0.50 U	20	15.4	77	70-130	

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	0.62 U	20	15.8	79	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	20.4	101	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	11.1	56	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	11.7	59	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	14.6	73	70-130	
Ethylbenzene	ug/L	0.50 U	20	14.6	73	70-130	
Iodomethane	ug/L	0.50 U	40	16.5	41	10-164	
Methylene Chloride	ug/L	2.5 U	20	15.3	76	65-136	
Styrene	ug/L	0.50 U	20	12.5	63	70-130	J(M1)
Tetrachloroethene	ug/L	0.50 U	20	11.9	59	64-134	J(M1)
Toluene	ug/L	0.50 U	20	14.5	73	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	16.1	80	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	10.3	52	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	10.3	52	42-129	
Trichloroethene	ug/L	0.50 U	20	15.8	79	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	19.0	95	65-135	
Vinyl acetate	ug/L	1.0 U	20	10.8	54	60-144	J(M1)
Vinyl chloride	ug/L	1.2	20	17.0	79	68-131	
Xylene (Total)	ug/L	1.5 U	60	43.6	73	70-130	MS
1,2-Dichloroethane-d4 (S)	%				110	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				104	70-130	

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	1.7	1.7	2	40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.52 I		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	27.5	27.1	1	40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	576	616	7	40	L
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	109	109	0	40	
4-Bromofluorobenzene (S)	%	94	97	3	40	
Toluene-d8 (S)	%	106	106	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

QC Batch: 480505 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35419087001

METHOD BLANK: 2601389 Matrix: Water
Associated Lab Samples: 35419087001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	09/27/18 11:27	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	09/27/18 11:27	

LABORATORY CONTROL SAMPLE: 2601390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.21	84	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.21	85	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2602091 2602092

Parameter	Units	35419010001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	<0.0063	.25	.25	0.22	0.23	88	90	60-140	3	40	
1,2-Dibromoethane (EDB)	ug/L	<0.0073	.25	.25	0.21	0.22	84	88	60-140	4	40	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
L	Off-scale high. Actual value is known to be greater than value given.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5/37/ Study
Pace Project No.: 35419087

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35419087001	**B37-13**				
35419087001	**B37-13**	EPA 8011	480505	EPA 8011	480900
35419087001	**B37-13**	EPA 8260	480547		

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WO# : 35419087

35419087

Pace Analytical

CUSTODY / Analytical Request Document

tody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Volusia County Solid Waste Management
Address:	1990 Tomoka Farms Road
	Daytona Beach, FL 32124
Email:	
Phone:	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ms. Jennifer Stirk
Copy To:	
Purchase Order #:	
Project Name:	Tomoka LF B5/37 Study
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	jeff.baylor@pacelabs.com,
Pace Profile #:	1592

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left) Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 VOCs Full List	Trip Blank DO NOT OPEN -	EDB 8011	Residual Chlorine (Y/N)
1	B37-13					9/20/18	1202												X		X	
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		9-20-18	1600	/Pace	9/20/18	1600		Y	N	Y
					1114	T-34.5				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: BRUCE Foster

SIGNATURE of SAMPLER: [signature] DATE Signed: 9-20-18

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

...m (SCUR)

WO#: 35419087
PM: JSB Due Date: 10/01/18
CLIENT: VOLDPW

Project #
Project Manager
Client:

Date and Initials of person:
Examining contents:
Label:
Deliver:
pH:

Thermometer Used: T-345 Date: 9/20/18 Time: 1600 Initials: NKB

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.2 (Visual)	0.2 (Correction Factor)	1.4 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** Wet Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☑ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑Yes ☐ No ☐N/A	
Chain of Custody Filled Out	☑Yes ☐ No ☐N/A	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No ☐N/A	
Samples Arrived within Hold Time	☑Yes ☐ No ☐N/A	
Rush TAT requested on COC	☐Yes ☐ No ☑N/A	
Sufficient Volume	☑Yes ☐ No ☐N/A	
Correct Containers Used	☑Yes ☐ No ☐N/A	
Containers Intact	☑Yes ☐ No ☐N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑Yes ☐ No ☐N/A	
All containers needing acid/base preservation have been checked.	☐Yes ☐ No ☑N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐Yes ☐ No ☑N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐Yes ☑ No ☐N/A	
Trip Blank Present:	☐Yes ☐ No ☑N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	Tomoka LF BS Study
WELL NO:	B37-13	SAMPLE ID:	B37-13
DATE:	9-20-18		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	37 feet to 70 feet	STATIC DEPTH TO WATER (feet):	4.97	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)
= (37.70 feet – 4.97 feet) X 0.16 gallons/foot = 5.2368 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	8	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	8	PURGING INITIATED AT:	10:59	PURGING ENDED AT:	12:02	TOTAL VOLUME PURGED (gallons):	8.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:40	5.33	5.33	.13	7.43	6.12	24.9	1549	0.75	2.25	yellow	sulfur
11:51	1.43	6.76	.13	7.43	6.15	24.7	1576	0.67	1.03	"	"
12:02	1.43	8.19	.13	7.43	6.15	24.9	1531	6.63	1.24	"	"

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Bruce Foster	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	12:02	SAMPLING ENDED AT:	12:08

PUMP OR TUBING DEPTH IN WELL (feet):	8	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	AG	40	HCl/ICE		6.15	8260	APP	200
	2	CG	1	ICE			EDB 8011	"	1

REMARKS: ORP -61.9 -70.4 -71.7

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

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

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

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

September 28, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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8 East Tower Circle
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CERTIFICATIONS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35418729001	**EQ Blank 9/19/18**	Water	09/19/18 12:50	09/19/18 17:10
35418729002	**B5-37B**	Water	09/19/18 13:34	09/19/18 17:10
35418729003	**B5-37B Dup**	Water	09/19/18 13:34	09/19/18 17:10
35418729004	**B37-1**	Water	09/19/18 14:48	09/19/18 17:10
35418729005	**B37-6**	Water	09/19/18 15:47	09/19/18 17:10
35418729006	**B37-3**	Water	09/19/18 15:34	09/19/18 17:10
35418729007	**Trip Blank 9/19/18**	Water	09/19/18 00:00	09/19/18 17:10

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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35418729001	**EQ Blank 9/19/18**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729002	**B5-37B**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729003	**B5-37B Dup**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729004	**B37-1**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729005	**B37-6**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729006	**B37-3**	EPA 8011	MMB	2	PASI-O
		EPA 8260	SK1	48	PASI-O
35418729007	**Trip Blank 9/19/18**	EPA 8260	SK1	50	PASI-O

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SUMMARY OF DETECTION

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418729002	**B5-37B**					
	Field pH	6.26	Std. Units		09/19/18 13:34	
	Field Temperature	23.4	deg C		09/19/18 13:34	
	Field Specific Conductance	1830	umhos/cm		09/19/18 13:34	
	Oxygen, Dissolved	2.55	mg/L		09/19/18 13:34	
	REDOX	-63.0	mV		09/19/18 13:34	
	Turbidity	5.14	NTU		09/19/18 13:34	
	Depth to Water	1.68	feet		09/19/18 13:34	
EPA 8260	Benzene	2.0	ug/L	1.0	09/25/18 07:20	
EPA 8260	Chlorobenzene	9.7	ug/L	1.0	09/25/18 07:20	
EPA 8260	cis-1,2-Dichloroethene	0.89	ug/L	1.0	09/25/18 07:20	I
EPA 8260	Vinyl chloride	2.0	ug/L	1.0	09/25/18 07:20	
35418729003	**B5-37B Dup**					
	Field pH	6.26	Std. Units		09/19/18 13:34	
	Field Temperature	23.4	deg C		09/19/18 13:34	
	Field Specific Conductance	1830	umhos/cm		09/19/18 13:34	
	Oxygen, Dissolved	2.55	mg/L		09/19/18 13:34	
	REDOX	-63.0	mV		09/19/18 13:34	
	Turbidity	5.14	NTU		09/19/18 13:34	
	Depth to Water	1.68	feet		09/19/18 13:34	
EPA 8260	Benzene	2.0	ug/L	1.0	09/25/18 07:44	
EPA 8260	Chlorobenzene	9.7	ug/L	1.0	09/25/18 07:44	
EPA 8260	cis-1,2-Dichloroethene	0.99	ug/L	1.0	09/25/18 07:44	I
EPA 8260	Vinyl chloride	1.9	ug/L	1.0	09/25/18 07:44	
35418729004	**B37-1**					
	Field pH	6.18	Std. Units		09/19/18 14:48	
	Field Temperature	24.1	deg C		09/19/18 14:48	
	Field Specific Conductance	2636	umhos/cm		09/19/18 14:48	
	Oxygen, Dissolved	0.92	mg/L		09/19/18 14:48	
	REDOX	83.8	mV		09/19/18 14:48	
	Turbidity	7.38	NTU		09/19/18 14:48	
	Depth to Water	1.09	feet		09/19/18 14:48	
EPA 8260	Benzene	7.6	ug/L	1.0	09/25/18 08:08	
EPA 8260	Chlorobenzene	6.5	ug/L	1.0	09/25/18 08:08	
EPA 8260	Ethylbenzene	1.0	ug/L	1.0	09/25/18 08:08	
EPA 8260	Toluene	4.3	ug/L	1.0	09/25/18 08:08	
EPA 8260	Xylene (Total)	9.8	ug/L	3.0	09/25/18 08:08	
35418729005	**B37-6**					
	Field pH	6.16	Std. Units		09/19/18 15:47	
	Field Temperature	24.0	deg C		09/19/18 15:47	
	Field Specific Conductance	1140	umhos/cm		09/19/18 15:47	
	Oxygen, Dissolved	1.61	mg/L		09/19/18 15:47	
	REDOX	-51.8	mV		09/19/18 15:47	
	Turbidity	12.00	NTU		09/19/18 15:47	
	Depth to Water	5.91	feet		09/19/18 15:47	
EPA 8260	Benzene	1.8	ug/L	1.0	09/25/18 08:31	
EPA 8260	Chlorobenzene	1.3	ug/L	1.0	09/25/18 08:31	

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SUMMARY OF DETECTION

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418729006	**B37-3**					
	Field pH	6.38	Std. Units		09/19/18 15:34	
	Field Temperature	24.3	deg C		09/19/18 15:34	
	Field Specific Conductance	1486	umhos/cm		09/19/18 15:34	
	Oxygen, Dissolved	0.09	mg/L		09/19/18 15:34	
	REDOX	-52.1	mV		09/19/18 15:34	
	Turbidity	2.51	NTU		09/19/18 15:34	
	Depth to Water	3.79	feet		09/19/18 15:34	
EPA 8260	Benzene	2.4	ug/L	1.0	09/25/18 23:41	
EPA 8260	Chlorobenzene	0.94	ug/L	1.0	09/25/18 23:41	I

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: EQ Blank 9/19/18 **Lab ID: 35418729001** Collected: 09/19/18 12:50 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 01:50	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0099	0.0074	1	09/20/18 09:44	09/21/18 01:50	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 06:57	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		09/25/18 06:57	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 06:57	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 06:57	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 06:57	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 06:57	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 06:57	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 06:57	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 06:57	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 06:57	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 06:57	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 06:57	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 06:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 06:57	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 06:57	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 06:57	96-18-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: EQ Blank 9/19/18 **Lab ID: 35418729001** Collected: 09/19/18 12:50 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 06:57	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 06:57	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 06:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		09/25/18 06:57	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		09/25/18 06:57	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		09/25/18 06:57	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B5-37B **Lab ID: 35418729002** Collected: 09/19/18 13:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.26**	Std. Units			1		09/19/18 13:34		
Field Temperature	**23.4**	deg C			1		09/19/18 13:34		
Field Specific Conductance	**1830**	umhos/cm			1		09/19/18 13:34		
Oxygen, Dissolved	**2.55**	mg/L			1		09/19/18 13:34	7782-44-7	
REDOX	**-63.0**	mV			1		09/19/18 13:34		
Turbidity	**5.14**	NTU			1		09/19/18 13:34		
Depth to Water	**1.68**	feet			1		09/19/18 13:34		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 02:04	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0098	0.0074	1	09/20/18 09:44	09/21/18 02:04	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 07:20	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	107-13-1	
Benzene	**2.0**	ug/L	1.0	0.10	1		09/25/18 07:20	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 07:20	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 07:20	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 07:20	56-23-5	
Chlorobenzene	**9.7**	ug/L	1.0	0.50	1		09/25/18 07:20	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 07:20	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 07:20	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 07:20	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 07:20	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	75-35-4	
cis-1,2-Dichloroethene	**0.89 I**	ug/L	1.0	0.50	1		09/25/18 07:20	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 07:20	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 07:20	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 07:20	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 07:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:20	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B5-37B **Lab ID: 35418729002** Collected: 09/19/18 13:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 07:20	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:20	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 07:20	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 07:20	108-05-4	
Vinyl chloride	**2.0**	ug/L	1.0	0.50	1		09/25/18 07:20	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 07:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		09/25/18 07:20	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		09/25/18 07:20	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/25/18 07:20	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B5-37B Dup **Lab ID: 35418729003** Collected: 09/19/18 13:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.26**	Std. Units			1		09/19/18 13:34		
Field Temperature	**23.4**	deg C			1		09/19/18 13:34		
Field Specific Conductance	**1830**	umhos/cm			1		09/19/18 13:34		
Oxygen, Dissolved	**2.55**	mg/L			1		09/19/18 13:34	7782-44-7	
REDOX	**-63.0**	mV			1		09/19/18 13:34		
Turbidity	**5.14**	NTU			1		09/19/18 13:34		
Depth to Water	**1.68**	feet			1		09/19/18 13:34		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 02:19	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0098	0.0074	1	09/20/18 09:44	09/21/18 02:19	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 07:44	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	107-13-1	
Benzene	**2.0**	ug/L	1.0	0.10	1		09/25/18 07:44	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 07:44	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 07:44	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 07:44	56-23-5	
Chlorobenzene	**9.7**	ug/L	1.0	0.50	1		09/25/18 07:44	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 07:44	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 07:44	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 07:44	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 07:44	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	75-35-4	
cis-1,2-Dichloroethene	**0.99 I**	ug/L	1.0	0.50	1		09/25/18 07:44	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 07:44	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 07:44	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 07:44	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 07:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 07:44	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	100-42-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B5-37B Dup **Lab ID: 35418729003** Collected: 09/19/18 13:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 07:44	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 07:44	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 07:44	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 07:44	108-05-4	
Vinyl chloride	**1.9**	ug/L	1.0	0.50	1		09/25/18 07:44	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 07:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/25/18 07:44	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/25/18 07:44	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		09/25/18 07:44	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-1 **Lab ID: 35418729004** Collected: 09/19/18 14:48 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.18**	Std. Units			1		09/19/18 14:48		
Field Temperature	**24.1**	deg C			1		09/19/18 14:48		
Field Specific Conductance	**2636**	umhos/cm			1		09/19/18 14:48		
Oxygen, Dissolved	**0.92**	mg/L			1		09/19/18 14:48	7782-44-7	
REDOX	**83.8**	mV			1		09/19/18 14:48		
Turbidity	**7.38**	NTU			1		09/19/18 14:48		
Depth to Water	**1.09**	feet			1		09/19/18 14:48		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 02:34	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	09/20/18 09:44	09/21/18 02:34	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 08:08	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	107-13-1	
Benzene	**7.6**	ug/L	1.0	0.10	1		09/25/18 08:08	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 08:08	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 08:08	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 08:08	56-23-5	
Chlorobenzene	**6.5**	ug/L	1.0	0.50	1		09/25/18 08:08	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 08:08	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 08:08	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 08:08	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 08:08	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 08:08	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 08:08	10061-02-6	
Ethylbenzene	**1.0**	ug/L	1.0	0.50	1		09/25/18 08:08	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 08:08	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 08:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:08	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	100-42-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-1 **Lab ID: 35418729004** Collected: 09/19/18 14:48 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 08:08	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	127-18-4	
Toluene	**4.3**	ug/L	1.0	0.50	1		09/25/18 08:08	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 08:08	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 08:08	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:08	75-01-4	
Xylene (Total)	**9.8**	ug/L	3.0	1.5	1		09/25/18 08:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/25/18 08:08	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		09/25/18 08:08	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		09/25/18 08:08	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-6 **Lab ID: 35418729005** Collected: 09/19/18 15:47 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.16**	Std. Units			1		09/19/18 15:47		
Field Temperature	**24.0**	deg C			1		09/19/18 15:47		
Field Specific Conductance	**1140**	umhos/cm			1		09/19/18 15:47		
Oxygen, Dissolved	**1.61**	mg/L			1		09/19/18 15:47	7782-44-7	
REDOX	**-51.8**	mV			1		09/19/18 15:47		
Turbidity	**12.00**	NTU			1		09/19/18 15:47		
Depth to Water	**5.91**	feet			1		09/19/18 15:47		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 02:49	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	09/20/18 09:44	09/21/18 02:49	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 08:31	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	107-13-1	
Benzene	**1.8**	ug/L	1.0	0.10	1		09/25/18 08:31	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 08:31	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 08:31	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 08:31	56-23-5	
Chlorobenzene	**1.3**	ug/L	1.0	0.50	1		09/25/18 08:31	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 08:31	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 08:31	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 08:31	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 08:31	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 08:31	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 08:31	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 08:31	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 08:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 08:31	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	100-42-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-6 **Lab ID: 35418729005** Collected: 09/19/18 15:47 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 08:31	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 08:31	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 08:31	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 08:31	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 08:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/25/18 08:31	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		09/25/18 08:31	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		09/25/18 08:31	2037-26-5	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-3 **Lab ID: 35418729006** Collected: 09/19/18 15:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.38**	Std. Units			1		09/19/18 15:34		
Field Temperature	**24.3**	deg C			1		09/19/18 15:34		
Field Specific Conductance	**1486**	umhos/cm			1		09/19/18 15:34		
Oxygen, Dissolved	**0.09**	mg/L			1		09/19/18 15:34	7782-44-7	
REDOX	**-52.1**	mV			1		09/19/18 15:34		
Turbidity	**2.51**	NTU			1		09/19/18 15:34		
Depth to Water	**3.79**	feet			1		09/19/18 15:34		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 09:44	09/21/18 03:03	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0099	0.0074	1	09/20/18 09:44	09/21/18 03:03	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 23:41	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	107-13-1	
Benzene	**2.4**	ug/L	1.0	0.10	1		09/25/18 23:41	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 23:41	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 23:41	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 23:41	56-23-5	
Chlorobenzene	**0.94 I**	ug/L	1.0	0.50	1		09/25/18 23:41	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 23:41	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 23:41	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 23:41	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 23:41	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 23:41	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 23:41	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 23:41	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 23:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:41	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	100-42-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: B37-3 **Lab ID: 35418729006** Collected: 09/19/18 15:34 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 23:41	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 23:41	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 23:41	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:41	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 23:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		09/25/18 23:41	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/25/18 23:41	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		09/25/18 23:41	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: Trip Blank 9/19/18 **Lab ID: 35418729007** Collected: 09/19/18 00:00 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 00:57	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		09/25/18 00:57	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 00:57	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 00:57	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 00:57	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 00:57	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 00:57	74-87-3	
1,2-Dibromo-3-chloropropane	**1.0 U**	ug/L	5.0	1.0	1		09/25/18 00:57	96-12-8	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 00:57	124-48-1	
1,2-Dibromoethane (EDB)	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	106-93-4	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 00:57	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 00:57	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 00:57	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 00:57	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 00:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 00:57	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 00:57	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 00:57	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 00:57	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 00:57	75-01-4	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Sample: Trip Blank 9/19/18 **Lab ID: 35418729007** Collected: 09/19/18 00:00 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 00:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		09/25/18 00:57	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		09/25/18 00:57	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/25/18 00:57	2037-26-5	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

QC Batch: 480138 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418729001, 35418729002, 35418729003, 35418729004, 35418729005, 35418729007

METHOD BLANK: 2600050 Matrix: Water
Associated Lab Samples: 35418729001, 35418729002, 35418729003, 35418729004, 35418729005, 35418729007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/25/18 00:33	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/25/18 00:33	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	5.0	1.0	09/25/18 00:33	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
Acetone	ug/L	10.0 U	20.0	10.0	09/25/18 00:33	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
Benzene	ug/L	0.10 U	1.0	0.10	09/25/18 00:33	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/25/18 00:33	
Bromoform	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/25/18 00:33	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/25/18 00:33	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/25/18 00:33	
Chloroform	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/25/18 00:33	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 00:33	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/25/18 00:33	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/25/18 00:33	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/25/18 00:33	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/25/18 00:33	
Styrene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Toluene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 00:33	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

METHOD BLANK: 2600050 Matrix: Water
Associated Lab Samples: 35418729001, 35418729002, 35418729003, 35418729004, 35418729005, 35418729007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/25/18 00:33	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/25/18 00:33	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/25/18 00:33	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/25/18 00:33	
1,2-Dichloroethane-d4 (S)	%	102	70-130		09/25/18 00:33	
4-Bromofluorobenzene (S)	%	99	70-130		09/25/18 00:33	
Toluene-d8 (S)	%	107	70-130		09/25/18 00:33	

LABORATORY CONTROL SAMPLE: 2600051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	17.1	85	70-130	
1,1,1-Trichloroethane	ug/L	20	18.3	92	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	21.4	107	68-125	
1,1,2-Trichloroethane	ug/L	20	20.6	103	70-130	
1,1-Dichloroethane	ug/L	20	20.1	101	70-130	
1,1-Dichloroethene	ug/L	20	19.3	97	66-133	
1,2,3-Trichloropropane	ug/L	20	21.4	107	62-127	
1,2-Dibromo-3-chloropropane	ug/L	20	19.6	98	45-137	
1,2-Dibromoethane (EDB)	ug/L	20	18.1	90	70-130	
1,2-Dichlorobenzene	ug/L	20	20.7	104	70-130	
1,2-Dichloroethane	ug/L	20	18.2	91	70-130	
1,2-Dichloropropane	ug/L	20	19.8	99	70-130	
1,4-Dichlorobenzene	ug/L	20	20.8	104	70-130	
2-Butanone (MEK)	ug/L	40	46.4	116	47-143	
2-Hexanone	ug/L	40	39.2	98	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	41.0	102	57-132	
Acetone	ug/L	40	41.8	105	46-148	
Acrylonitrile	ug/L	200	204	102	60-143	
Benzene	ug/L	20	20.1	100	70-130	
Bromochloromethane	ug/L	20	20.3	102	70-130	
Bromodichloromethane	ug/L	20	16.8	84	70-130	
Bromoform	ug/L	20	16.4	82	49-126	
Bromomethane	ug/L	20	25.5	128	10-165	
Carbon disulfide	ug/L	20	19.1	95	60-141	
Carbon tetrachloride	ug/L	20	16.7	84	63-126	
Chlorobenzene	ug/L	20	19.8	99	70-130	
Chloroethane	ug/L	20	20.6	103	71-142	
Chloroform	ug/L	20	20.3	102	70-130	
Chloromethane	ug/L	20	21.3	106	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	
cis-1,3-Dichloropropene	ug/L	20	16.8	84	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

LABORATORY CONTROL SAMPLE: 2600051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	16.7	84	62-118	
Dibromomethane	ug/L	20	19.7	98	70-130	
Ethylbenzene	ug/L	20	20.8	104	70-130	
Iodomethane	ug/L	40	36.9	92	10-164	
Methylene Chloride	ug/L	20	19.5	97	65-136	
Styrene	ug/L	20	18.9	94	70-130	
Tetrachloroethene	ug/L	20	17.2	86	64-134	
Toluene	ug/L	20	19.9	99	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	68-127	
trans-1,3-Dichloropropene	ug/L	20	16.3	81	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	18.6	93	42-129	
Trichloroethene	ug/L	20	20.0	100	70-130	
Trichlorofluoromethane	ug/L	20	20.6	103	65-135	
Vinyl acetate	ug/L	20	19.3	97	60-144	
Vinyl chloride	ug/L	20	20.4	102	68-131	
Xylene (Total)	ug/L	60	63.0	105	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 2601026

Parameter	Units	35419604002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	11.7	59	70-130	J(M1)
1,1,1-Trichloroethane	ug/L	0.50 U	20	14.4	72	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	14.7	73	68-125	
1,1,2-Trichloroethane	ug/L	0.50 U	20	13.3	67	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	16.1	80	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	15.1	76	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	14.8	74	62-127	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	20	13.9	70	45-137	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	20	12.0	60	70-130	J(M1)
1,2-Dichlorobenzene	ug/L	0.50 U	20	14.2	71	70-130	
1,2-Dichloroethane	ug/L	0.50 U	20	14.3	71	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	14.0	70	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	14.8	74	70-130	
2-Butanone (MEK)	ug/L	5.0 U	40	35.5	89	47-143	
2-Hexanone	ug/L	5.0 U	40	26.9	67	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	29.7	74	57-132	
Acetone	ug/L	10.0 U	40	35.5	84	46-148	
Acrylonitrile	ug/L	5.0 U	200	172	86	60-143	
Benzene	ug/L	0.10 U	20	14.9	74	70-130	
Bromochloromethane	ug/L	0.50 U	20	14.6	73	70-130	
Bromodichloromethane	ug/L	0.27 U	20	11.8	59	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	12.0	60	49-126	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

MATRIX SPIKE SAMPLE: 2601026

Parameter	Units	35419604002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	0.50 U	20	13.2	66	10-165	
Carbon disulfide	ug/L	5.0 U	20	16.6	80	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	13.5	68	63-126	
Chlorobenzene	ug/L	0.50 U	20	13.8	69	70-130	J(M1)
Chloroethane	ug/L	0.50 U	20	14.5	72	71-142	
Chloroform	ug/L	0.50 U	20	15.1	75	70-130	
Chloromethane	ug/L	0.62 U	20	14.9	75	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	15.1	76	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	11.2	56	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	11.9	60	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	14.4	72	70-130	
Ethylbenzene	ug/L	0.50 U	20	14.7	73	70-130	
Iodomethane	ug/L	0.50 U	40	24.3	61	10-164	
Methylene Chloride	ug/L	2.5 U	20	14.4	72	65-136	
Styrene	ug/L	0.50 U	20	12.7	64	70-130	J(M1)
Tetrachloroethene	ug/L	0.50 U	20	12.1	61	64-134	J(M1)
Toluene	ug/L	0.50 U	20	14.1	70	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	15.6	78	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	10.7	53	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	12.1	61	42-129	
Trichloroethene	ug/L	0.50 U	20	14.3	71	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	15.8	79	65-135	
Vinyl acetate	ug/L	1.0 U	20	13.4	67	60-144	
Vinyl chloride	ug/L	0.50 U	20	14.9	74	68-131	
Xylene (Total)	ug/L	1.5 U	60	43.0	72	70-130	MS
1,2-Dichloroethane-d4 (S)	%				108	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2601025

Parameter	Units	35419604001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	1.0 U		40	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	0.50 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

SAMPLE DUPLICATE: 2601025

Parameter	Units	35419604001 Result	Dup Result	RPD	Max RPD	Qualifiers
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	105	107	2	40	
4-Bromofluorobenzene (S)	%	100	97	3	40	
Toluene-d8 (S)	%	107	107	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

QC Batch: 480547 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418729006

METHOD BLANK: 2601665 Matrix: Water
Associated Lab Samples: 35418729006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/25/18 22:30	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/25/18 22:30	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Acetone	ug/L	10.0 U	20.0	10.0	09/25/18 22:30	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Benzene	ug/L	0.10 U	1.0	0.10	09/25/18 22:30	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/25/18 22:30	
Bromoform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/25/18 22:30	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/25/18 22:30	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Chloroform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/25/18 22:30	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/25/18 22:30	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/25/18 22:30	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/25/18 22:30	
Styrene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Toluene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

METHOD BLANK: 2601665 Matrix: Water
Associated Lab Samples: 35418729006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/25/18 22:30	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/25/18 22:30	
1,2-Dichloroethane-d4 (S)	%	111	70-130		09/25/18 22:30	
4-Bromofluorobenzene (S)	%	97	70-130		09/25/18 22:30	
Toluene-d8 (S)	%	108	70-130		09/25/18 22:30	

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.5	82	70-130	
1,1,1-Trichloroethane	ug/L	20	19.7	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	68-125	
1,1,2-Trichloroethane	ug/L	20	18.8	94	70-130	
1,1-Dichloroethane	ug/L	20	21.8	109	70-130	
1,1-Dichloroethene	ug/L	20	21.5	107	66-133	
1,2,3-Trichloropropane	ug/L	20	18.9	94	62-127	
1,2-Dichlorobenzene	ug/L	20	19.3	96	70-130	
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	
1,2-Dichloropropane	ug/L	20	19.8	99	70-130	
1,4-Dichlorobenzene	ug/L	20	19.3	97	70-130	
2-Butanone (MEK)	ug/L	40	38.8	97	47-143	
2-Hexanone	ug/L	40	34.3	86	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.9	92	57-132	
Acetone	ug/L	40	41.5	104	46-148	
Acrylonitrile	ug/L	200	203	101	60-143	
Benzene	ug/L	20	20.2	101	70-130	
Bromochloromethane	ug/L	20	21.0	105	70-130	
Bromodichloromethane	ug/L	20	17.0	85	70-130	
Bromoform	ug/L	20	15.6	78	49-126	
Bromomethane	ug/L	20	16.6	83	10-165	
Carbon disulfide	ug/L	20	16.7	84	60-141	
Carbon tetrachloride	ug/L	20	18.4	92	63-126	
Chlorobenzene	ug/L	20	19.3	97	70-130	
Chloroethane	ug/L	20	18.6	93	71-142	
Chloroform	ug/L	20	20.7	104	70-130	
Chloromethane	ug/L	20	17.4	87	40-140	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	70-130	
cis-1,3-Dichloropropene	ug/L	20	16.7	83	70-130	
Dibromochloromethane	ug/L	20	15.9	80	62-118	
Dibromomethane	ug/L	20	19.7	98	70-130	
Ethylbenzene	ug/L	20	20.2	101	70-130	
Iodomethane	ug/L	40	29.4	73	10-164	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	20.8	104	65-136	
Styrene	ug/L	20	17.9	89	70-130	
Tetrachloroethene	ug/L	20	16.6	83	64-134	
Toluene	ug/L	20	19.8	99	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	68-127	
trans-1,3-Dichloropropene	ug/L	20	15.5	78	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	14.1	70	42-129	
Trichloroethene	ug/L	20	19.7	99	70-130	
Trichlorofluoromethane	ug/L	20	20.5	103	65-135	
Vinyl acetate	ug/L	20	18.0	90	60-144	
Vinyl chloride	ug/L	20	17.7	89	68-131	
Xylene (Total)	ug/L	60	61.4	102	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	11.8	59	70-130	J(M1)
1,1,1-Trichloroethane	ug/L	0.50 U	20	15.4	77	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	13.3	66	68-125	J(M1)
1,1,2-Trichloroethane	ug/L	0.50 U	20	13.8	69	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	16.8	84	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	16.9	84	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	13.1	65	62-127	
1,2-Dichlorobenzene	ug/L	0.50 U	20	13.4	67	70-130	J(M1)
1,2-Dichloroethane	ug/L	0.50 U	20	14.0	70	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	14.2	71	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	13.6	68	70-130	J(M1)
2-Butanone (MEK)	ug/L	5.0 U	40	28.0	70	47-143	
2-Hexanone	ug/L	5.0 U	40	23.9	60	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	24.4	61	57-132	
Acetone	ug/L	10.0 U	40	29.2	73	46-148	
Acrylonitrile	ug/L	5.0 U	200	173	87	60-143	
Benzene	ug/L	0.54 I	20	15.6	75	70-130	
Bromochloromethane	ug/L	0.50 U	20	15.2	76	70-130	
Bromodichloromethane	ug/L	0.27 U	20	12.2	61	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	11.5	58	49-126	
Bromomethane	ug/L	0.50 U	20	14.1	70	10-165	
Carbon disulfide	ug/L	5.0 U	20	13.9	67	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	14.2	71	63-126	
Chlorobenzene	ug/L	1.3	20	15.0	68	70-130	J(M1)
Chloroethane	ug/L	0.50 U	20	17.1	85	71-142	
Chloroform	ug/L	0.50 U	20	15.4	77	70-130	

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	0.62 U	20	15.8	79	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	20.4	101	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	11.1	56	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	11.7	59	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	14.6	73	70-130	
Ethylbenzene	ug/L	0.50 U	20	14.6	73	70-130	
Iodomethane	ug/L	0.50 U	40	16.5	41	10-164	
Methylene Chloride	ug/L	2.5 U	20	15.3	76	65-136	
Styrene	ug/L	0.50 U	20	12.5	63	70-130	J(M1)
Tetrachloroethene	ug/L	0.50 U	20	11.9	59	64-134	J(M1)
Toluene	ug/L	0.50 U	20	14.5	73	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	16.1	80	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	10.3	52	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	10.3	52	42-129	
Trichloroethene	ug/L	0.50 U	20	15.8	79	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	19.0	95	65-135	
Vinyl acetate	ug/L	1.0 U	20	10.8	54	60-144	J(M1)
Vinyl chloride	ug/L	1.2	20	17.0	79	68-131	
Xylene (Total)	ug/L	1.5 U	60	43.6	73	70-130	MS
1,2-Dichloroethane-d4 (S)	%				110	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				104	70-130	

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	1.7	1.7	2	40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.52 I		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	27.5	27.1	1	40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	576	616	7	40	L
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	109	109	0	40	
4-Bromofluorobenzene (S)	%	94	97	3	40	
Toluene-d8 (S)	%	106	106	0	40	

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

QC Batch: 478991 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35418729001, 35418729002, 35418729003, 35418729004, 35418729005, 35418729006

METHOD BLANK: 2594404 Matrix: Water
Associated Lab Samples: 35418729001, 35418729002, 35418729003, 35418729004, 35418729005, 35418729006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	09/20/18 23:06	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	09/20/18 23:06	

LABORATORY CONTROL SAMPLE: 2594405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.23	91	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.23	90	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2594463 2594464

Parameter	Units	35418617005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0061 U	.44	.44	0.47	0.46	107	104	60-140	3	40	
1,2-Dibromoethane (EDB)	ug/L	0.0072 U	.44	.44	0.47	0.46	107	106	60-140	1	40	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
L	Off-scale high. Actual value is known to be greater than value given.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5/37 Study
Pace Project No.: 35418729

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35418729002	**B5-37B**				
35418729003	**B5-37B Dup**				
35418729004	**B37-1**				
35418729005	**B37-6**				
35418729006	**B37-3**				
35418729001	**EQ Blank 9/19/18**	EPA 8011	478991	EPA 8011	479067
35418729002	**B5-37B**	EPA 8011	478991	EPA 8011	479067
35418729003	**B5-37B Dup**	EPA 8011	478991	EPA 8011	479067
35418729004	**B37-1**	EPA 8011	478991	EPA 8011	479067
35418729005	**B37-6**	EPA 8011	478991	EPA 8011	479067
35418729006	**B37-3**	EPA 8011	478991	EPA 8011	479067
35418729001	**EQ Blank 9/19/18**	EPA 8260	480138		
35418729002	**B5-37B**	EPA 8260	480138		
35418729003	**B5-37B Dup**	EPA 8260	480138		
35418729004	**B37-1**	EPA 8260	480138		
35418729005	**B37-6**	EPA 8260	480138		
35418729006	**B37-3**	EPA 8260	480547		
35418729007	**Trip Blank 9/19/18**	EPA 8260	480138		

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WO# : 35418729

35418729

Pace Analytical
www.pacelabs.com

al Request Document

All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Volusia County Solid Waste Management
Address:	1990 Tomoka Farms Road
	Daytona Beach, FL 32124
Email:	
Phone:	Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Ms. Jennifer Stirk
Copy To:	
Purchase Order #:	
Project Name:	Tomoka LF B5/37 Study
Project #:	

Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	jeff.baylor@pacelabs.com,
Pace Profile #:	1592

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 VOCs Full List	Trip Blank DO NOT OPEN -	EDB 8011	Residual Chlorine (Y/N)
1	EQ					9-17-18	12:50												X	X	X	
2	B5-37B						1334															
3	Dup						1334															
4	B37-1						1448															
5	B37-6						1547															
6	B37-3						1534															
7	Trip Blank						0000													X		
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
SAMPLING KIT EMPTY		9/19/18	1600				
			1710	ATS/Pace	9/19/18	1710	Y N Y
					1/19	1346	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Bruce Foster

SIGNATURE of SAMPLER:

DATE Signed: 9-19-18

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt (SCUR)

WO#: 35418729

PM: JSB Due Date: 10/01/18

CLIENT: VOLDPW

Project #:

Project Manager:

Client:

Date and Initials of person:
Examining contents: TMM
Label:
Deliver: AC
pH:

Thermometer Used: T346 Date: 9/19/18 Time: 1710 Initials: AKP

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.8 **(Visual)**	+0.1 **(Correction Factor)**	1.9 **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals intact:** ☐ Yes ☐ No **Ice:** ~~Wet~~ Blue Dry None

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☒ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☒ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☒ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☒ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☒ No ☐ N/A	
Sufficient Volume	☒ Yes ☐ No ☐ N/A	
Correct Containers Used	☒ Yes ☐ No ☐ N/A	
Containers Intact	☒ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☒ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☐ Yes ☐ No ☒ N/A	Preservation Information: Preservative: Lot #/Trace #: Date: Time: Initials:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☒ N/A	
Headspace in VOA Vials? (>6mm):	☒ Yes ☐ No ☐ N/A	
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments): Sample 1 - 2/3 vials, sample 2 1/3 Sample 3 - 2/3 vials sample 4 - 1/3 vials

Project Manager Review: Date:

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	Tomoka LF BS Study	
WELL NO:	EQ	SAMPLE ID:	EQ	DATE: 9-19-18

PURGING DATA

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

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

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

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Bruce Foster		1250	1300

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCL/ICE			8260	APP	400
	2	CG	40	ICE			EDB 504		

REMARKS:

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF BS STUDY	
WELL NO:	BS-37B / Dup	SAMPLE ID:	BS-37B / Dup	DATE: 9-19-18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4	28 feet to 75 feet	1.68	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)
= (28.75 feet – 1.68 feet) X 0.16 gallons/foot = 4.3312 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
5	5	13:05	13:34	6.96

TIME (24)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
13:24	4.56	4.56	.24	3.94	~~6.27~~	~~35.29~~	1828	2.59	13.28	Yellow	Sulfur
13:29	1.20	5.76	.24	3.94	6.25	23.4	1830	2.62	6.33	/	/
13:34	1.20	6.96	.24	3.94	6.26	23.4	1830	2.55	5.14	/	/

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Bruce Foster		13:34	13:46

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCl / ICE		6.26	8260	APP	≤400
	2	CG	40	ICE			EDB 504.1	/	/

REMARKS: ORP – 59.0 -60.3 -63.0

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF BS STUDY
WELL NO:	B37-1	SAMPLE ID:	B37-1
DATE:	9-19-18		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	37 feet to 8 feet	STATIC DEPTH TO WATER (feet):	1.09	PURGE PUMP TYPE OR BAILER:	P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (37.8 feet − 1.09 feet) X 0.16 gallons/foot = 5.744 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	3	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	3	PURGING INITIATED AT:	1400	PURGING ENDED AT:	1448	TOTAL VOLUME PURGED (gallons):	11.52

TIME (24)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1424	5.76	5.76	.24	2.04	6.24	24.5	2380	0.84	8.87	yellow	Sulfur
1430	1.44	7.20	.24	2.04	6.18	24.3	2582	0.77	4.52		
1436	1.44	8.64	.24	2.04	6.18	24.2	2617	0.73	5.77		
1442	1.44	10.08	.24	2.04	6.18	24.1	2628	0.71	4.44		
1448	1.44	11.52	.24	2.04	6.18	24.1	2636	0.72	7.38		

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Bruce Foster	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1448	SAMPLING ENDED AT:	1455
PUMP OR TUBING DEPTH IN WELL (feet):	3	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (R) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCl ICE		6.18	8260	APP	400
	2	CG	40	ICE			EDB 8011	1	1

REMARKS:
ORP −58.1, −80.1, −81.5, 81.7, 83.8

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

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County		SITE LOCATION: Tomoka L.F. BS study	
WELL NO: B37-6	SAMPLE ID: B37-6		DATE: 9-19-18

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 39 feet to 8 feet	STATIC DEPTH TO WATER (feet): 5.91	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (39.80 feet – 5.91 feet) X gallons/foot = 5.4224 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
11	11	1500	1547	11.28

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1523	5.52	5.52	.24	9.01	7.39	24.6	645	2.19	9.54	Clear	None
1529	1.44	6.96	.24	9.01	7.39	24.6	644	2.10	1.53		
1535	1.44	8.40	.24	9.01	7.39	24.1	1107	1.98	17.59		
1541	1.44	9.84	.24	9.01	7.39	24.1	1130	1.88	17.25		
1547	1.44	11.28	.24	9.01	7.39	24.0	1140	1.61	12.00		
					6.22						
					6.17						
					6.16						

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: BRUCE FOSTER	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1547	SAMPLING ENDED AT: 1558
PUMP OR TUBING DEPTH IN WELL (feet): 11	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCl / ICE		6.16	8260	APP	<400
	2	CG	40	ICE			EDB 504.1	1	1

REMARKS:
ORP – 48.7 – 49.0 – 50.1 – 50.8 – 51.8

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF BS STUDY
WELL NO:	B37-6	SAMPLE ID:	B37-6
DATE:	9-19-18		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4	39 feet to 8 feet	5.91	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (39.40 feet – 5.91 feet) X 0.16 gallons/foot = 5.4224 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
11	11	1500	1547	11.28

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1523	5.52	5.52	.24	9.01	7.38	24.6	645	2.19	9.54	clear	none
1529	1.44	6.96	.24	9.01	7.39	24.6	644	2.10	1.53		
1535	1.44	8.40	.24	9.09	6.22	24.1	1107	1.98	17.59		
1541	1.44	9.84	.24	9.01	6.17	24.1	1130	1.85	17.25		
1547	1.44	11.28	.24	9.00	6.16	24.0	1140	1.61	12.00		

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Bruce Fosler		1547	1558

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCL/ICE		6.16	8260	APP	400
	2	CG	40	ICE			EDB 8011	1	1

REMARKS: ORP -48.7 -49.0 -50.1 -50.8 -51.8

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County Solid Waste | SITE LOCATION: Tomoka LF B.5 STUDY
WELL NO: B37-3 | SAMPLE ID: B37-3 | DATE: 9-18-13

PURGING DATA

WELL DIAMETER (inches): 2 | TUBING DIAMETER (inches): 1/4 | WELL SCREEN INTERVAL DEPTH: feet to feet | STATIC DEPTH TO WATER (feet): 3.79 | 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)
= (37.22 feet – 3.79 feet) X 0.16 gallons/foot = 5.3488 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8 | FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8 | PURGING INITIATED AT: 1422 | PURGING ENDED AT: 1534 | TOTAL VOLUME PURGED (gallons): 10.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1458	5.4	5.4	.150	6.98	6.34	24.3	1242	0.10	11.2	Yellow	Sulfur
1507	~~1.35~~ 5.4	~~6.75~~ 10.8	.150	6.98	6.33	24.3	1333	0.09	6.93		
1516	~~5.4~~	8.00	.150	6.98	6.34	24.3	1404	0.09	3.25		
1525	1.35	9.35	.150	6.98	6.36	24.3	1453	0.09	1.82		
1534	1.35	10.70	.150	6.98	6.38	24.3	1486	0.09	2.51		

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DAVID ICE / PACE | SAMPLER(S) SIGNATURE(S): | SAMPLING INITIATED AT: 1534 | SAMPLING ENDED AT: 1536
PUMP OR TUBING DEPTH IN WELL (feet): 8 | TUBING MATERIAL CODE: HDPE S | FIELD-FILTERED: Y (N) Filtration Equipment Type: | FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	~~1~~	~~PE~~	~~500~~	ICE		6.38	~~ALK, 903.0, Cl, SO4~~	APP	400
	~~1~~	~~1~~	~~1~~	HNO3			~~TOTAL COND~~		
	2	CG	40	ICE		6.38	8260 VOC		
	~~2~~	~~1~~	~~1~~	~~1~~			~~DISSOLVED GASES~~		
	3	1	1	HCl		<2	8260 FULL LIST		

REMARKS:
ORP -46.8 ORP -48.3 ORP -49.6 ORP -51.0 ORP -52.1

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)
SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

October 02, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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8 East Tower Circle
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CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Ormond Beach Certification IDs

Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35418447001	**EQ Blank 9/18/18**	Water	09/18/18 09:40	09/18/18 16:40
35418447002	**TMW 2B**	Water	09/18/18 11:43	09/18/18 16:40
35418447003	**TMW 2A**	Water	09/18/18 12:41	09/18/18 16:40
35418447004	**TMW 3A**	Water	09/18/18 13:38	09/18/18 16:40
35418447005	**TMW 3B**	Water	09/18/18 14:38	09/18/18 16:40
35418447006	**TMW 1A**	Water	09/18/18 12:50	09/18/18 16:40
35418447007	**TMW 1B**	Water	09/18/18 14:07	09/18/18 16:40
35418447008	**TMW 2A Duplicate**	Water	09/18/18 12:41	09/18/18 16:40
35418447009	**Trip Blank 9/18/18**	Water	09/18/18 00:00	09/18/18 16:40

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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35418447001	**EQ Blank 9/18/18**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447002	**TMW 2B**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN, SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447003	**TMW 2A**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447004	**TMW 3A**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447005	**TMW 3B**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	JWP	1	PASI-O
		EPA 8260	BTN, SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447006	**TMW 1A**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O

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8 East Tower Circle
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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN, SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447007	**TMW 1B**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	JWP	1	PASI-O
		EPA 8260	BTN, SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447008	**TMW 2A Duplicate**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	SK1	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	SEW	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418447009	**Trip Blank 9/18/18**	EPA 8260	SK1	50	PASI-O

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(386)672-5668

SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418447001	**EQ Blank 9/18/18**					
RSK 175	Methane	6.6 I	ug/L	10.0	09/24/18 12:44	
EPA 6010	Sodium	36.7	mg/L	2.0	09/25/18 22:01	
SM 2320B	Carbon Dioxide, Free	9.5	mg/L		10/01/18 10:42	
35418447002	**TMW 2B**					
RSK 175	Ethane	242	ug/L	10.0	09/24/18 12:51	
RSK 175	Ethene	78.2	ug/L	10.0	09/24/18 12:51	
RSK 175	Methane	3510	ug/L	10.0	09/24/18 12:51	
	Field pH	6.57	Std. Units		09/18/18 11:43	
	Field Temperature	24.4	deg C		09/18/18 11:43	
	Field Specific Conductance	1811	umhos/cm		09/18/18 11:43	
	Oxygen, Dissolved	0.11	mg/L		09/18/18 11:43	
	REDOX	-40.3	mV		09/18/18 11:43	
	Turbidity	1.50	NTU		09/18/18 11:43	
	Depth to Water	8.71	feet		09/18/18 11:43	
EPA 6010	Sodium	41.2	mg/L	2.0	09/25/18 22:04	
EPA 8260	Benzene	1.7	ug/L	1.0	09/26/18 03:41	
EPA 8260	cis-1,2-Dichloroethene	27.5	ug/L	1.0	09/26/18 03:41	
EPA 8260	Vinyl chloride	576	ug/L	25.0	09/27/18 18:47	
SM 2320B	Carbon Dioxide, Free	105	mg/L		10/01/18 10:50	
EPA 300.0	Chloride	102	mg/L	25.0	09/26/18 20:38	
EPA 300.0	Sulfate	121	mg/L	25.0	09/26/18 20:38	
35418447003	**TMW 2A**					
RSK 175	Ethane	154	ug/L	10.0	09/24/18 12:59	
RSK 175	Methane	2340	ug/L	10.0	09/24/18 12:59	
	Field pH	6.71	Std. Units		09/18/18 12:41	
	Field Temperature	24.0	deg C		09/18/18 12:41	
	Field Specific Conductance	1808	umhos/cm		09/18/18 12:41	
	Oxygen, Dissolved	0.05	mg/L		09/18/18 12:41	
	REDOX	-81.5	mV		09/18/18 12:41	
	Turbidity	3.79	NTU		09/18/18 12:41	
	Depth to Water	3.64	feet		09/18/18 12:41	
EPA 6010	Sodium	36.5	mg/L	2.0	09/25/18 22:08	
EPA 8260	Benzene	0.58 I	ug/L	1.0	09/28/18 00:39	
EPA 8260	Chlorobenzene	1.3	ug/L	1.0	09/28/18 00:39	
EPA 8260	Vinyl chloride	0.94 I	ug/L	1.0	09/28/18 00:39	
SM 2320B	Carbon Dioxide, Free	115	mg/L		10/01/18 10:59	
EPA 300.0	Chloride	77.2	mg/L	25.0	09/26/18 21:00	
EPA 300.0	Sulfate	52.5	mg/L	25.0	09/26/18 21:00	
35418447004	**TMW 3A**					
RSK 175	Ethane	89.0	ug/L	10.0	09/24/18 13:06	
RSK 175	Ethene	41.0	ug/L	10.0	09/24/18 13:06	
RSK 175	Methane	6750	ug/L	10.0	09/24/18 13:06	
	Field pH	6.43	Std. Units		09/18/18 13:38	
	Field Temperature	24.2	deg C		09/18/18 13:38	
	Field Specific Conductance	1721	umhos/cm		09/18/18 13:38	
	Oxygen, Dissolved	0.09	mg/L		09/18/18 13:38	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418447004	**TMW 3A**					
	REDOX	-48.7	mV		09/18/18 13:38	
	Turbidity	1.61	NTU		09/18/18 13:38	
	Depth to Water	4.56	feet		09/18/18 13:38	
EPA 6010	Sodium	43.7	mg/L	2.0	09/25/18 22:12	
EPA 8260	Benzene	3.3	ug/L	1.0	09/26/18 04:53	
EPA 8260	Chlorobenzene	5.6	ug/L	1.0	09/26/18 04:53	
EPA 8260	1,1-Dichloroethene	1.5	ug/L	1.0	09/26/18 04:53	
EPA 8260	cis-1,2-Dichloroethene	16.6	ug/L	1.0	09/26/18 04:53	
EPA 8260	Toluene	0.57 I	ug/L	1.0	09/26/18 04:53	
EPA 8260	Vinyl chloride	71.5	ug/L	1.0	09/26/18 04:53	
SM 2320B	Carbon Dioxide, Free	175	mg/L		10/01/18 11:07	
EPA 300.0	Chloride	131	mg/L	25.0	09/26/18 16:58	
35418447005	**TMW 3B**					
RSK 175	Ethane	6.4 I	ug/L	10.0	09/24/18 13:13	
RSK 175	Ethene	26.3	ug/L	10.0	09/24/18 13:13	
RSK 175	Methane	218	ug/L	10.0	09/24/18 13:13	
	Field pH	6.70	Std. Units		09/18/18 14:38	
	Field Temperature	25.3	deg C		09/18/18 14:38	
	Field Specific Conductance	1741	umhos/cm		09/18/18 14:38	
	Oxygen, Dissolved	4.34	mg/L		09/18/18 14:38	
	REDOX	-67.9	mV		09/18/18 14:38	
	Turbidity	147	NTU		09/18/18 14:38	
	Depth to Water	2.38	feet		09/18/18 14:38	
EPA 6010	Sodium	8.1	mg/L	2.0	09/26/18 10:15	
EPA 8260	Benzene	3.9	ug/L	1.0	09/26/18 05:17	
EPA 8260	Chlorobenzene	4.2	ug/L	1.0	09/26/18 05:17	
EPA 8260	1,1-Dichloroethene	829	ug/L	100	09/27/18 19:11	
EPA 8260	cis-1,2-Dichloroethene	10900	ug/L	100	09/27/18 19:11	
EPA 8260	trans-1,2-Dichloroethene	184	ug/L	100	09/27/18 19:11	
EPA 8260	Ethylbenzene	0.90 I	ug/L	1.0	09/26/18 05:17	
EPA 8260	Toluene	3.3	ug/L	1.0	09/26/18 05:17	
EPA 8260	Trichloroethene	4680	ug/L	100	09/27/18 19:11	
EPA 8260	Vinyl chloride	1180	ug/L	100	09/27/18 19:11	
EPA 8260	Xylene (Total)	2.1 I	ug/L	3.0	09/26/18 05:17	
SM 2320B	Carbon Dioxide, Free	77.0	mg/L		10/01/18 11:16	
EPA 300.0	Chloride	146	mg/L	25.0	09/26/18 17:20	
EPA 300.0	Sulfate	11.4	mg/L	5.0	09/27/18 08:23	
35418447006	**TMW 1A**					
RSK 175	Ethane	1030	ug/L	10.0	09/24/18 13:20	
RSK 175	Ethene	384	ug/L	10.0	09/24/18 13:20	
RSK 175	Methane	6420	ug/L	10.0	09/24/18 13:20	
	Field pH	6.52	Std. Units		09/18/18 12:50	
	Field Temperature	25.1	deg C		09/18/18 12:50	
	Field Specific Conductance	2238	umhos/cm		09/18/18 12:50	
	Oxygen, Dissolved	0.82	mg/L		09/18/18 12:50	
	REDOX	-104.3	mV		09/18/18 12:50	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418447006	**TMW 1A**					
	Turbidity	19.21	NTU		09/18/18 12:50	
	Depth to Water	3.31	feet		09/18/18 12:50	
EPA 6010	Sodium	45.7	mg/L	2.0	09/25/18 22:20	
EPA 8260	Benzene	5.4	ug/L	1.0	09/26/18 05:40	
EPA 8260	Chlorobenzene	3.7	ug/L	1.0	09/26/18 05:40	
EPA 8260	1,1-Dichloroethene	55.0	ug/L	1.0	09/26/18 05:40	
EPA 8260	cis-1,2-Dichloroethene	1480	ug/L	100	09/27/18 19:34	
EPA 8260	trans-1,2-Dichloroethene	6.4	ug/L	1.0	09/26/18 05:40	
EPA 8260	Ethylbenzene	1.1	ug/L	1.0	09/26/18 05:40	
EPA 8260	Toluene	12.3	ug/L	1.0	09/26/18 05:40	
EPA 8260	Trichloroethene	5.8	ug/L	1.0	09/26/18 05:40	
EPA 8260	Vinyl chloride	6890	ug/L	100	09/27/18 19:34	
EPA 8260	Xylene (Total)	9.2	ug/L	3.0	09/26/18 05:40	
SM 2320B	Carbon Dioxide, Free	98.3	mg/L		10/01/18 11:25	
EPA 300.0	Chloride	116	mg/L	25.0	09/26/18 17:42	
EPA 300.0	Sulfate	37.3	mg/L	25.0	09/26/18 17:42	
35418447007	**TMW 1B**					
RSK 175	Ethane	33.9	ug/L	10.0	09/24/18 13:27	
RSK 175	Ethene	57.6	ug/L	10.0	09/24/18 13:27	
RSK 175	Methane	1050	ug/L	10.0	09/24/18 13:27	
	Field pH	6.45	Std. Units		09/18/18 14:07	
	Field Temperature	25.3	deg C		09/18/18 14:07	
	Field Specific Conductance	1321	umhos/cm		09/18/18 14:07	
	Oxygen, Dissolved	0.71	mg/L		09/18/18 14:07	
	REDOX	-76.4	mV		09/18/18 14:07	
	Turbidity	2.70	NTU		09/18/18 14:07	
	Depth to Water	9.48	feet		09/18/18 14:07	
EPA 6010	Sodium	129	mg/L	2.0	10/01/18 15:30	J(M1)
EPA 8260	Benzene	0.99 I	ug/L	1.0	09/26/18 06:04	
EPA 8260	1,1-Dichloroethene	108	ug/L	1.0	09/26/18 06:04	
EPA 8260	cis-1,2-Dichloroethene	2450	ug/L	100	09/27/18 19:58	
EPA 8260	trans-1,2-Dichloroethene	9.1	ug/L	1.0	09/26/18 06:04	
EPA 8260	Trichloroethene	2.2	ug/L	1.0	09/26/18 06:04	
EPA 8260	Vinyl chloride	1330	ug/L	100	09/27/18 19:58	
SM 2320B	Carbon Dioxide, Free	51.9	mg/L		10/01/18 11:42	
EPA 300.0	Chloride	115	mg/L	10.0	09/26/18 18:04	
EPA 300.0	Sulfate	84.6	mg/L	10.0	09/26/18 18:04	
EPA 353.2	Nitrogen, Nitrate	0.025 I	mg/L	0.050	09/19/18 09:00	
35418447008	**TMW 2A Duplicate**					
RSK 175	Ethane	175	ug/L	10.0	09/24/18 13:35	
RSK 175	Methane	2690	ug/L	10.0	09/24/18 13:35	
	Field pH	6.71	Std. Units		09/18/18 12:41	
	Field Temperature	24.0	deg C		09/18/18 12:41	
	Field Specific Conductance	1808	umhos/cm		09/18/18 12:41	
	Oxygen, Dissolved	0.05	mg/L		09/18/18 12:41	
	REDOX	-81.5	mV		09/18/18 12:41	

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(386)672-5668

SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418447008	**TMW 2A Duplicate**					
	Turbidity	3.79	NTU		09/18/18 12:41	
	Depth to Water	3.64	feet		09/18/18 12:41	
EPA 6010	Sodium	235	mg/L	10.0	10/02/18 09:39	
EPA 8260	Benzene	0.57	ug/L	1.0	09/29/18 13:51	I
EPA 8260	Chlorobenzene	1.3	ug/L	1.0	09/29/18 13:51	
EPA 8260	Vinyl chloride	0.86	ug/L	1.0	09/29/18 13:51	I
SM 2320B	Carbon Dioxide, Free	104	mg/L		10/01/18 11:51	
EPA 300.0	Chloride	77.7	mg/L	25.0	09/26/18 18:26	
EPA 300.0	Sulfate	52.1	mg/L	25.0	09/26/18 18:26	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: EQ Blank 9/18/18 **Lab ID: 35418447001** Collected: 09/18/18 09:40 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**3.0 U**	ug/L	10.0	3.0	1		09/24/18 12:44	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/24/18 12:44	74-85-1	
Methane	**6.6 I**	ug/L	10.0	4.9	1		09/24/18 12:44	74-82-8	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 07:11	09/20/18 20:53	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0098	0.0074	1	09/20/18 07:11	09/20/18 20:53	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**36.7**	mg/L	2.0	0.27	1	09/24/18 22:58	09/25/18 22:01	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 22:54	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		09/25/18 22:54	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 22:54	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 22:54	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 22:54	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 22:54	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 22:54	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 22:54	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 22:54	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 22:54	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 22:54	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 22:54	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 22:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 22:54	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	630-20-6	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: EQ Blank 9/18/18 **Lab ID: 35418447001** Collected: 09/18/18 09:40 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 22:54	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 22:54	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 22:54	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 22:54	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 22:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		09/25/18 22:54	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		09/25/18 22:54	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		09/25/18 22:54	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**9.5**	mg/L			1		10/01/18 10:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5 U**	mg/L	5.0	2.5	1		09/26/18 20:16	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/26/18 20:16	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 U**	mg/L	0.050	0.025	1		09/19/18 08:27	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2B **Lab ID: 35418447002** Collected: 09/18/18 11:43 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**242**	ug/L	10.0	3.0	1		09/24/18 12:51	74-84-0	
Ethene	**78.2**	ug/L	10.0	2.9	1		09/24/18 12:51	74-85-1	
Methane	**3510**	ug/L	10.0	4.9	1		09/24/18 12:51	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.57**	Std. Units			1		09/18/18 11:43		
Field Temperature	**24.4**	deg C			1		09/18/18 11:43		
Field Specific Conductance	**1811**	umhos/cm			1		09/18/18 11:43		
Oxygen, Dissolved	**0.11**	mg/L			1		09/18/18 11:43	7782-44-7	
REDOX	**-40.3**	mV			1		09/18/18 11:43		
Turbidity	**1.50**	NTU			1		09/18/18 11:43		
Depth to Water	**8.71**	feet			1		09/18/18 11:43		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 07:11	09/20/18 21:08	96-12-8	
1,2-Dibromoethane (EDB)	**0.0074 U**	ug/L	0.0098	0.0074	1	09/20/18 07:11	09/20/18 21:08	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**41.2**	mg/L	2.0	0.27	1	09/24/18 22:58	09/25/18 22:04	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 03:41	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	107-13-1	
Benzene	**1.7**	ug/L	1.0	0.10	1		09/26/18 03:41	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 03:41	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 03:41	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 03:41	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 03:41	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 03:41	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 03:41	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 03:41	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	75-35-4	
cis-1,2-Dichloroethene	**27.5**	ug/L	1.0	0.50	1		09/26/18 03:41	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2B **Lab ID: 35418447002** Collected: 09/18/18 11:43 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 03:41	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 03:41	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 03:41	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 03:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 03:41	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 03:41	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 03:41	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 03:41	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 03:41	108-05-4	
Vinyl chloride	**576**	ug/L	25.0	12.5	25		09/27/18 18:47	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/26/18 03:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		09/26/18 03:41	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		09/26/18 03:41	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/26/18 03:41	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**105**	mg/L			1		10/01/18 10:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**102**	mg/L	25.0	12.5	5		09/26/18 20:38	16887-00-6	
Sulfate	**121**	mg/L	25.0	12.5	5		09/26/18 20:38	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.12 U**	mg/L	0.25	0.12	5		09/19/18 09:05	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2A **Lab ID: 35418447003** Collected: 09/18/18 12:41 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**154**	ug/L	10.0	3.0	1		09/24/18 12:59	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/24/18 12:59	74-85-1	
Methane	**2340**	ug/L	10.0	4.9	1		09/24/18 12:59	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.71**	Std. Units			1		09/18/18 12:41		
Field Temperature	**24.0**	deg C			1		09/18/18 12:41		
Field Specific Conductance	**1808**	umhos/cm			1		09/18/18 12:41		
Oxygen, Dissolved	**0.05**	mg/L			1		09/18/18 12:41	7782-44-7	
REDOX	**-81.5**	mV			1		09/18/18 12:41		
Turbidity	**3.79**	NTU			1		09/18/18 12:41		
Depth to Water	**3.64**	feet			1		09/18/18 12:41		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 07:11	09/20/18 21:22	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	09/20/18 07:11	09/20/18 21:22	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**36.5**	mg/L	2.0	0.27	1	09/24/18 22:58	09/25/18 22:08	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	630-20-6	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	71-55-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/28/18 00:39	79-34-5	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	79-00-5	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	75-34-3	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	75-35-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/28/18 00:39	96-18-4	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	95-50-1	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	107-06-2	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	78-87-5	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	106-46-7	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	78-93-3	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	591-78-6	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	108-10-1	
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/28/18 00:39	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	107-13-1	
Benzene	**0.58 I**	ug/L	1.0	0.10	1		09/28/18 00:39	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/28/18 00:39	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/28/18 00:39	74-83-9	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/28/18 00:39	56-23-5	
Chlorobenzene	**1.3**	ug/L	1.0	0.50	1		09/28/18 00:39	108-90-7	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2A **Lab ID: 35418447003** Collected: 09/18/18 12:41 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/28/18 00:39	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/28/18 00:39	74-87-3	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	156-59-2	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/28/18 00:39	10061-01-5	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/28/18 00:39	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/28/18 00:39	74-95-3	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	100-41-4	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/28/18 00:39	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/28/18 00:39	75-09-2	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	100-42-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	108-88-3	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	156-60-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/28/18 00:39	10061-02-6	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/28/18 00:39	110-57-6	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/28/18 00:39	75-69-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/28/18 00:39	108-05-4	
Vinyl chloride	**0.94 I**	ug/L	1.0	0.50	1		09/28/18 00:39	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/28/18 00:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		09/28/18 00:39	460-00-4	
4-Bromofluorobenzene (S)	95	%	70-130		1		09/26/18 04:29	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		09/26/18 04:29	17060-07-0	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		09/28/18 00:39	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		09/28/18 00:39	2037-26-5	
Toluene-d8 (S)	106	%	70-130		1		09/26/18 04:29	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**115**	mg/L			1		10/01/18 10:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**77.2**	mg/L	25.0	12.5	5		09/26/18 21:00	16887-00-6	
Sulfate	**52.5**	mg/L	25.0	12.5	5		09/26/18 21:00	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.25 U**	mg/L	0.50	0.25	10		09/19/18 09:11	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 3A **Lab ID: 35418447004** Collected: 09/18/18 13:38 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**89.0**	ug/L	10.0	3.0	1		09/24/18 13:06	74-84-0	
Ethene	**41.0**	ug/L	10.0	2.9	1		09/24/18 13:06	74-85-1	
Methane	**6750**	ug/L	10.0	4.9	1		09/24/18 13:06	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.43**	Std. Units			1		09/18/18 13:38		
Field Temperature	**24.2**	deg C			1		09/18/18 13:38		
Field Specific Conductance	**1721**	umhos/cm			1		09/18/18 13:38		
Oxygen, Dissolved	**0.09**	mg/L			1		09/18/18 13:38	7782-44-7	
REDOX	**-48.7**	mV			1		09/18/18 13:38		
Turbidity	**1.61**	NTU			1		09/18/18 13:38		
Depth to Water	**4.56**	feet			1		09/18/18 13:38		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 07:11	09/20/18 21:37	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 07:11	09/20/18 21:37	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**43.7**	mg/L	2.0	0.27	1	09/24/18 22:58	09/25/18 22:12	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 04:53	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	107-13-1	
Benzene	**3.3**	ug/L	1.0	0.10	1		09/26/18 04:53	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 04:53	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 04:53	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 04:53	56-23-5	
Chlorobenzene	**5.6**	ug/L	1.0	0.50	1		09/26/18 04:53	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 04:53	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 04:53	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 04:53	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 04:53	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.50	1		09/26/18 04:53	75-35-4	
cis-1,2-Dichloroethene	**16.6**	ug/L	1.0	0.50	1		09/26/18 04:53	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 3A **Lab ID: 35418447004** Collected: 09/18/18 13:38 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 04:53	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 04:53	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 04:53	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 04:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 04:53	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 04:53	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	127-18-4	
Toluene	**0.57 I**	ug/L	1.0	0.50	1		09/26/18 04:53	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 04:53	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 04:53	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 04:53	108-05-4	
Vinyl chloride	**71.5**	ug/L	1.0	0.50	1		09/26/18 04:53	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/26/18 04:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/26/18 04:53	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		09/26/18 04:53	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/26/18 04:53	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**175**	mg/L			1		10/01/18 11:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**131**	mg/L	25.0	12.5	5		09/26/18 16:58	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/27/18 08:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.25 U**	mg/L	0.50	0.25	10		09/19/18 09:14	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 3B **Lab ID: 35418447005** Collected: 09/18/18 14:38 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**6.4 I**	ug/L	10.0	3.0	1		09/24/18 13:13	74-84-0	
Ethene	**26.3**	ug/L	10.0	2.9	1		09/24/18 13:13	74-85-1	
Methane	**218**	ug/L	10.0	4.9	1		09/24/18 13:13	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.70**	Std. Units			1		09/18/18 14:38		
Field Temperature	**25.3**	deg C			1		09/18/18 14:38		
Field Specific Conductance	**1741**	umhos/cm			1		09/18/18 14:38		
Oxygen, Dissolved	**4.34**	mg/L			1		09/18/18 14:38	7782-44-7	
REDOX	**-67.9**	mV			1		09/18/18 14:38		
Turbidity	**147**	NTU			1		09/18/18 14:38		
Depth to Water	**2.38**	feet			1		09/18/18 14:38		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0061 U**	ug/L	0.019	0.0061	1	09/20/18 07:11	09/20/18 22:06	96-12-8	
1,2-Dibromoethane (EDB)	**0.0072 U**	ug/L	0.0096	0.0072	1	09/20/18 07:11	09/20/18 22:06	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**8.1**	mg/L	2.0	0.27	1	09/24/18 22:58	09/26/18 10:15	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 05:17	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	107-13-1	
Benzene	**3.9**	ug/L	1.0	0.10	1		09/26/18 05:17	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 05:17	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 05:17	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 05:17	56-23-5	
Chlorobenzene	**4.2**	ug/L	1.0	0.50	1		09/26/18 05:17	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 05:17	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 05:17	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 05:17	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 05:17	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	107-06-2	
1,1-Dichloroethene	**829**	ug/L	100	50.0	100		09/27/18 19:11	75-35-4	
cis-1,2-Dichloroethene	**10900**	ug/L	100	50.0	100		09/27/18 19:11	156-59-2	
trans-1,2-Dichloroethene	**184**	ug/L	100	50.0	100		09/27/18 19:11	156-60-5	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 3B **Lab ID: 35418447005** Collected: 09/18/18 14:38 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 05:17	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 05:17	10061-02-6	
Ethylbenzene	**0.90 I**	ug/L	1.0	0.50	1		09/26/18 05:17	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 05:17	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 05:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:17	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 05:17	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	127-18-4	
Toluene	**3.3**	ug/L	1.0	0.50	1		09/26/18 05:17	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	79-00-5	
Trichloroethene	**4680**	ug/L	100	50.0	100		09/27/18 19:11	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:17	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 05:17	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 05:17	108-05-4	
Vinyl chloride	**1180**	ug/L	100	50.0	100		09/27/18 19:11	75-01-4	
Xylene (Total)	**2.1 I**	ug/L	3.0	1.5	1		09/26/18 05:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		09/26/18 05:17	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		09/26/18 05:17	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		09/26/18 05:17	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**77.0**	mg/L			1		10/01/18 11:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**146**	mg/L	25.0	12.5	5		09/26/18 17:20	16887-00-6	
Sulfate	**11.4**	mg/L	5.0	2.5	1		09/27/18 08:23	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.25 U**	mg/L	0.50	0.25	10		09/19/18 09:12	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 1A **Lab ID: 35418447006** Collected: 09/18/18 12:50 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**1030**	ug/L	10.0	3.0	1		09/24/18 13:20	74-84-0	
Ethene	**384**	ug/L	10.0	2.9	1		09/24/18 13:20	74-85-1	
Methane	**6420**	ug/L	10.0	4.9	1		09/24/18 13:20	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.52**	Std. Units			1		09/18/18 12:50		
Field Temperature	**25.1**	deg C			1		09/18/18 12:50		
Field Specific Conductance	**2238**	umhos/cm			1		09/18/18 12:50		
Oxygen, Dissolved	**0.82**	mg/L			1		09/18/18 12:50	7782-44-7	
REDOX	**-104.3**	mV			1		09/18/18 12:50		
Turbidity	**19.21**	NTU			1		09/18/18 12:50		
Depth to Water	**3.31**	feet			1		09/18/18 12:50		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 07:11	09/20/18 22:21	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 07:11	09/20/18 22:21	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**45.7**	mg/L	2.0	0.27	1	09/24/18 22:58	09/25/18 22:20	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 05:40	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	107-13-1	
Benzene	**5.4**	ug/L	1.0	0.10	1		09/26/18 05:40	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 05:40	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 05:40	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 05:40	56-23-5	
Chlorobenzene	**3.7**	ug/L	1.0	0.50	1		09/26/18 05:40	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 05:40	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 05:40	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 05:40	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 05:40	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	107-06-2	
1,1-Dichloroethene	**55.0**	ug/L	1.0	0.50	1		09/26/18 05:40	75-35-4	
cis-1,2-Dichloroethene	**1480**	ug/L	100	50.0	100		09/27/18 19:34	156-59-2	
trans-1,2-Dichloroethene	**6.4**	ug/L	1.0	0.50	1		09/26/18 05:40	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 1A **Lab ID: 35418447006** Collected: 09/18/18 12:50 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 05:40	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 05:40	10061-02-6	
Ethylbenzene	**1.1**	ug/L	1.0	0.50	1		09/26/18 05:40	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 05:40	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 05:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 05:40	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 05:40	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	127-18-4	
Toluene	**12.3**	ug/L	1.0	0.50	1		09/26/18 05:40	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	79-00-5	
Trichloroethene	**5.8**	ug/L	1.0	0.50	1		09/26/18 05:40	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 05:40	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 05:40	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 05:40	108-05-4	
Vinyl chloride	**6890**	ug/L	100	50.0	100		09/27/18 19:34	75-01-4	
Xylene (Total)	**9.2**	ug/L	3.0	1.5	1		09/26/18 05:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		09/26/18 05:40	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/26/18 05:40	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/26/18 05:40	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**98.3**	mg/L			1		10/01/18 11:25		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**116**	mg/L	25.0	12.5	5		09/26/18 17:42	16887-00-6	
Sulfate	**37.3**	mg/L	25.0	12.5	5		09/26/18 17:42	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 U**	mg/L	0.050	0.025	1		09/19/18 08:58	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 1B **Lab ID: 35418447007** Collected: 09/18/18 14:07 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**33.9**	ug/L	10.0	3.0	1		09/24/18 13:27	74-84-0	
Ethene	**57.6**	ug/L	10.0	2.9	1		09/24/18 13:27	74-85-1	
Methane	**1050**	ug/L	10.0	4.9	1		09/24/18 13:27	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.45**	Std. Units			1		09/18/18 14:07		
Field Temperature	**25.3**	deg C			1		09/18/18 14:07		
Field Specific Conductance	**1321**	umhos/cm			1		09/18/18 14:07		
Oxygen, Dissolved	**0.71**	mg/L			1		09/18/18 14:07	7782-44-7	
REDOX	**-76.4**	mV			1		09/18/18 14:07		
Turbidity	**2.70**	NTU			1		09/18/18 14:07		
Depth to Water	**9.48**	feet			1		09/18/18 14:07		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 07:11	09/20/18 22:36	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 07:11	09/20/18 22:36	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**129**	mg/L	2.0	0.27	1	09/30/18 13:57	10/01/18 15:30	7440-23-5	J(M1)
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/26/18 06:04	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	107-13-1	
Benzene	**0.99 I**	ug/L	1.0	0.10	1		09/26/18 06:04	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/26/18 06:04	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/26/18 06:04	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/26/18 06:04	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 06:04	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/26/18 06:04	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/26/18 06:04	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/26/18 06:04	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	107-06-2	
1,1-Dichloroethene	**108**	ug/L	1.0	0.50	1		09/26/18 06:04	75-35-4	
cis-1,2-Dichloroethene	**2450**	ug/L	100	50.0	100		09/27/18 19:58	156-59-2	
trans-1,2-Dichloroethene	**9.1**	ug/L	1.0	0.50	1		09/26/18 06:04	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 1B **Lab ID: 35418447007** Collected: 09/18/18 14:07 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 06:04	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/26/18 06:04	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/26/18 06:04	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/26/18 06:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/26/18 06:04	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/26/18 06:04	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	79-00-5	
Trichloroethene	**2.2**	ug/L	1.0	0.50	1		09/26/18 06:04	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/26/18 06:04	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/26/18 06:04	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/26/18 06:04	108-05-4	
Vinyl chloride	**1330**	ug/L	100	50.0	100		09/27/18 19:58	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/26/18 06:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		09/26/18 06:04	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		09/26/18 06:04	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		09/26/18 06:04	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**51.9**	mg/L			1		10/01/18 11:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**115**	mg/L	10.0	5.0	2		09/26/18 18:04	16887-00-6	
Sulfate	**84.6**	mg/L	10.0	5.0	2		09/26/18 18:04	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 I**	mg/L	0.050	0.025	1		09/19/18 09:00	14797-55-8	

REPORT OF LABORATORY ANALYSIS

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2A Duplicate **Lab ID: 35418447008** Collected: 09/18/18 12:41 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**175**	ug/L	10.0	3.0	1		09/24/18 13:35	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/24/18 13:35	74-85-1	
Methane	**2690**	ug/L	10.0	4.9	1		09/24/18 13:35	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.71**	Std. Units			1		09/18/18 12:41		
Field Temperature	**24.0**	deg C			1		09/18/18 12:41		
Field Specific Conductance	**1808**	umhos/cm			1		09/18/18 12:41		
Oxygen, Dissolved	**0.05**	mg/L			1		09/18/18 12:41	7782-44-7	
REDOX	**-81.5**	mV			1		09/18/18 12:41		
Turbidity	**3.79**	NTU			1		09/18/18 12:41		
Depth to Water	**3.64**	feet			1		09/18/18 12:41		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	09/20/18 07:11	09/20/18 22:51	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	09/20/18 07:11	09/20/18 22:51	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**235**	mg/L	10.0	1.4	5	09/30/18 13:57	10/02/18 09:39	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/29/18 13:51	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	107-13-1	
Benzene	**0.57 I**	ug/L	1.0	0.10	1		09/29/18 13:51	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/29/18 13:51	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/29/18 13:51	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/29/18 13:51	56-23-5	
Chlorobenzene	**1.3**	ug/L	1.0	0.50	1		09/29/18 13:51	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/29/18 13:51	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/29/18 13:51	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/29/18 13:51	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/29/18 13:51	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: TMW 2A Duplicate **Lab ID: 35418447008** Collected: 09/18/18 12:41 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/29/18 13:51	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/29/18 13:51	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/29/18 13:51	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/29/18 13:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/29/18 13:51	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/29/18 13:51	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/29/18 13:51	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/29/18 13:51	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/29/18 13:51	108-05-4	
Vinyl chloride	**0.86 I**	ug/L	1.0	0.50	1		09/29/18 13:51	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/29/18 13:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/29/18 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		09/29/18 13:51	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		09/29/18 13:51	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**104**	mg/L			1		10/01/18 11:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**77.7**	mg/L	25.0	12.5	5		09/26/18 18:26	16887-00-6	
Sulfate	**52.1**	mg/L	25.0	12.5	5		09/26/18 18:26	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.25 U**	mg/L	0.50	0.25	10		09/19/18 09:15	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: Trip Blank 9/18/18 **Lab ID: 35418447009** Collected: 09/18/18 00:00 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		09/25/18 23:17	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		09/25/18 23:17	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		09/25/18 23:17	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		09/25/18 23:17	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		09/25/18 23:17	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 23:17	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		09/25/18 23:17	74-87-3	
1,2-Dibromo-3-chloropropane	**1.0 U**	ug/L	5.0	1.0	1		09/25/18 23:17	96-12-8	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		09/25/18 23:17	124-48-1	
1,2-Dibromoethane (EDB)	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	106-93-4	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		09/25/18 23:17	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 23:17	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		09/25/18 23:17	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		09/25/18 23:17	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		09/25/18 23:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		09/25/18 23:17	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		09/25/18 23:17	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		09/25/18 23:17	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		09/25/18 23:17	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		09/25/18 23:17	75-01-4	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Sample: Trip Blank 9/18/18 **Lab ID: 35418447009** Collected: 09/18/18 00:00 Received: 09/18/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		09/25/18 23:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		09/25/18 23:17	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		09/25/18 23:17	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		09/25/18 23:17	2037-26-5	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 564727 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

METHOD BLANK: 3065117 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	3.0 U	10.0	3.0	09/24/18 09:16	
Ethene	ug/L	2.9 U	10.0	2.9	09/24/18 09:16	
Methane	ug/L	4.9 U	10.0	4.9	09/24/18 09:16	

LABORATORY CONTROL SAMPLE & LCSD: 3065118 3065119

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	110	110	96	97	85-115	0	20	
Ethene	ug/L	106	104	104	99	98	85-115	1	20	
Methane	ug/L	60.7	59.0	59.3	97	98	85-115	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3065120 3065121

Parameter	Units	10448452001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	29.4	114	114	121	133	80	91	30-150	10	20	
Ethene	ug/L	ND	106	106	91.2	97.2	86	92	30-150	6	20	
Methane	ug/L	9790	60.7	60.7	8280	10800	-2500	1660	30-150	26	20	J(M1), J(R1)

SAMPLE DUPLICATE: 3065123

Parameter	Units	35418447008 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	175	173	1	20	
Ethene	ug/L	2.9 U	2.9 U		20	
Methane	ug/L	2690	2690	0	20	

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

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 480131 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006

METHOD BLANK: 2600030 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sodium	mg/L	0.65 I	2.0	0.27	09/26/18 09:44	

LABORATORY CONTROL SAMPLE: 2600031

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	12.5	14.4	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2600032 2600033

Parameter	Units	35418387001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sodium	mg/L	175000 ug/L	12.5	12.5	188	186	109	86	75-125	1	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 481767 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 35418447007, 35418447008

METHOD BLANK: 2608098 Matrix: Water
Associated Lab Samples: 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sodium	mg/L	0.27 U	2.0	0.27	10/02/18 10:12	

LABORATORY CONTROL SAMPLE: 2608099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	12.5	12.7	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2608100 2608101

Parameter	Units	35418447007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sodium	mg/L	129	12.5	12.5	144	148	120	147	75-125	2	20	J(M1)

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 480547 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447009

METHOD BLANK: 2601665 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/25/18 22:30	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/25/18 22:30	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	5.0	1.0	09/25/18 22:30	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Acetone	ug/L	10.0 U	20.0	10.0	09/25/18 22:30	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Benzene	ug/L	0.10 U	1.0	0.10	09/25/18 22:30	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/25/18 22:30	
Bromoform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/25/18 22:30	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/25/18 22:30	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Chloroform	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/25/18 22:30	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/25/18 22:30	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/25/18 22:30	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/25/18 22:30	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/25/18 22:30	
Styrene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Toluene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

METHOD BLANK: 2601665 Matrix: Water

Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/25/18 22:30	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/25/18 22:30	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/25/18 22:30	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/25/18 22:30	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/25/18 22:30	
1,2-Dichloroethane-d4 (S)	%	111	70-130		09/25/18 22:30	
4-Bromofluorobenzene (S)	%	97	70-130		09/25/18 22:30	
Toluene-d8 (S)	%	108	70-130		09/25/18 22:30	

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.5	82	70-130	
1,1,1-Trichloroethane	ug/L	20	19.7	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	68-125	
1,1,2-Trichloroethane	ug/L	20	18.8	94	70-130	
1,1-Dichloroethane	ug/L	20	21.8	109	70-130	
1,1-Dichloroethene	ug/L	20	21.5	107	66-133	
1,2,3-Trichloropropane	ug/L	20	18.9	94	62-127	
1,2-Dibromo-3-chloropropane	ug/L	20	18.0	90	45-137	
1,2-Dibromoethane (EDB)	ug/L	20	16.9	85	70-130	
1,2-Dichlorobenzene	ug/L	20	19.3	96	70-130	
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	
1,2-Dichloropropane	ug/L	20	19.8	99	70-130	
1,4-Dichlorobenzene	ug/L	20	19.3	97	70-130	
2-Butanone (MEK)	ug/L	40	38.8	97	47-143	
2-Hexanone	ug/L	40	34.3	86	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.9	92	57-132	
Acetone	ug/L	40	41.5	104	46-148	
Acrylonitrile	ug/L	200	203	101	60-143	
Benzene	ug/L	20	20.2	101	70-130	
Bromochloromethane	ug/L	20	21.0	105	70-130	
Bromodichloromethane	ug/L	20	17.0	85	70-130	
Bromoform	ug/L	20	15.6	78	49-126	
Bromomethane	ug/L	20	16.6	83	10-165	
Carbon disulfide	ug/L	20	16.7	84	60-141	
Carbon tetrachloride	ug/L	20	18.4	92	63-126	
Chlorobenzene	ug/L	20	19.3	97	70-130	
Chloroethane	ug/L	20	18.6	93	71-142	
Chloroform	ug/L	20	20.7	104	70-130	
Chloromethane	ug/L	20	17.4	87	40-140	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

LABORATORY CONTROL SAMPLE: 2601666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	20.4	102	70-130	
cis-1,3-Dichloropropene	ug/L	20	16.7	83	70-130	
Dibromochloromethane	ug/L	20	15.9	80	62-118	
Dibromomethane	ug/L	20	19.7	98	70-130	
Ethylbenzene	ug/L	20	20.2	101	70-130	
Iodomethane	ug/L	40	29.4	73	10-164	
Methylene Chloride	ug/L	20	20.8	104	65-136	
Styrene	ug/L	20	17.9	89	70-130	
Tetrachloroethene	ug/L	20	16.6	83	64-134	
Toluene	ug/L	20	19.8	99	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	68-127	
trans-1,3-Dichloropropene	ug/L	20	15.5	78	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	14.1	70	42-129	
Trichloroethene	ug/L	20	19.7	99	70-130	
Trichlorofluoromethane	ug/L	20	20.5	103	65-135	
Vinyl acetate	ug/L	20	18.0	90	60-144	
Vinyl chloride	ug/L	20	17.7	89	68-131	
Xylene (Total)	ug/L	60	61.4	102	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	11.8	59	70-130	J(M1)
1,1,1-Trichloroethane	ug/L	0.50 U	20	15.4	77	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	13.3	66	68-125	J(M1)
1,1,2-Trichloroethane	ug/L	0.50 U	20	13.8	69	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	16.8	84	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	16.9	84	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	13.1	65	62-127	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	20	12.6	63	45-137	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	20	12.1	60	70-130	J(M1)
1,2-Dichlorobenzene	ug/L	0.50 U	20	13.4	67	70-130	J(M1)
1,2-Dichloroethane	ug/L	0.50 U	20	14.0	70	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	14.2	71	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	13.6	68	70-130	J(M1)
2-Butanone (MEK)	ug/L	5.0 U	40	28.0	70	47-143	
2-Hexanone	ug/L	5.0 U	40	23.9	60	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	24.4	61	57-132	
Acetone	ug/L	10.0 U	40	29.2	73	46-148	
Acrylonitrile	ug/L	5.0 U	200	173	87	60-143	
Benzene	ug/L	0.58 I	20	15.6	75	70-130	
Bromochloromethane	ug/L	0.50 U	20	15.2	76	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

MATRIX SPIKE SAMPLE: 2603245

Parameter	Units	35418447003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	0.27 U	20	12.2	61	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	11.5	58	49-126	
Bromomethane	ug/L	0.50 U	20	14.1	70	10-165	
Carbon disulfide	ug/L	5.0 U	20	13.9	67	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	14.2	71	63-126	
Chlorobenzene	ug/L	1.3	20	15.0	68	70-130	J(M1)
Chloroethane	ug/L	0.50 U	20	17.1	85	71-142	
Chloroform	ug/L	0.50 U	20	15.4	77	70-130	
Chloromethane	ug/L	0.62 U	20	15.8	79	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	20.4	101	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	11.1	56	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	11.7	59	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	14.6	73	70-130	
Ethylbenzene	ug/L	0.50 U	20	14.6	73	70-130	
Iodomethane	ug/L	0.50 U	40	16.5	41	10-164	
Methylene Chloride	ug/L	2.5 U	20	15.3	76	65-136	
Styrene	ug/L	0.50 U	20	12.5	63	70-130	J(M1)
Tetrachloroethene	ug/L	0.50 U	20	11.9	59	64-134	J(M1)
Toluene	ug/L	0.50 U	20	14.5	73	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	16.1	80	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	10.3	52	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	10.3	52	42-129	
Trichloroethene	ug/L	0.50 U	20	15.8	79	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	19.0	95	65-135	
Vinyl acetate	ug/L	1.0 U	20	10.8	54	60-144	J(M1)
Vinyl chloride	ug/L	0.94 I	20	17.0	79	68-131	
Xylene (Total)	ug/L	1.5 U	60	43.6	73	70-130	MS
1,2-Dichloroethane-d4 (S)	%				110	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				104	70-130	

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	1.0 U		40	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	0.50 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

SAMPLE DUPLICATE: 2603244

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	1.7	1.7	2	40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.52 I		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	27.5	27.1	1	40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	576	616	7	40	L
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	109	109	0	40	
4-Bromofluorobenzene (S)	%	94	97	3	40	
Toluene-d8 (S)	%	106	106	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 481294 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418447003

METHOD BLANK: 2605566 Matrix: Water
Associated Lab Samples: 35418447003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/28/18 00:15	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/28/18 00:15	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
Acetone	ug/L	10.0 U	20.0	10.0	09/28/18 00:15	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
Benzene	ug/L	0.10 U	1.0	0.10	09/28/18 00:15	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/28/18 00:15	
Bromoform	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/28/18 00:15	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/28/18 00:15	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/28/18 00:15	
Chloroform	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/28/18 00:15	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/28/18 00:15	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/28/18 00:15	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/28/18 00:15	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/28/18 00:15	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/28/18 00:15	
Styrene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Toluene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/28/18 00:15	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/28/18 00:15	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

METHOD BLANK: 2605566 Matrix: Water
Associated Lab Samples: 35418447003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/28/18 00:15	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/28/18 00:15	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/28/18 00:15	
1,2-Dichloroethane-d4 (S)	%	106	70-130		09/28/18 00:15	
4-Bromofluorobenzene (S)	%	97	70-130		09/28/18 00:15	
Toluene-d8 (S)	%	104	70-130		09/28/18 00:15	

LABORATORY CONTROL SAMPLE: 2605567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.8	84	70-130	
1,1,1-Trichloroethane	ug/L	20	18.4	92	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	101	68-125	
1,1,2-Trichloroethane	ug/L	20	19.1	96	70-130	
1,1-Dichloroethane	ug/L	20	20.6	103	70-130	
1,1-Dichloroethene	ug/L	20	19.9	100	66-133	
1,2,3-Trichloropropane	ug/L	20	21.0	105	62-127	
1,2-Dichlorobenzene	ug/L	20	19.0	95	70-130	
1,2-Dichloroethane	ug/L	20	18.6	93	70-130	
1,2-Dichloropropane	ug/L	20	19.3	97	70-130	
1,4-Dichlorobenzene	ug/L	20	19.3	97	70-130	
2-Butanone (MEK)	ug/L	40	42.2	105	47-143	
2-Hexanone	ug/L	40	38.5	96	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	39.5	99	57-132	
Acetone	ug/L	40	41.3	103	46-148	
Acrylonitrile	ug/L	200	204	102	60-143	
Benzene	ug/L	20	20.2	101	70-130	
Bromochloromethane	ug/L	20	20.4	102	70-130	
Bromodichloromethane	ug/L	20	17.1	86	70-130	
Bromoform	ug/L	20	16.4	82	49-126	
Bromomethane	ug/L	20	14.8	74	10-165	
Carbon disulfide	ug/L	20	17.5	88	60-141	
Carbon tetrachloride	ug/L	20	17.9	89	63-126	
Chlorobenzene	ug/L	20	19.3	96	70-130	
Chloroethane	ug/L	20	19.1	95	71-142	
Chloroform	ug/L	20	19.5	98	70-130	
Chloromethane	ug/L	20	17.5	87	40-140	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	70-130	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	70-130	
Dibromochloromethane	ug/L	20	16.3	82	62-118	
Dibromomethane	ug/L	20	19.9	100	70-130	
Ethylbenzene	ug/L	20	19.7	99	70-130	
Iodomethane	ug/L	40	23.2	58	10-164	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

LABORATORY CONTROL SAMPLE: 2605567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	19.6	98	65-136	
Styrene	ug/L	20	17.5	88	70-130	
Tetrachloroethene	ug/L	20	16.1	80	64-134	
Toluene	ug/L	20	19.8	99	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.6	98	68-127	
trans-1,3-Dichloropropene	ug/L	20	16.1	80	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	15.2	76	42-129	
Trichloroethene	ug/L	20	19.9	99	70-130	
Trichlorofluoromethane	ug/L	20	20.0	100	65-135	
Vinyl acetate	ug/L	20	19.2	96	60-144	
Vinyl chloride	ug/L	20	17.7	89	68-131	
Xylene (Total)	ug/L	60	59.2	99	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 2606809

Parameter	Units	35420136002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	10.7	53	70-130	J(M1)
1,1,1-Trichloroethane	ug/L	0.50 U	20	12.0	60	70-130	J(M1)
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	11.6	58	68-125	J(M1)
1,1,2-Trichloroethane	ug/L	0.50 U	20	12.4	62	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	13.8	69	70-130	J(M1)
1,1-Dichloroethene	ug/L	0.50 U	20	13.6	68	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	11.0	55	62-127	J(M1)
1,2-Dichlorobenzene	ug/L	0.50 U	20	11.9	59	70-130	J(M1)
1,2-Dichloroethane	ug/L	0.50 U	20	10.8	54	70-130	J(M1)
1,2-Dichloropropane	ug/L	0.50 U	20	12.2	61	70-130	J(M1)
1,4-Dichlorobenzene	ug/L	0.50 U	20	12.0	60	70-130	J(M1)
2-Butanone (MEK)	ug/L	5.0 U	40	27.8	69	47-143	
2-Hexanone	ug/L	5.0 U	40	25.6	64	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	27.6	69	57-132	
Acetone	ug/L	10.0 U	40	28.8	72	46-148	
Benzene	ug/L	0.10 U	20	13.6	68	70-130	J(M1)
Bromochloromethane	ug/L	0.50 U	20	13.2	66	70-130	J(M1)
Bromodichloromethane	ug/L	0.27 U	20	9.9	49	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	10.7	54	49-126	
Bromomethane	ug/L	0.50 U	20	8.1	41	10-165	
Carbon disulfide	ug/L	5.0 U	20	15.5	75	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	11.1	55	63-126	J(M1)
Chlorobenzene	ug/L	0.50 U	20	13.0	65	70-130	J(M1)
Chloroethane	ug/L	0.50 U	20	14.3	71	71-142	
Chloroform	ug/L	0.50 U	20	12.5	62	70-130	J(M1)
Chloromethane	ug/L	0.62 U	20	12.5	63	40-140	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

MATRIX SPIKE SAMPLE: 2606809

Parameter	Units	35420136002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	0.50 U	20	13.2	66	70-130	J(M1)
cis-1,3-Dichloropropene	ug/L	0.25 U	20	10.0	50	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	10.8	54	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	13.2	66	70-130	J(M1)
Ethylbenzene	ug/L	0.50 U	20	13.5	67	70-130	J(M1)
Iodomethane	ug/L	0.50 U	40	17.6	44	10-164	
Methylene Chloride	ug/L	2.5 U	20	12.4	62	65-136	J(M1)
Styrene	ug/L	0.50 U	20	12.0	60	70-130	J(M1)
Tetrachloroethene	ug/L	0.50 U	20	11.2	56	64-134	J(M1)
Toluene	ug/L	0.50 U	20	13.5	67	70-130	J(M1)
trans-1,2-Dichloroethene	ug/L	0.50 U	20	13.1	65	68-127	J(M1)
trans-1,3-Dichloropropene	ug/L	0.25 U	20	9.4	47	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	8.3 I	41	42-129	J(M1)
Trichloroethene	ug/L	0.50 U	20	13.5	68	70-130	J(M1)
Trichlorofluoromethane	ug/L	0.50 U	20	13.0	65	65-135	
Vinyl acetate	ug/L	1.0 U	20	11.7	58	60-144	J(M1)
Vinyl chloride	ug/L	0.50 U	20	14.0	70	68-131	
Xylene (Total)	ug/L	1.5 U	60	39.6	66	70-130	MS
1,2-Dichloroethane-d4 (S)	%				92	70-130	
4-Bromofluorobenzene (S)	%				107	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 2606808

Parameter	Units	35420136001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

SAMPLE DUPLICATE: 2606808

Parameter	Units	35420136001 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	1.1	1.0	2	40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	100	100	0	40	
4-Bromofluorobenzene (S)	%	97	96	1	40	
Toluene-d8 (S)	%	100	101	1	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 481698 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418447008

METHOD BLANK: 2607678 Matrix: Water
Associated Lab Samples: 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	09/29/18 12:40	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	09/29/18 12:40	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
2-Hexanone	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
Acetone	ug/L	10.0 U	20.0	10.0	09/29/18 12:40	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
Benzene	ug/L	0.10 U	1.0	0.10	09/29/18 12:40	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	09/29/18 12:40	
Bromoform	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Bromomethane	ug/L	0.50 U	5.0	0.50	09/29/18 12:40	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	09/29/18 12:40	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Chloroethane	ug/L	0.50 U	10.0	0.50	09/29/18 12:40	
Chloroform	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Chloromethane	ug/L	0.62 U	1.0	0.62	09/29/18 12:40	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/29/18 12:40	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	09/29/18 12:40	
Dibromomethane	ug/L	0.50 U	2.0	0.50	09/29/18 12:40	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Iodomethane	ug/L	0.50 U	10.0	0.50	09/29/18 12:40	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	09/29/18 12:40	
Styrene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Toluene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	09/29/18 12:40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	09/29/18 12:40	
Trichloroethene	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

METHOD BLANK: 2607678 Matrix: Water
Associated Lab Samples: 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	09/29/18 12:40	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	09/29/18 12:40	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	09/29/18 12:40	
1,2-Dichloroethane-d4 (S)	%	108	70-130		09/29/18 12:40	
4-Bromofluorobenzene (S)	%	98	70-130		09/29/18 12:40	
Toluene-d8 (S)	%	104	70-130		09/29/18 12:40	

LABORATORY CONTROL SAMPLE: 2607679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.2	81	70-130	
1,1,1-Trichloroethane	ug/L	20	17.8	89	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	101	68-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	70-130	
1,1-Dichloroethane	ug/L	20	20.6	103	70-130	
1,1-Dichloroethene	ug/L	20	18.5	93	66-133	
1,2,3-Trichloropropane	ug/L	20	20.4	102	62-127	
1,2-Dichlorobenzene	ug/L	20	19.5	98	70-130	
1,2-Dichloroethane	ug/L	20	19.5	98	70-130	
1,2-Dichloropropane	ug/L	20	19.5	98	70-130	
1,4-Dichlorobenzene	ug/L	20	19.4	97	70-130	
2-Butanone (MEK)	ug/L	40	45.3	113	47-143	
2-Hexanone	ug/L	40	35.1	88	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.6	91	57-132	
Acetone	ug/L	40	41.3	103	46-148	
Acrylonitrile	ug/L	200	204	102	60-143	
Benzene	ug/L	20	19.7	99	70-130	
Bromochloromethane	ug/L	20	20.0	100	70-130	
Bromodichloromethane	ug/L	20	16.8	84	70-130	
Bromoform	ug/L	20	15.4	77	49-126	
Bromomethane	ug/L	20	14.5	72	10-165	
Carbon disulfide	ug/L	20	15.5	77	60-141	
Carbon tetrachloride	ug/L	20	16.7	84	63-126	
Chlorobenzene	ug/L	20	18.8	94	70-130	
Chloroethane	ug/L	20	18.5	93	71-142	
Chloroform	ug/L	20	19.7	99	70-130	
Chloromethane	ug/L	20	17.5	88	40-140	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	70-130	
cis-1,3-Dichloropropene	ug/L	20	16.9	84	70-130	
Dibromochloromethane	ug/L	20	16.2	81	62-118	
Dibromomethane	ug/L	20	19.8	99	70-130	
Ethylbenzene	ug/L	20	18.7	94	70-130	
Iodomethane	ug/L	40	20.1	50	10-164	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

LABORATORY CONTROL SAMPLE: 2607679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	20.2	101	65-136	
Styrene	ug/L	20	17.0	85	70-130	
Tetrachloroethene	ug/L	20	15.5	77	64-134	
Toluene	ug/L	20	18.4	92	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	68-127	
trans-1,3-Dichloropropene	ug/L	20	15.3	77	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	14.7	73	42-129	
Trichloroethene	ug/L	20	19.2	96	70-130	
Trichlorofluoromethane	ug/L	20	19.7	98	65-135	
Vinyl acetate	ug/L	20	19.0	95	60-144	
Vinyl chloride	ug/L	20	17.7	89	68-131	
Xylene (Total)	ug/L	60	56.2	94	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 2607702

Parameter	Units	35420325001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	15.5	77	70-130	
1,1,1-Trichloroethane	ug/L	0.50 U	20	15.9	79	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	17.5	87	68-125	
1,1,2-Trichloroethane	ug/L	0.50 U	20	22.1	111	70-130	
1,1-Dichloroethane	ug/L	0.50 U	20	18.6	93	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	17.2	86	66-133	
1,2,3-Trichloropropane	ug/L	5.1	20	22.0	84	62-127	
1,2-Dichlorobenzene	ug/L	0.50 U	20	18.2	91	70-130	
1,2-Dichloroethane	ug/L	0.50 U	20	14.5	72	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	18.7	93	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	18.3	92	70-130	
2-Butanone (MEK)	ug/L	5.0 U	40	94.1	235	47-143	J(M1),L
2-Hexanone	ug/L	5.0 U	40	30.2	75	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	35.5	89	57-132	
Acetone	ug/L	10.0 U	40	42.1	105	46-148	
Acrylonitrile	ug/L	5.0 U	200	175	87	60-143	
Benzene	ug/L	0.10 U	20	19.5	97	70-130	
Bromochloromethane	ug/L	0.50 U	20	16.9	84	70-130	
Bromodichloromethane	ug/L	0.27 U	20	12.9	65	70-130	J(M1)
Bromoform	ug/L	0.50 U	20	13.3	67	49-126	
Bromomethane	ug/L	0.50 U	20	12.4	62	10-165	
Carbon disulfide	ug/L	5.0 U	20	13.4	64	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	14.5	73	63-126	
Chlorobenzene	ug/L	0.50 U	20	18.9	95	70-130	
Chloroethane	ug/L	0.50 U	20	20.8	104	71-142	
Chloroform	ug/L	0.50 U	20	16.7	83	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

MATRIX SPIKE SAMPLE: 2607702

Parameter	Units	35420325001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	0.62 U	20	15.5	77	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	17.4	87	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	14.4	72	70-130	
Dibromochloromethane	ug/L	0.26 U	20	14.6	73	62-118	
Dibromomethane	ug/L	0.50 U	20	16.6	83	70-130	
Ethylbenzene	ug/L	125	20	147	111	70-130	
Iodomethane	ug/L	0.50 U	40	13.8	34	10-164	
Methylene Chloride	ug/L	2.5 U	20	15.7	79	65-136	
Styrene	ug/L	0.50 U	20	17.9	90	70-130	
Tetrachloroethene	ug/L	0.50 U	20	16.2	81	64-134	
Toluene	ug/L	9.1	20	29.6	103	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	17.2	86	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	14.3	71	65-121	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	9.2 I	46	42-129	
Trichloroethene	ug/L	0.50 U	20	18.2	91	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	18.0	90	65-135	
Vinyl acetate	ug/L	1.0 U	20	14.2	71	60-144	
Vinyl chloride	ug/L	0.50 U	20	19.8	99	68-131	
Xylene (Total)	ug/L	662	60	680	31	70-130	ES,MS
1,2-Dichloroethane-d4 (S)	%				89	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 2607701

Parameter	Units	35420334018 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

SAMPLE DUPLICATE: 2607701

Parameter	Units	35420334018 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.55 I	0.55 I		40	
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	111	112	0	40	
4-Bromofluorobenzene (S)	%	96	95	1	40	
Toluene-d8 (S)	%	104	105	1	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 478741 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

METHOD BLANK: 2592788 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	09/20/18 16:40	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	09/20/18 16:40	

LABORATORY CONTROL SAMPLE: 2592789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.23	94	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.24	95	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2593029 2593030

Parameter	Units	35418108001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0062 U	.25	.25	0.27	0.27	107	107	60-140	0	40	
1,2-Dibromoethane (EDB)	ug/L	0.0073 U	.25	.25	0.26	0.26	105	106	60-140	1	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 481894 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

METHOD BLANK: 2608402 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon Dioxide, Free	mg/L	5.2			10/01/18 10:04	

SAMPLE DUPLICATE: 2608404

Parameter	Units	92400464002 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	10.3	10.3	0		

SAMPLE DUPLICATE: 2608405

Parameter	Units	35418447008 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	104	101	2		

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 480668 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 35418447001, 35418447002, 35418447003

METHOD BLANK: 2602191 Matrix: Water
Associated Lab Samples: 35418447001, 35418447002, 35418447003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	09/26/18 11:02	
Sulfate	mg/L	2.5 U	5.0	2.5	09/26/18 11:02	

LABORATORY CONTROL SAMPLE: 2602192

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Sulfate	mg/L	50	50.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2602223 2602224

Parameter	Units	92400372001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.2	50	50	55.3	55.5	100	101	90-110	0	20	
Sulfate	mg/L	ND	50	50	53.4	53.6	98	98	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2602225 2602226

Parameter	Units	35419753001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.0	50	50	55.4	55.6	99	99	90-110	0	20	
Sulfate	mg/L	4.0 I	50	50	52.8	52.8	98	98	90-110	0	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 480701 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

METHOD BLANK: 2602230 Matrix: Water
Associated Lab Samples: 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	09/26/18 15:08	
Sulfate	mg/L	2.5 U	5.0	2.5	09/26/18 15:08	

LABORATORY CONTROL SAMPLE: 2602231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.8	98	90-110	
Sulfate	mg/L	50	48.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2602407 2602408

Parameter	Units	35419117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	84.5	50	50	135	139	101	109	90-110	3	20	L
Sulfate	mg/L	23.1	50	50	71.4	74.0	97	102	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2602409 2602410

Parameter	Units	35419260002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.7	50	50	73.9	74.0	104	105	90-110	0	20	
Sulfate	mg/L	29.5	50	50	82.8	82.8	106	107	90-110	0	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 478572 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 35418447001

METHOD BLANK: 2592315 Matrix: Water
Associated Lab Samples: 35418447001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.050	0.025	09/19/18 08:07	

SAMPLE DUPLICATE: 2592317

Parameter	Units	35418427005 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.025 U		20	

SAMPLE DUPLICATE: 2592319

Parameter	Units	35418432002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	4.6	4.8	5	20	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

QC Batch: 478573 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

METHOD BLANK: 2592321 Matrix: Water
Associated Lab Samples: 35418447002, 35418447003, 35418447004, 35418447005, 35418447006, 35418447007, 35418447008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.050	0.025	09/19/18 08:46	

SAMPLE DUPLICATE: 2592323

Parameter	Units	35418447002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.12 U	0.12 U		20	

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

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QUALIFIERS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
J(R1)	Estimated Value. RPD value was outside control limits.
L	Off-scale high. Actual value is known to be greater than value given.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35418447001	**EQ Blank 9/18/18**	RSK 175	564727		
35418447002	**TMW 2B**	RSK 175	564727		
35418447003	**TMW 2A**	RSK 175	564727		
35418447004	**TMW 3A**	RSK 175	564727		
35418447005	**TMW 3B**	RSK 175	564727		
35418447006	**TMW 1A**	RSK 175	564727		
35418447007	**TMW 1B**	RSK 175	564727		
35418447008	**TMW 2A Duplicate**	RSK 175	564727		
35418447002	**TMW 2B**				
35418447003	**TMW 2A**				
35418447004	**TMW 3A**				
35418447005	**TMW 3B**				
35418447006	**TMW 1A**				
35418447007	**TMW 1B**				
35418447008	**TMW 2A Duplicate**				
35418447001	**EQ Blank 9/18/18**	EPA 8011	478741	EPA 8011	479063
35418447002	**TMW 2B**	EPA 8011	478741	EPA 8011	479063
35418447003	**TMW 2A**	EPA 8011	478741	EPA 8011	479063
35418447004	**TMW 3A**	EPA 8011	478741	EPA 8011	479063
35418447005	**TMW 3B**	EPA 8011	478741	EPA 8011	479063
35418447006	**TMW 1A**	EPA 8011	478741	EPA 8011	479063
35418447007	**TMW 1B**	EPA 8011	478741	EPA 8011	479063
35418447008	**TMW 2A Duplicate**	EPA 8011	478741	EPA 8011	479063
35418447001	**EQ Blank 9/18/18**	EPA 3010	480131	EPA 6010	480132
35418447002	**TMW 2B**	EPA 3010	480131	EPA 6010	480132
35418447003	**TMW 2A**	EPA 3010	480131	EPA 6010	480132
35418447004	**TMW 3A**	EPA 3010	480131	EPA 6010	480132
35418447005	**TMW 3B**	EPA 3010	480131	EPA 6010	480132
35418447006	**TMW 1A**	EPA 3010	480131	EPA 6010	480132
35418447007	**TMW 1B**	EPA 3010	481767	EPA 6010	481798
35418447008	**TMW 2A Duplicate**	EPA 3010	481767	EPA 6010	481798
35418447001	**EQ Blank 9/18/18**	EPA 8260	480547		
35418447002	**TMW 2B**	EPA 8260	480547		
35418447003	**TMW 2A**	EPA 8260	480547		
35418447003	**TMW 2A**	EPA 8260	481294		
35418447004	**TMW 3A**	EPA 8260	480547		
35418447005	**TMW 3B**	EPA 8260	480547		
35418447006	**TMW 1A**	EPA 8260	480547		
35418447007	**TMW 1B**	EPA 8260	480547		
35418447008	**TMW 2A Duplicate**	EPA 8260	481698		
35418447009	**Trip Blank 9/18/18**	EPA 8260	480547		
35418447001	**EQ Blank 9/18/18**	SM 2320B	481894		
35418447002	**TMW 2B**	SM 2320B	481894		
35418447003	**TMW 2A**	SM 2320B	481894		

REPORT OF LABORATORY ANALYSIS

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(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418447

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35418447004	**TMW 3A**	SM 2320B	481894		
35418447005	**TMW 3B**	SM 2320B	481894		
35418447006	**TMW 1A**	SM 2320B	481894		
35418447007	**TMW 1B**	SM 2320B	481894		
35418447008	**TMW 2A Duplicate**	SM 2320B	481894		
35418447001	**EQ Blank 9/18/18**	EPA 300.0	480668		
35418447002	**TMW 2B**	EPA 300.0	480668		
35418447003	**TMW 2A**	EPA 300.0	480668		
35418447004	**TMW 3A**	EPA 300.0	480701		
35418447005	**TMW 3B**	EPA 300.0	480701		
35418447006	**TMW 1A**	EPA 300.0	480701		
35418447007	**TMW 1B**	EPA 300.0	480701		
35418447008	**TMW 2A Duplicate**	EPA 300.0	480701		
35418447001	**EQ Blank 9/18/18**	EPA 353.2	478572		
35418447002	**TMW 2B**	EPA 353.2	478573		
35418447003	**TMW 2A**	EPA 353.2	478573		
35418447004	**TMW 3A**	EPA 353.2	478573		
35418447005	**TMW 3B**	EPA 353.2	478573		
35418447006	**TMW 1A**	EPA 353.2	478573		
35418447007	**TMW 1B**	EPA 353.2	478573		
35418447008	**TMW 2A Duplicate**	EPA 353.2	478573		

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WO# : 35418447

35418447

CUSTODY / Analytical Request Document

stody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Volusia County Solid Waste Management
Address:	1990 Tomoka Farms Road
	Daytona Beach, FL 32124
Email:	
Phone:	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ms. Jennifer Stirk
Copy To:	
Purchase Order #:	
Project Name:	Tomoka LF B5 Remediation
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	jeff.baylor@pacelabs.com,
Pace Profile #:	1721

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 Full List	EDB and DBCP EPA 8011	Alkalinity/NO3/CL/SO4	Dissolved Gases (Methane,	Metals by 6010	Trip Blank DO NOT OPEN -	Residual Chlorine (Y/N)
1	EQ					9-18-18	0940												✓	✓	✓	✓	✓		
2	TMW 2 B						1143																		
3	TMW 2 A						1241																		
4	TMW 3 A						1338																		
5	TMW 3B						1438																		
6	TMW 1A						1250																		
7	TMW 1B						1403																		
8	DUPLICATE						1241																		
9	TRIP BLANK						0000																	✓	
10																									
11																									
12																									

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SAMPLING KIT-ENTA	[illegible] Pace	9/8/10	1600							
	[illegible] Pace	9-18-18	1640	NKSS/Pace	9/18/18	1640	4.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DAVID FOX

SIGNATURE of SAMPLER: [signature] DATE Signed: 9-18-18

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt (SCUR)

WO# : 35418447

Project # PM: JSB **Due Date:** 10/02/18

Project Manager: CLIENT: VOLDPW

Client:

Date and Initials of person:
Examining contents:_____
Label:_____
Deliver:_____
pH:_____

Thermometer Used: T-338 Date: 9/18/18 Time: 1640 Initials: NKB

State of Origin: _____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	4.2 (Visual)	0 (Correction Factor)	4.2 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other_____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other_____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** ☑ Wet Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other_____

Samples shorted to lab (If Yes, complete) Shorted Date:_____ Shorted Time:_____ Qty:_____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☐ No ☑ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☑ Yes ☐ No ☐ N/A	Preservation Information: Preservative:_____ Lot #/Trace #:_____ Date:_____ Time:_____ Initials:_____
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A	
Headspace in VOA Vials? (>6mm):	☑ Yes ☐ No ☐ N/A	
Trip Blank Present:	☑ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments):
Headspace in 2/3 vials for sample 005
Headspace in 1/3 vials for samples 006, 008

Project Manager Review: _____ Date: _____

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF B-5 REMEDIATION
WELL NO:	TMW1A	SAMPLE ID:	TMW1A
DATE:	9-18-18		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	33 feet to 80 feet	STATIC DEPTH TO WATER (feet):	3.31	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)
= (37.86 feet – 3.31 feet) X 0.16 gallons/foot = 4.9784 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	11	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	11	PURGING INITIATED AT:	11:50	PURGING ENDED AT:	12:50	TOTAL VOLUME PURGED (gallons):	7.50

TIME (EST)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
12:30	5.0	5.0	.125	9.74	6.48	25.1	2205	.88	11.38	yellow	Sulfur
12:40	1.25	6.25	.125	9.74	6.52	25.1	2221	.82	17.73	/	/
12:50	1.25	7.50	.125	9.74	6.52	25.11	2238	.87	19.21		/

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	BRUCE Foster	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	12:50	SAMPLING ENDED AT:	12:58
PUMP OR TUBING DEPTH IN WELL (feet):	11	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.57	NH3, NO3, SO4	APP	4400
	1	PE	250	HNO3			METALS 6010	/	/
	3	CG	40	HCl			8260	/	/
	2	CG	40	ICE			DISSOLVED GAS	/	/
	2	CG	40	ICE			CPB & DBCP 504	/	

REMARKS: ORP -85.6 -99.4 -104.3

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County	SITE LOCATION: Tomoka LF B5 Remediation	
WELL NO: TMW-1B	SAMPLE ID: TMW-1B	DATE: 7-12-18

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 44 feet to 57 feet	STATIC DEPTH TO WATER (feet): 9.48	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)

= (44.57 feet – 9.48 feet) X 0.16 gallons/foot = 5.6144 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): 16	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 16	PURGING INITIATED AT: 1300	PURGING ENDED AT: 1409	TOTAL VOLUME PURGED (gallons): 8.625

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1345	5.625	5.625	.125	14.92	6.96	25.7	1320	0.71	2.90	yellow	Sulfur
~~1402~~											
~~1410~~											
1357	1.5	7.125	.125	14.92	6.44	25.3	1321	0.70	3.16	1	1
1409	1.5	8.625	.125	14.92	6.45	25.3	1321	0.71	2.70		

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

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Bruce Foster	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1409	SAMPLING ENDED AT: 1415
PUMP OR TUBING DEPTH IN WELL (feet): 16	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	Ice		6.45	Alk, NO3 SO4 Cl	APP	400
	1	PE	250	HNO3			METALS 6010		
	3	CG	40	HCl			8260		
	2	CG	40	Ice			Dissolved Gases		
	2	CG	40	Ice			EDC + DBCP 8011		

REMARKS: ORP -68.3 -67.1 -76.4

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

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County Solid Waste		SITE LOCATION: Tomoka LF BS Remediation	
WELL NO: EO	SAMPLE ID: EO		DATE: 9-18-18

PURGING DATA

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: ~~10~~	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DAVID ICE / PACE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0940	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE			ALKA, m3, m2, SM	APP	200
	1	1	1	HNO3			MKTAL 6010		
	2 ✓	GG	40	ICE			EDB 8011		
	2	1	1	HCl			Aldrin Cmpds		
	3	1	1	HCl			8260 Full List		

REMARKS:

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County Solid Waste	SITE LOCATION:	Tomoka LF B5 Remediation	
WELL NO:	TMW 2B	SAMPLE ID:	TMW 2B	DATE: 9-18-18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): ~~5.92~~ 8.71	PURGE PUMP TYPE OR BAILER:
2	1/4			PP

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

= (14.45 feet – 8.71 feet) X 0.16 gallons/foot = 5.7184 gallons

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
17	17	1015	1143	8.80

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1113	5.80	5.80	.10	16.34	6.57	24.5	1812	0.15	2.62	Yellow	SULFUR
1128	1.50	7.30	.10	16.34	6.57	24.2	1811	0.13	1.86	"	"
1143	1.50	8.80	.10	16.34	6.57	24.4	1811	0.11	1.50	"	"

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DAVID ICE / POCK		1143	1147

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.57	Alk, NO3, Cl, SO4	APP	< 400
	1	1	1	HNO3		< 2	Metals 6010	"	"
	2	CG	40	ICE		6.57	TDB, BRP 8011	"	"
	2	"	"	HCL		< 2	Dissolved Gases	"	"
	3	"	"	HCL		< 2	8260 Full List	"	"

REMARKS: ORP -40.3

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

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County Solid Waste	SITE LOCATION:	Tomoka LF B5 Remediation
WELL NO:	TMW 2A	SAMPLE ID:	TMW-2A / Duplicate
		DATE:	9-18-18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4		3.64	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (34.45 feet – 3.64 feet) X 0.16 gallons/foot = 4.9296 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8	8	1202	1241	7.80

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1227	5.00	5.00	0.20	7.02	6.69	24.1	1777	0.05	4.09	Yellow	Sulfur
1234	1.40	6.40	0.20	7.02	6.20	23.9	1794	0.05	2.52	1	1
1241	1.40	7.80	0.20	7.02	6.71	24.0	1808	0.05	3.25	1	1

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DAVID ICE / PACE		1241	1248

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.71	ALK, MCAS, Cl, SO4	APP	200
	1	1	500	HNO3		<2	METALS 6010		
	2	CG	40	ICE		6.71	EPA 8011		
	2			HCl		<2	Dissolved Gases		
	3			HCl		<2	8260 Full List		

REMARKS: ORP -77.2 ORP -78.8 ORP -81.5

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County Solid Waste	SITE LOCATION:	Tomoka LF BS Remediation
WELL NO:	TMW 3A	SAMPLE ID:	~~DUP TMW 3A~~ TMW 3A
DATE:	9-13-18		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4		4.56	PP

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

= (34.60 feet – 4.56 feet) X 0.16 gallons/foot = 4.8064 gallons

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
7	7	1305	1338	>9.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1326	5.04	5.04	0.24	5.77	~~6.40~~ 6.43	24.3	1727	0.12	3.14	Yellow	Sulfur
1332	1.44	6.48	0.24	5.77	6.42	24.2	1727	0.12	2.46	/	/
1338	1.44	7.92	0.24	5.77	6.43	24.2	1721	0.09	1.61	/	/

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DAVID ICE / ARS		1338	1344

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.43	ALK, M3, Cl, SO4	APP	400
	1	1	1	HNO3		<2	METALS 6010	/	/
	2	CO	40	ICE		6.43	EPA 524.2	/	/
	2	/	/	HCl		<2	Dissolved Gases	/	/
	3	/	/	HCl		<2	8260 Full List	/	/

REMARKS: ORP -48.4 ORP -48.6 ORP -48.7

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

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County Solid Waste		SITE LOCATION: Tomoka LF BS Remediation	
WELL NO: TMW 3B	SAMPLE ID: TMW 3B		DATE: 9-18-18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	1/4		2.38	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (44.05 feet – 2.38 feet) X 0.16 gallons/foot = 6.6672 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1354	PURGING ENDED AT: 1438	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1438			0.03	23.	6.70	25.3	1741	4.34	142.	Yellow	Sl Fox

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1438	SAMPLING ENDED AT: 1448
DAVID ICE / PBE			

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.70	Alk, NO3, Cl, SO4	APP	≤400
	1	1	500	HNO3		<2	MMBL 6010	|	|
	2	CG	40	ICE		6.70	COD 8011	|	|
	2	|	|	HCl		<2	Dissolved Gases	|	|
	3	|	|	HCl		<2	8260 Full List	|	|

REMARKS: ORP -62.9 WELL PURGING OUT AT 0.03 Pump will not pull SAMPLE AT DEPTH SUBMERSIBLE pump will not FIT WELL, PROBLEM WITH WELL Took SAMPLE

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

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

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

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

Monitor Well Water Level
Field Data

Landfill: TOMOKA B-5 STUDY

Date: 9/17/2018

Measured By: BF

Data

	Well No.	Depth to Water (ft.)TOC	Total Well Depth(ft.)TOC
Water level only	**B5**	**4.01**	**25.60**
B5 Remediation	**B5-28**	**2.68**	**29.40**
Water level only	**B5-30B**	**2.29**	**30.20**
Water level only	**B5-32**	**1.74**	**12.13**
	B5-35	**2.55**	**11.31**
	B5-37A	**2.11**	**11.65**
	B5-37B	**1.81**	**28.75**
	B37-1	**0.19**	**37.80**
	B37-3	**3.92**	**37.22**
	B37-6	**5.94**	**39.80**
	B37-8	**4.92**	**37.04**
	B37-13	**4.91**	**37.70**
Water level only	**B5-41B**	**5.67**	**34.15**
B5 Remediation	**MW100-6**	**8.77**	**52.95**
B5 Remediation	**TMW-1A**	**3.36**	**33.80**
B5 Remediation	**TMW-1B**	**8.34**	**44.57**
B5 Remediation	**TMW-2A**	**3.63**	**34.45**
B5 Remediation	**TMW-2B**	**8.61**	**44.45**
B5 Remediation	**TMW-3A**	**4.55**	**34.60**
B5 Remediation	**TMW-3B**	**2.6**	**44.05**
B5 Remediation	**TMW-4B**	**7.32**	**47.80**
B5 Remediation	**TMW-5B**	**5.8**	**47.75**

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

October 03, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C

REPORT OF LABORATORY ANALYSIS

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Ormond Beach Certification IDs

Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35418730001	**EQ Blank 9/19/18 A**	Water	09/19/18 08:43	09/19/18 17:10
35418730002	**TMW-4B**	Water	09/19/18 09:54	09/19/18 17:10
35418730003	**TMW-5B**	Water	09/19/18 11:19	09/19/18 17:10
35418730004	**B5-28**	Water	09/19/18 12:11	09/19/18 17:10

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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35418730001	**EQ Blank 9/19/18 A**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418730002	**TMW-4B**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418730003	**TMW-5B**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35418730004	**B5-28**	RSK 175	AMC	3	PASI-M
		EPA 8011	MMB	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O

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SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418730001	**EQ Blank 9/19/18 A**					
SM 2320B	Carbon Dioxide, Free	2.7	mg/L		10/02/18 14:13	
35418730002	**TMW-4B**					
RSK 175	Ethane	53.2	ug/L	10.0	09/26/18 10:10	
RSK 175	Ethene	99.2	ug/L	10.0	09/26/18 10:10	
RSK 175	Methane	2680	ug/L	10.0	09/26/18 10:10	
	Field pH	6.22	Std. Units		09/19/18 09:54	
	Field Temperature	24.4	deg C		09/19/18 09:54	
	Field Specific Conductance	1343	umhos/cm		09/19/18 09:54	
	Oxygen, Dissolved	0.80	mg/L		09/19/18 09:54	
	REDOX	-61.2	mV		09/19/18 09:54	
	Turbidity	2.18	NTU		09/19/18 09:54	
	Depth to Water	7.34	feet		09/19/18 09:54	
EPA 6010	Sodium	142	mg/L	2.0	09/28/18 00:40	
EPA 8260	Benzene	0.88	ug/L	1.0	10/01/18 19:42	I
EPA 8260	1,1-Dichloroethene	27.6	ug/L	1.0	10/01/18 19:42	
EPA 8260	cis-1,2-Dichloroethene	1420	ug/L	50.0	10/02/18 12:12	
EPA 8260	trans-1,2-Dichloroethene	3.2	ug/L	1.0	10/01/18 19:42	
EPA 8260	Toluene	3.8	ug/L	1.0	10/01/18 19:42	
EPA 8260	Vinyl chloride	1880	ug/L	50.0	10/02/18 12:12	
SM 2320B	Carbon Dioxide, Free	103	mg/L		10/02/18 14:20	
EPA 300.0	Chloride	100	mg/L	10.0	09/30/18 01:49	
EPA 300.0	Sulfate	39.4	mg/L	10.0	09/30/18 01:49	
EPA 353.2	Nitrogen, Nitrate	0.050	mg/L	0.050	09/20/18 09:21	
35418730003	**TMW-5B**					
RSK 175	Ethane	61.5	ug/L	10.0	09/26/18 10:24	
RSK 175	Methane	6740	ug/L	10.0	09/26/18 10:24	
	Field pH	6.37	Std. Units		09/19/18 09:54	
	Field Temperature	24.6	deg C		09/19/18 09:54	
	Field Specific Conductance	1930	umhos/cm		09/19/18 09:54	
	Oxygen, Dissolved	0.63	mg/L		09/19/18 09:54	
	REDOX	-101.8	mV		09/19/18 09:54	
	Turbidity	1.27	NTU		09/19/18 09:54	
	Depth to Water	5.80	feet		09/19/18 09:54	
EPA 6010	Sodium	104	mg/L	2.0	09/28/18 00:44	
EPA 8260	Benzene	2.2	ug/L	1.0	10/02/18 17:31	
EPA 8260	Chlorobenzene	6.7	ug/L	1.0	10/02/18 17:31	
EPA 8260	cis-1,2-Dichloroethene	1.8	ug/L	1.0	10/02/18 17:31	
EPA 8260	Vinyl chloride	5.7	ug/L	1.0	10/02/18 17:31	
SM 2320B	Carbon Dioxide, Free	145	mg/L		10/02/18 14:29	
EPA 300.0	Chloride	96.8	mg/L	25.0	09/30/18 02:11	
EPA 353.2	Nitrogen, Nitrate	0.035	mg/L	0.050	09/20/18 09:23	I
35418730004	**B5-28**					
RSK 175	Ethane	31.6	ug/L	10.0	09/26/18 10:31	
RSK 175	Methane	2220	ug/L	10.0	09/26/18 10:31	
	Field pH	6.41	Std. Units		09/19/18 12:11	
	Field Temperature	24.5	deg C		09/19/18 12:11	

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SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35418730004	**B5-28**					
	Field Specific Conductance	1563	umhos/cm		09/19/18 12:11	
	Oxygen, Dissolved	0.47	mg/L		09/19/18 12:11	
	REDOX	-94.4	mV		09/19/18 12:11	
	Turbidity	1.89	NTU		09/19/18 12:11	
	Depth to Water	2.53	feet		09/19/18 12:11	
EPA 6010	Sodium	70.8	mg/L	2.0	09/28/18 00:48	
EPA 8260	Benzene	0.38	ug/L	1.0	10/01/18 20:30	I
EPA 8260	Chlorobenzene	1.6	ug/L	1.0	10/01/18 20:30	
EPA 8260	Chloroethane	1.2	ug/L	10.0	10/01/18 20:30	I
EPA 8260	cis-1,2-Dichloroethene	2.3	ug/L	1.0	10/01/18 20:30	
EPA 8260	Vinyl chloride	6.6	ug/L	1.0	10/01/18 20:30	
SM 2320B	Carbon Dioxide, Free	105	mg/L		10/02/18 14:38	
EPA 300.0	Chloride	47.0	mg/L	5.0	09/30/18 12:01	
EPA 353.2	Nitrogen, Nitrate	0.088	mg/L	0.050	09/20/18 09:24	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: EQ Blank 9/19/18 A **Lab ID: 35418730001** Collected: 09/19/18 08:43 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**3.0 U**	ug/L	10.0	3.0	1		09/26/18 10:02	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/26/18 10:02	74-85-1	
Methane	**4.9 U**	ug/L	10.0	4.9	1		09/26/18 10:02	74-82-8	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 09:44	09/21/18 03:34	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 09:44	09/21/18 03:34	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**0.27 U**	mg/L	2.0	0.27	1	09/26/18 21:53	09/28/18 00:17	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/01/18 18:30	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/01/18 18:30	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/01/18 18:30	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/01/18 18:30	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/01/18 18:30	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 18:30	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/01/18 18:30	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/01/18 18:30	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/01/18 18:30	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 18:30	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 18:30	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 18:30	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/01/18 18:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:30	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	630-20-6	

REPORT OF LABORATORY ANALYSIS

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Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: EQ Blank 9/19/18 A **Lab ID: 35418730001** Collected: 09/19/18 08:43 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/01/18 18:30	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/01/18 18:30	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/01/18 18:30	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:30	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/01/18 18:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		10/01/18 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/01/18 18:30	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/01/18 18:30	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**2.7**	mg/L			1		10/02/18 14:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 01:26	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 01:26	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 U**	mg/L	0.050	0.025	1		09/20/18 08:29	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: TMW-4B **Lab ID: 35418730002** Collected: 09/19/18 09:54 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**53.2**	ug/L	10.0	3.0	1		09/26/18 10:10	74-84-0	
Ethene	**99.2**	ug/L	10.0	2.9	1		09/26/18 10:10	74-85-1	
Methane	**2680**	ug/L	10.0	4.9	1		09/26/18 10:10	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.22**	Std. Units			1		09/19/18 09:54		
Field Temperature	**24.4**	deg C			1		09/19/18 09:54		
Field Specific Conductance	**1343**	umhos/cm			1		09/19/18 09:54		
Oxygen, Dissolved	**0.80**	mg/L			1		09/19/18 09:54	7782-44-7	
REDOX	**-61.2**	mV			1		09/19/18 09:54		
Turbidity	**2.18**	NTU			1		09/19/18 09:54		
Depth to Water	**7.34**	feet			1		09/19/18 09:54		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 09:44	09/21/18 03:48	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 09:44	09/21/18 03:48	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**142**	mg/L	2.0	0.27	1	09/26/18 21:53	09/28/18 00:40	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/01/18 19:42	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	107-13-1	
Benzene	**0.88 I**	ug/L	1.0	0.10	1		10/01/18 19:42	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/01/18 19:42	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/01/18 19:42	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/01/18 19:42	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 19:42	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/01/18 19:42	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/01/18 19:42	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/01/18 19:42	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	107-06-2	
1,1-Dichloroethene	**27.6**	ug/L	1.0	0.50	1		10/01/18 19:42	75-35-4	
cis-1,2-Dichloroethene	**1420**	ug/L	50.0	25.0	50		10/02/18 12:12	156-59-2	
trans-1,2-Dichloroethene	**3.2**	ug/L	1.0	0.50	1		10/01/18 19:42	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: TMW-4B **Lab ID: 35418730002** Collected: 09/19/18 09:54 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 19:42	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 19:42	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 19:42	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/01/18 19:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:42	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/01/18 19:42	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	127-18-4	
Toluene	**3.8**	ug/L	1.0	0.50	1		10/01/18 19:42	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:42	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/01/18 19:42	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/01/18 19:42	108-05-4	
Vinyl chloride	**1880**	ug/L	50.0	25.0	50		10/02/18 12:12	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/01/18 19:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		10/01/18 19:42	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/01/18 19:42	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		10/01/18 19:42	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**103**	mg/L			1		10/02/18 14:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**100**	mg/L	10.0	5.0	2		09/30/18 01:49	16887-00-6	
Sulfate	**39.4**	mg/L	10.0	5.0	2		09/30/18 01:49	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.050**	mg/L	0.050	0.025	1		09/20/18 09:21	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: TMW-5B **Lab ID: 35418730003** Collected: 09/19/18 11:19 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**61.5**	ug/L	10.0	3.0	1		09/26/18 10:24	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/26/18 10:24	74-85-1	
Methane	**6740**	ug/L	10.0	4.9	1		09/26/18 10:24	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.37**	Std. Units			1		09/19/18 09:54		
Field Temperature	**24.6**	deg C			1		09/19/18 09:54		
Field Specific Conductance	**1930**	umhos/cm			1		09/19/18 09:54		
Oxygen, Dissolved	**0.63**	mg/L			1		09/19/18 09:54	7782-44-7	
REDOX	**-101.8**	mV			1		09/19/18 09:54		
Turbidity	**1.27**	NTU			1		09/19/18 09:54		
Depth to Water	**5.80**	feet			1		09/19/18 09:54		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 09:44	09/21/18 04:03	96-12-8	
1,2-Dibromoethane (EDB)	**0.0072 U**	ug/L	0.0096	0.0072	1	09/20/18 09:44	09/21/18 04:03	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**104**	mg/L	2.0	0.27	1	09/26/18 21:53	09/28/18 00:44	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/02/18 17:31	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	107-13-1	
Benzene	**2.2**	ug/L	1.0	0.10	1		10/02/18 17:31	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/02/18 17:31	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/02/18 17:31	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/02/18 17:31	56-23-5	
Chlorobenzene	**6.7**	ug/L	1.0	0.50	1		10/02/18 17:31	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/02/18 17:31	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/02/18 17:31	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/02/18 17:31	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/02/18 17:31	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	75-35-4	
cis-1,2-Dichloroethene	**1.8**	ug/L	1.0	0.50	1		10/02/18 17:31	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: TMW-5B **Lab ID: 35418730003** Collected: 09/19/18 11:19 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/02/18 17:31	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/02/18 17:31	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/02/18 17:31	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/02/18 17:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:31	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/02/18 17:31	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:31	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/02/18 17:31	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/02/18 17:31	108-05-4	
Vinyl chloride	**5.7**	ug/L	1.0	0.50	1		10/02/18 17:31	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/02/18 17:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/02/18 17:31	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/02/18 17:31	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/02/18 17:31	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**145**	mg/L			1		10/02/18 14:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**96.8**	mg/L	25.0	12.5	5		09/30/18 02:11	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 11:39	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.035 I**	mg/L	0.050	0.025	1		09/20/18 09:23	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: B5-28 **Lab ID: 35418730004** Collected: 09/19/18 12:11 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**31.6**	ug/L	10.0	3.0	1		09/26/18 10:31	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/26/18 10:31	74-85-1	
Methane	**2220**	ug/L	10.0	4.9	1		09/26/18 10:31	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.41**	Std. Units			1		09/19/18 12:11		
Field Temperature	**24.5**	deg C			1		09/19/18 12:11		
Field Specific Conductance	**1563**	umhos/cm			1		09/19/18 12:11		
Oxygen, Dissolved	**0.47**	mg/L			1		09/19/18 12:11	7782-44-7	
REDOX	**-94.4**	mV			1		09/19/18 12:11		
Turbidity	**1.89**	NTU			1		09/19/18 12:11		
Depth to Water	**2.53**	feet			1		09/19/18 12:11		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/20/18 09:44	09/21/18 04:19	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/20/18 09:44	09/21/18 04:19	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**70.8**	mg/L	2.0	0.27	1	09/26/18 21:53	09/28/18 00:48	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/01/18 20:30	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	107-13-1	
Benzene	**0.38 I**	ug/L	1.0	0.10	1		10/01/18 20:30	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/01/18 20:30	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/01/18 20:30	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/01/18 20:30	56-23-5	
Chlorobenzene	**1.6**	ug/L	1.0	0.50	1		10/01/18 20:30	108-90-7	
Chloroethane	**1.2 I**	ug/L	10.0	0.50	1		10/01/18 20:30	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/01/18 20:30	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/01/18 20:30	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/01/18 20:30	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	75-35-4	
cis-1,2-Dichloroethene	**2.3**	ug/L	1.0	0.50	1		10/01/18 20:30	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Sample: B5-28 **Lab ID: 35418730004** Collected: 09/19/18 12:11 Received: 09/19/18 17:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 20:30	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 20:30	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 20:30	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/01/18 20:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 20:30	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/01/18 20:30	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 20:30	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/01/18 20:30	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/01/18 20:30	108-05-4	
Vinyl chloride	**6.6**	ug/L	1.0	0.50	1		10/01/18 20:30	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/01/18 20:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/01/18 20:30	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/01/18 20:30	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/01/18 20:30	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**105**	mg/L			1		10/02/18 14:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**47.0**	mg/L	5.0	2.5	1		09/30/18 12:01	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 12:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.088**	mg/L	0.050	0.025	1		09/20/18 09:24	14797-55-8	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 565332 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

METHOD BLANK: 3067770 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	3.0 U	10.0	3.0	09/26/18 09:38	
Ethene	ug/L	2.9 U	10.0	2.9	09/26/18 09:38	
Methane	ug/L	4.9 U	10.0	4.9	09/26/18 09:38	

LABORATORY CONTROL SAMPLE & LCSD: 3067771 3067772

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	115	115	101	101	85-115	0	20	
Ethene	ug/L	106	109	109	103	102	85-115	1	20	
Methane	ug/L	60.7	62.1	62.1	102	102	85-115	0	20	

SAMPLE DUPLICATE: 3068211

Parameter	Units	35418730002 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.2	63.6	18	20	
Ethene	ug/L	99.2	117	17	20	
Methane	ug/L	2680	3270	20	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 480915 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

METHOD BLANK: 2603686 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sodium	mg/L	0.27 U	2.0	0.27	09/28/18 00:09	

LABORATORY CONTROL SAMPLE: 2603687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	12.5	13.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2603688 2603689

Parameter	Units	35418730001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sodium	mg/L	0.27 U	12.5	12.5	13.3	13.0	106	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 481942 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418730001, 35418730002, 35418730004

METHOD BLANK: 2608519 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	10/01/18 11:37	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	10/01/18 11:37	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
2-Hexanone	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Acetone	ug/L	10.0 U	20.0	10.0	10/01/18 11:37	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Benzene	ug/L	0.10 U	1.0	0.10	10/01/18 11:37	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	10/01/18 11:37	
Bromoform	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Bromomethane	ug/L	0.50 U	5.0	0.50	10/01/18 11:37	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	10/01/18 11:37	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Chloroethane	ug/L	0.50 U	10.0	0.50	10/01/18 11:37	
Chloroform	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Chloromethane	ug/L	0.62 U	1.0	0.62	10/01/18 11:37	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/01/18 11:37	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	10/01/18 11:37	
Dibromomethane	ug/L	0.50 U	2.0	0.50	10/01/18 11:37	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Iodomethane	ug/L	0.50 U	10.0	0.50	10/01/18 11:37	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	10/01/18 11:37	
Styrene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Toluene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/01/18 11:37	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Trichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

METHOD BLANK: 2608519 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	10/01/18 11:37	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Xylene (Total)	ug/L	1.0 U	3.0	1.0	10/01/18 11:37	
1,2-Dichloroethane-d4 (S)	%	89	70-130		10/01/18 11:37	
4-Bromofluorobenzene (S)	%	107	70-130		10/01/18 11:37	
Toluene-d8 (S)	%	96	70-130		10/01/18 11:37	

LABORATORY CONTROL SAMPLE: 2608520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.7	114	70-130	
1,1,1-Trichloroethane	ug/L	20	19.6	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	21.7	109	68-125	
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	
1,1-Dichloroethene	ug/L	20	16.9	85	66-133	
1,2,3-Trichloropropane	ug/L	20	22.0	110	62-127	
1,2-Dichlorobenzene	ug/L	20	21.6	108	70-130	
1,2-Dichloroethane	ug/L	20	17.0	85	70-130	
1,2-Dichloropropane	ug/L	20	20.4	102	70-130	
1,4-Dichlorobenzene	ug/L	20	21.3	107	70-130	
2-Butanone (MEK)	ug/L	40	36.2	90	47-143	
2-Hexanone	ug/L	40	43.6	109	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	39.9	100	57-132	
Acetone	ug/L	40	39.8	100	46-148	
Acrylonitrile	ug/L	200	206	103	60-143	
Benzene	ug/L	20	20.8	104	70-130	
Bromochloromethane	ug/L	20	21.7	109	70-130	
Bromodichloromethane	ug/L	20	19.5	97	70-130	
Bromoform	ug/L	20	21.0	105	49-126	
Bromomethane	ug/L	20	7.5	37	10-165	
Carbon disulfide	ug/L	20	16.4	82	60-141	
Carbon tetrachloride	ug/L	20	19.3	97	63-126	
Chlorobenzene	ug/L	20	22.2	111	70-130	
Chloroethane	ug/L	20	18.7	94	71-142	
Chloroform	ug/L	20	19.7	98	70-130	
Chloromethane	ug/L	20	16.8	84	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	70-130	
cis-1,3-Dichloropropene	ug/L	20	21.4	107	70-130	
Dibromochloromethane	ug/L	20	21.1	106	62-118	
Dibromomethane	ug/L	20	22.6	113	70-130	
Ethylbenzene	ug/L	20	21.6	108	70-130	
Iodomethane	ug/L	40	4.3 I	11	10-164	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

LABORATORY CONTROL SAMPLE: 2608520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	17.9	89	65-136	
Styrene	ug/L	20	22.5	112	70-130	
Tetrachloroethene	ug/L	20	22.7	113	64-134	
Toluene	ug/L	20	22.0	110	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	68-127	
trans-1,3-Dichloropropene	ug/L	20	22.4	112	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	20.8	104	42-129	
Trichloroethene	ug/L	20	20.6	103	70-130	
Trichlorofluoromethane	ug/L	20	16.3	82	65-135	
Vinyl acetate	ug/L	20	19.0	95	60-144	
Vinyl chloride	ug/L	20	17.9	89	68-131	
Xylene (Total)	ug/L	60	66.2	110	70-130	
1,2-Dichloroethane-d4 (S)	%			89	70-130	
4-Bromofluorobenzene (S)	%			109	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 2608530

Parameter	Units	35420124005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	18.2	91	70-130	
1,1,1-Trichloroethane	ug/L	0.50 U	20	17.2	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	19.0	95	68-125	
1,1,2-Trichloroethane	ug/L	0.50 U	20	18.5	93	70-130	
1,1-Dichloroethane	ug/L	0.50 U	20	17.1	86	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	15.4	77	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	19.4	97	62-127	
1,2-Dichlorobenzene	ug/L	0.50 U	20	18.1	90	70-130	
1,2-Dichloroethane	ug/L	0.50 U	20	14.8	74	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	17.2	86	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	18.0	90	70-130	
2-Butanone (MEK)	ug/L	5.0 U	40	41.4	103	47-143	
2-Hexanone	ug/L	5.0 U	40	43.2	108	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	44.7	112	57-132	
Acetone	ug/L	10.0 U	40	43.7	109	46-148	
Acrylonitrile	ug/L	5.0 U	200	197	98	60-143	
Benzene	ug/L	0.10 U	20	17.6	88	70-130	
Bromochloromethane	ug/L	0.50 U	20	17.4	87	70-130	
Bromodichloromethane	ug/L	0.27 U	20	16.4	82	70-130	
Bromoform	ug/L	0.50 U	20	17.2	86	49-126	
Bromomethane	ug/L	0.50 U	20	7.4	37	10-165	
Carbon disulfide	ug/L	5.0 U	20	18.9	94	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	17.1	86	63-126	
Chlorobenzene	ug/L	0.50 U	20	18.0	90	70-130	
Chloroethane	ug/L	0.50 U	20	20.0	100	71-142	
Chloroform	ug/L	0.50 U	20	16.6	83	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

MATRIX SPIKE SAMPLE: 2608530

Parameter	Units	35420124005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	0.62 U	20	17.2	86	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	16.8	84	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	17.4	87	70-130	
Dibromochloromethane	ug/L	0.26 U	20	17.1	85	62-118	
Dibromomethane	ug/L	0.50 U	20	17.9	90	70-130	
Ethylbenzene	ug/L	0.50 U	20	17.9	90	70-130	
Iodomethane	ug/L	0.50 U	40	2.8 I	7	10-164	J(M1)
Methylene Chloride	ug/L	2.5 U	20	15.0	75	65-136	
Styrene	ug/L	0.50 U	20	17.9	89	70-130	
Tetrachloroethene	ug/L	0.50 U	20	18.1	91	64-134	
Toluene	ug/L	0.50 U	20	18.1	91	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	17.3	86	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	18.5	93	65-121	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	24.8	124	42-129	
Trichloroethene	ug/L	0.50 U	20	17.2	86	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	19.1	95	65-135	
Vinyl acetate	ug/L	1.0 U	20	21.3	106	60-144	
Vinyl chloride	ug/L	0.50 U	20	19.6	98	68-131	
Xylene (Total)	ug/L	1.0 U	60	53.8	90	70-130	
1,2-Dichloroethane-d4 (S)	%				93	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 2608529

Parameter	Units	35420124004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

SAMPLE DUPLICATE: 2608529

Parameter	Units	35420124004 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.0 U	1.0 U		40	
1,2-Dichloroethane-d4 (S)	%	87	89	2	40	
4-Bromofluorobenzene (S)	%	105	105	1	40	
Toluene-d8 (S)	%	96	96	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 482254 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35418730003

METHOD BLANK: 2609993 Matrix: Water
Associated Lab Samples: 35418730003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	10/02/18 12:19	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	10/02/18 12:19	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
2-Hexanone	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Acetone	ug/L	10.0 U	20.0	10.0	10/02/18 12:19	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Benzene	ug/L	0.10 U	1.0	0.10	10/02/18 12:19	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	10/02/18 12:19	
Bromoform	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Bromomethane	ug/L	0.50 U	5.0	0.50	10/02/18 12:19	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	10/02/18 12:19	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Chloroethane	ug/L	0.50 U	10.0	0.50	10/02/18 12:19	
Chloroform	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Chloromethane	ug/L	0.62 U	1.0	0.62	10/02/18 12:19	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/02/18 12:19	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	10/02/18 12:19	
Dibromomethane	ug/L	0.50 U	2.0	0.50	10/02/18 12:19	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Iodomethane	ug/L	0.50 U	10.0	0.50	10/02/18 12:19	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	10/02/18 12:19	
Styrene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Toluene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/02/18 12:19	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Trichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

METHOD BLANK: 2609993 Matrix: Water
Associated Lab Samples: 35418730003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	10/02/18 12:19	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Xylene (Total)	ug/L	1.0 U	3.0	1.0	10/02/18 12:19	
1,2-Dichloroethane-d4 (S)	%	100	70-130		10/02/18 12:19	
4-Bromofluorobenzene (S)	%	98	70-130		10/02/18 12:19	
Toluene-d8 (S)	%	100	70-130		10/02/18 12:19	

LABORATORY CONTROL SAMPLE: 2609994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.4	102	70-130	
1,1,1-Trichloroethane	ug/L	20	19.7	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	68-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	70-130	
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	
1,1-Dichloroethene	ug/L	20	17.1	86	66-133	
1,2,3-Trichloropropane	ug/L	20	19.7	98	62-127	
1,2-Dichlorobenzene	ug/L	20	19.5	98	70-130	
1,2-Dichloroethane	ug/L	20	17.7	89	70-130	
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	
1,4-Dichlorobenzene	ug/L	20	19.2	96	70-130	
2-Butanone (MEK)	ug/L	40	35.2	88	47-143	
2-Hexanone	ug/L	40	37.3	93	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.6	92	57-132	
Acetone	ug/L	40	39.9	100	46-148	
Acrylonitrile	ug/L	200	194	97	60-143	
Benzene	ug/L	20	19.8	99	70-130	
Bromochloromethane	ug/L	20	19.3	97	70-130	
Bromodichloromethane	ug/L	20	19.2	96	70-130	
Bromoform	ug/L	20	18.7	94	49-126	
Bromomethane	ug/L	20	29.1	145	10-165	
Carbon disulfide	ug/L	20	17.6	88	60-141	
Carbon tetrachloride	ug/L	20	19.6	98	63-126	
Chlorobenzene	ug/L	20	19.4	97	70-130	
Chloroethane	ug/L	20	19.7	98	71-142	
Chloroform	ug/L	20	19.5	98	70-130	
Chloromethane	ug/L	20	24.0	120	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	70-130	
cis-1,3-Dichloropropene	ug/L	20	20.4	102	70-130	
Dibromochloromethane	ug/L	20	19.1	95	62-118	
Dibromomethane	ug/L	20	20.0	100	70-130	
Ethylbenzene	ug/L	20	19.5	98	70-130	
Iodomethane	ug/L	40	32.5	81	10-164	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

LABORATORY CONTROL SAMPLE: 2609994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	19.2	96	65-136	
Styrene	ug/L	20	20.0	100	70-130	
Tetrachloroethene	ug/L	20	19.7	98	64-134	
Toluene	ug/L	20	19.9	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	68-127	
trans-1,3-Dichloropropene	ug/L	20	20.8	104	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	20.6	103	42-129	
Trichloroethene	ug/L	20	19.1	96	70-130	
Trichlorofluoromethane	ug/L	20	17.6	88	65-135	
Vinyl acetate	ug/L	20	20.9	104	60-144	
Vinyl chloride	ug/L	20	21.1	105	68-131	
Xylene (Total)	ug/L	60	60.7	101	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 2611141

Parameter	Units	2084377002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.6	108	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	24.0	120	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.2	106	68-125	
1,1,2-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.2	111	70-130	
1,1-Dichloroethene	ug/L	ND	20	19.1	96	66-133	
1,2,3-Trichloropropane	ug/L	ND	20	20.4	102	62-127	
1,2-Dichlorobenzene	ug/L	ND	20	21.0	105	70-130	
1,2-Dichloroethane	ug/L	ND	20	21.8	108	70-130	
1,2-Dichloropropane	ug/L	ND	20	21.4	107	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.4	102	70-130	
2-Butanone (MEK)	ug/L	ND	40	39.2	98	47-143	
2-Hexanone	ug/L	ND	40	41.8	105	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.2	98	57-132	
Acetone	ug/L	ND	40	44.9	106	46-148	
Acrylonitrile	ug/L	ND	200	199	100	60-143	
Benzene	ug/L	ND	20	21.6	108	70-130	
Bromochloromethane	ug/L	ND	20	20.8	104	70-130	
Bromodichloromethane	ug/L	ND	20	21.9	109	70-130	
Bromoform	ug/L	ND	20	20.6	103	49-126	
Bromomethane	ug/L	ND	20	16.8	84	10-165	
Carbon disulfide	ug/L	ND	20	18.2	91	60-141	
Carbon tetrachloride	ug/L	ND	20	24.5	122	63-126	
Chlorobenzene	ug/L	ND	20	20.6	103	70-130	
Chloroethane	ug/L	ND	20	18.3	92	71-142	
Chloroform	ug/L	ND	20	22.0	108	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

MATRIX SPIKE SAMPLE: 2611141

Parameter	Units	2084377002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	ND	20	22.0	110	40-140	
cis-1,2-Dichloroethene	ug/L	ND	20	21.9	110	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	20.7	103	70-130	
Dibromochloromethane	ug/L	ND	20	20.5	103	62-118	
Dibromomethane	ug/L	ND	20	20.8	104	70-130	
Ethylbenzene	ug/L	ND	20	21.0	105	70-130	
Iodomethane	ug/L	ND	40	9.1 I	23	10-164	
Methylene Chloride	ug/L	ND	20	20.6	103	65-136	
Styrene	ug/L	ND	20	20.7	103	70-130	
Tetrachloroethene	ug/L	ND	20	20.4	102	64-134	
Toluene	ug/L	ND	20	21.1	105	70-130	
trans-1,2-Dichloroethene	ug/L	ND	20	20.1	101	68-127	
trans-1,3-Dichloropropene	ug/L	ND	20	22.1	111	65-121	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	22.9	114	42-129	
Trichloroethene	ug/L	ND	20	20.8	104	70-130	
Trichlorofluoromethane	ug/L	ND	20	21.4	107	65-135	
Vinyl acetate	ug/L	ND	20	20.9	105	60-144	
Vinyl chloride	ug/L	ND	20	20.3	102	68-131	
Xylene (Total)	ug/L	ND	60	64.6	108	70-130	
1,2-Dichloroethane-d4 (S)	%				115	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2611140

Parameter	Units	2084377001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50 U		40	
1,1,1-Trichloroethane	ug/L	ND	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	ND	0.12 U		40	
1,1,2-Trichloroethane	ug/L	ND	0.50 U		40	
1,1-Dichloroethane	ug/L	ND	0.50 U		40	
1,1-Dichloroethene	ug/L	ND	0.50 U		40	
1,2,3-Trichloropropane	ug/L	ND	0.59 U		40	
1,2-Dichlorobenzene	ug/L	ND	0.50 U		40	
1,2-Dichloroethane	ug/L	ND	0.50 U		40	
1,2-Dichloropropane	ug/L	ND	0.50 U		40	
1,4-Dichlorobenzene	ug/L	ND	0.50 U		40	
2-Butanone (MEK)	ug/L	ND	5.0 U		40	
2-Hexanone	ug/L	ND	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0 U		40	
Acetone	ug/L	ND	10.0 U		40	
Acrylonitrile	ug/L	ND	5.0 U		40	
Benzene	ug/L	ND	0.10 U		40	
Bromochloromethane	ug/L	ND	0.50 U		40	
Bromodichloromethane	ug/L	ND	0.27 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

SAMPLE DUPLICATE: 2611140

Parameter	Units	2084377001 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	ND	0.50 U		40	
Bromomethane	ug/L	ND	0.50 U		40	
Carbon disulfide	ug/L	ND	5.0 U		40	
Carbon tetrachloride	ug/L	ND	0.50 U		40	
Chlorobenzene	ug/L	ND	0.50 U		40	
Chloroethane	ug/L	ND	0.50 U		40	
Chloroform	ug/L	ND	0.50 U		40	
Chloromethane	ug/L	ND	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	ND	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	ND	0.25 U		40	
Dibromochloromethane	ug/L	ND	0.26 U		40	
Dibromomethane	ug/L	ND	0.50 U		40	
Ethylbenzene	ug/L	ND	0.50 U		40	
Iodomethane	ug/L	ND	0.50 U		40	
Methylene Chloride	ug/L	ND	2.5 U		40	
Styrene	ug/L	ND	0.50 U		40	
Tetrachloroethene	ug/L	ND	0.50 U		40	
Toluene	ug/L	ND	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	ND	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	ND	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	ND	5.0 U		40	
Trichloroethene	ug/L	ND	0.50 U		40	
Trichlorofluoromethane	ug/L	ND	0.50 U		40	
Vinyl acetate	ug/L	ND	1.0 U		40	
Vinyl chloride	ug/L	ND	0.50 U		40	
Xylene (Total)	ug/L	ND	1.0 U		40	
1,2-Dichloroethane-d4 (S)	%	102	105	2	40	
4-Bromofluorobenzene (S)	%	99	98	1	40	
Toluene-d8 (S)	%	100	100	0	40	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 478991 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

METHOD BLANK: 2594404 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	09/20/18 23:06	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	09/20/18 23:06	

LABORATORY CONTROL SAMPLE: 2594405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.23	91	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.23	90	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2594463 2594464

Parameter	Units	35418617005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0061 U	.44	.44	0.47	0.46	107	104	60-140	3	40	
1,2-Dibromoethane (EDB)	ug/L	0.0072 U	.44	.44	0.47	0.46	107	106	60-140	1	40	

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 482192 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

METHOD BLANK: 2609649 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon Dioxide, Free	mg/L	10.9			10/02/18 13:23	

SAMPLE DUPLICATE: 2609651

Parameter	Units	35419410002 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	7.8	8.2	5		

SAMPLE DUPLICATE: 2609652

Parameter	Units	35418905001 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	0.19	0.17	11		

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 481701 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

METHOD BLANK: 2607703 Matrix: Water
Associated Lab Samples: 35418730001, 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	09/29/18 17:19	
Sulfate	mg/L	2.5 U	5.0	2.5	09/29/18 17:19	

LABORATORY CONTROL SAMPLE: 2607704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Sulfate	mg/L	50	49.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2607856 2607857

Parameter	Units	35420554001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	165	100	100	274	270	110	106	90-110	1	20	L,Q
Sulfate	mg/L	26.4	50	50	78.2	79.2	104	106	90-110	1	20	Q

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2607858 2607859

Parameter	Units	35420364001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	34.2	50	50	88.6	88.7	109	109	90-110	0	20	
Sulfate	mg/L	5.8	50	50	54.9	55.0	98	98	90-110	0	20	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 478953 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 35418730001

METHOD BLANK: 2594272 Matrix: Water
Associated Lab Samples: 35418730001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.050	0.025	09/20/18 07:42	

SAMPLE DUPLICATE: 2594274

Parameter	Units	35418785001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.10	0.10	2	20	

SAMPLE DUPLICATE: 2594276

Parameter	Units	35418623001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.025 U		20	

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

QC Batch: 478954 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 35418730002, 35418730003, 35418730004

METHOD BLANK: 2594278 Matrix: Water
Associated Lab Samples: 35418730002, 35418730003, 35418730004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.050	0.025	09/20/18 08:47	

SAMPLE DUPLICATE: 2594280

Parameter	Units	35418558001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.025 U		20	

SAMPLE DUPLICATE: 2594282

Parameter	Units	35418647002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.025 U		20	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
L	Off-scale high. Actual value is known to be greater than value given.
Q	Sample held beyond the accepted holding time. Sample was received outside EPA method holding time.

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5 Remediation
Pace Project No.: 35418730

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35418730001	**EQ Blank 9/19/18 A**	RSK 175	565332		
35418730002	**TMW-4B**	RSK 175	565332		
35418730003	**TMW-5B**	RSK 175	565332		
35418730004	**B5-28**	RSK 175	565332		
35418730002	**TMW-4B**				
35418730003	**TMW-5B**				
35418730004	**B5-28**				
35418730001	**EQ Blank 9/19/18 A**	EPA 8011	478991	EPA 8011	479067
35418730002	**TMW-4B**	EPA 8011	478991	EPA 8011	479067
35418730003	**TMW-5B**	EPA 8011	478991	EPA 8011	479067
35418730004	**B5-28**	EPA 8011	478991	EPA 8011	479067
35418730001	**EQ Blank 9/19/18 A**	EPA 3010	480915	EPA 6010	480918
35418730002	**TMW-4B**	EPA 3010	480915	EPA 6010	480918
35418730003	**TMW-5B**	EPA 3010	480915	EPA 6010	480918
35418730004	**B5-28**	EPA 3010	480915	EPA 6010	480918
35418730001	**EQ Blank 9/19/18 A**	EPA 8260	481942		
35418730002	**TMW-4B**	EPA 8260	481942		
35418730003	**TMW-5B**	EPA 8260	482254		
35418730004	**B5-28**	EPA 8260	481942		
35418730001	**EQ Blank 9/19/18 A**	SM 2320B	482192		
35418730002	**TMW-4B**	SM 2320B	482192		
35418730003	**TMW-5B**	SM 2320B	482192		
35418730004	**B5-28**	SM 2320B	482192		
35418730001	**EQ Blank 9/19/18 A**	EPA 300.0	481701		
35418730002	**TMW-4B**	EPA 300.0	481701		
35418730003	**TMW-5B**	EPA 300.0	481701		
35418730004	**B5-28**	EPA 300.0	481701		
35418730001	**EQ Blank 9/19/18 A**	EPA 353.2	478953		
35418730002	**TMW-4B**	EPA 353.2	478954		
35418730003	**TMW-5B**	EPA 353.2	478954		
35418730004	**B5-28**	EPA 353.2	478954		

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WO#: 35418730

35418730

Pace Analytical
www.pacelabs.com

N-OF-CUSTODY / Analytical Request Document

in-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Volusia County Solid Waste Management
Address:	1990 Tomoka Farms Road
	Daytona Beach, FL 32124
Email:	
Phone:	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ms. Jennifer Stirk
Copy To:	
Purchase Order #:	
Project Name:	Tomoka LF B5 Remediation
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	jeff.baylor@pacelabs.com,
Pace Profile #:	1721

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 Full List	EDB and DBCP EPA 8011	Alkalinity/NO3/CL/SO4	Dissolved Gases (Methane,	Metals by 6010	Trip Blank DO NOT OPEN -	Residual Chlorine (Y/N)
1	EQ Blank					9-19-16	8:43												X	X	X	X	X		
2	TMW-4B						9:54																		
3	TMW-5B						11:19																		
4	B5-24						12:11																		
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] Pace	9/8/16	1600				
	Bruce Foster	9-19-16	1710	AS/Pace	9/19/16 1710		4
					1-19 T-346		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: BRUCE FOSTER

SIGNATURE of SAMPLER: [signature]

DATE Signed: 9-19-16

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 13	Document Revised: May 30, 2018 Issuing Authority: Pace Florida Quality Office

WO#: 35418730 (SCUR)

PM: JSB Due Date: 10/04/18

CLIENT: VOLDPW

Project #

Project Manager

Client:

Date and Initials of person:
Examining contents: TMM
Label: _____
Deliver: AP
pH: _____

Thermometer Used: T346 Date: 9/19/18 Time: 1710 Initials: AKP

State of Origin: _____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.8 (Visual)	+.1 (Correction Factor)	1.9 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other_____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other_____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other_____

Samples shorted to lab (If Yes, complete) Shorted Date:_____ Shorted Time:_____ Qty:_____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked. All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A ☑ Yes ☐ No ☐ N/A	Preservation Information: Preservative:_____ Lot #/Trace #:_____ Date:_____ Time:_____ Initials:_____
Headspace in VOA Vials? (>6mm):	☐ Yes ☒ No ☐ N/A	
Trip Blank Present:	☐ Yes ☒ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF B5 REMEDIATION
WELL NO:	EQ	SAMPLE ID:	~~MW-5B~~ EQ
DATE:	9-19-18		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: ~~57~~ feet to ~~75~~ feet	STATIC DEPTH TO WATER (feet):	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)
= (feet – feet) X gallons/foot = gallons

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

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
BRUCE FOSTER		8:43	8:50

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

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE			ALK, NO3 SO4 CL	PP	200
	1	PE	250	HNO3			METALS 6010		
	3	CG	40	HCl			8260		
	2	CG	40	ICE			D. Solved Gases		
	2	CG	40	ICE			EDC DBCP, 504		

REMARKS:

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

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

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA 2F B5 REMEDIATION
WELL NO:	TMW 4B	SAMPLE ID:	TMW 4D
		DATE:	9-19-18

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	47 feet to 8 feet	STATIC DEPTH TO WATER (feet):	7.34	PURGE PUMP TYPE OR BAILER:	BP

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

= (47.8 feet – 7.34 feet) X 0.16 gallons/foot = 6.4736 gallons

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	17	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	17	PURGING INITIATED AT:	9:00	PURGING ENDED AT:	9:54	TOTAL VOLUME PURGED (gallons):	9.72

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
9:36	6.48	6.48	180	15.52	6.26	24.6	1309	1.18	4.11	yellow	sulfur
9:45	1.62	~~7.629~~ 8.10	100	15.52	6.22	24.4	1339	0.93	1.82	/	/
9:54	1.62	9.72	.18	15.52	6.22	24.4	1343	0.80	2.18	/	/

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	BRUCE FOSTER	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	9:54	SAMPLING ENDED AT:	10:00
PUMP OR TUBING DEPTH IN WELL (feet):	17	TUBING MATERIAL CODE:	HDPE S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING	Y (N) (replaced)	DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.22	ALK NO3 SO4 Cl	APP	400
	1	PE	250	HNO3			METALS 6010	/	/
	3	CG	40	HCl			8260		
	2	CG	40	ICE			Dissolved Gases		
	2	CG	40	ICE			EDC DBCP 8011		

REMARKS:
ORP -45.1 -60.3 -61.2

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	Tomoka LF B5 Remediation
WELL NO:	Imw-5B	SAMPLE ID:	Imw-5B
DATE:	9-19-13		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	67 feet to 75 feet	STATIC DEPTH TO WATER (feet):	5.80	PURGE PUMP TYPE OR BAILER:	P

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

= (47.75 feet – 5.80 feet) X 0.16 gallons/foot = 6.712 gallons

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10	PURGING INITIATED AT:	10:05	PURGING ENDED AT:	11:19	TOTAL VOLUME PURGED (gallons):	10.08

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or %-saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:51	6.72	6.72	.12	8.77	6.48	24.5	1986	0.56	0.80	grey/brown	sulfur
11:05	1.68	8.40	.12	8.77	6.38	24.5	1930	0.65	1.57	"	"
11:19	1.68	10.08	.12	8.77	6.37	24.6	1930	0.63	1.27	"	"

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

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Bruce Fosyer	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	11:19	SAMPLING ENDED AT:	11:25
PUMP OR TUBING DEPTH IN WELL (feet):	10	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION:	PUMP Y (N)	TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.37	ALK NO3 SO4 Cl	APP	2000
	1	PE	250	HNO3			METALS 6010		
	3	CG	40	HCl			8260		
	2	CG	40	ICE			Dissolved Gases		
	2	CG	40	ICE			COC ABCP 8011		

REMARKS: ORP -112.9 -102.9 101.8

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	TOMOKA LF BS REMEDIATION
WELL NO:	BS-28	SAMPLE ID:	BS-28
DATE:	9-19-18		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	29 feet to 40 feet	STATIC DEPTH TO WATER (feet):	2.53	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)

= (29.40 feet − 2.53 feet) X 0.16 gallons/foot = 4.2992 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:	11:35	PURGING ENDED AT:	12:11	TOTAL VOLUME PURGED (gallons):	6.48

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:39	4.32	4.32	.18	4.65	6.41	24.6	1556	0.54	1.04	yellow	sulfur
12:05	1.08	5.40	.18	4.65	6.41	24.5	1561	0.51	1.59	1	1
12:11	1.08	6.48	.18	4.65	6.41	24.5	1563	0.49	1.89	1	1

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	BRUCE FOSTER	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	12:11	SAMPLING ENDED AT:	12:17
PUMP OR TUBING DEPTH IN WELL (feet):	6	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.41	~~TDS~~ ALK NO3 SO4	APP	<400
	1	PE	250	HNO3			METALS Gold		
	3	CG	40	HCL			8260		
	2	CG	40	ICE			Dissolved Gas		
	2	CG	40	ICE			EDB/DBCP 8011		

REMARKS: ORP − 95.3 −96.3 −99.9

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

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

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

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

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

October 03, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on September 20, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Ormond Beach Certification IDs

Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35419086001	**EQ Blank 9/20/18**	Water	09/20/18 09:35	09/20/18 16:00
35419086002	**MW 100-6**	Water	09/20/18 10:45	09/20/18 16:00
35419086003	**Trip Blank 9/20/18**	Water	09/20/18 00:00	09/20/18 16:00

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35419086001	**EQ Blank 9/20/18**	RSK 175	AMC	3	PASI-M
		EPA 8011	SMH	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35419086002	**MW 100-6**	RSK 175	AMC	3	PASI-M
		EPA 8011	SMH	2	PASI-O
		EPA 6010	SC1	1	PASI-O
		EPA 8260	BTN	48	PASI-O
		SM 2320B	AGS	1	PASI-O
		EPA 300.0	CMB	2	PASI-O
		EPA 353.2	JWH	1	PASI-O
35419086003	**Trip Blank 9/20/18**	EPA 8260	BTN	50	PASI-O

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SUMMARY OF DETECTION

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35419086001	**EQ Blank 9/20/18**					
SM 2320B	Carbon Dioxide, Free	10.4	mg/L		10/02/18 15:16	
35419086002	**MW 100-6**					
RSK 175	Ethane	9.8 I	ug/L	10.0	09/26/18 11:30	
RSK 175	Methane	1500	ug/L	10.0	09/26/18 11:30	
	Field pH	6.38	Std. Units		09/20/18 10:45	
	Field Temperature	23.8	deg C		09/20/18 10:45	
	Field Specific Conductance	711	umhos/cm		09/20/18 10:45	
	Oxygen, Dissolved	0.68	mg/L		09/20/18 10:45	
	REDOX	68.4	mV		09/20/18 10:45	
	Turbidity	19.37	NTU		09/20/18 10:45	
	Depth to Water	8.88	feet		09/20/18 10:45	
EPA 6010	Sodium	39.1	mg/L	2.0	09/28/18 00:52	
EPA 8260	cis-1,2-Dichloroethene	1.5	ug/L	1.0	10/01/18 19:18	
EPA 8260	Vinyl chloride	1.9	ug/L	1.0	10/01/18 19:18	
SM 2320B	Carbon Dioxide, Free	47.8	mg/L		10/02/18 15:22	
EPA 300.0	Chloride	55.4	mg/L	5.0	09/30/18 02:52	

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8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: EQ Blank 9/20/18 **Lab ID: 35419086001** Collected: 09/20/18 09:35 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**3.0 U**	ug/L	10.0	3.0	1		09/26/18 10:53	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/26/18 10:53	74-85-1	
Methane	**4.9 U**	ug/L	10.0	4.9	1		09/26/18 10:53	74-82-8	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/27/18 11:18	09/28/18 09:06	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/27/18 11:18	09/28/18 09:06	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**0.27 U**	mg/L	2.0	0.27	1	09/28/18 05:00	09/29/18 16:21	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/01/18 18:54	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/01/18 18:54	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/01/18 18:54	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/01/18 18:54	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/01/18 18:54	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 18:54	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/01/18 18:54	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/01/18 18:54	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/01/18 18:54	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 18:54	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 18:54	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 18:54	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/01/18 18:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 18:54	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	630-20-6	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: EQ Blank 9/20/18 **Lab ID: 35419086001** Collected: 09/20/18 09:35 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/01/18 18:54	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/01/18 18:54	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/01/18 18:54	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 18:54	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/01/18 18:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/01/18 18:54	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/01/18 18:54	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/01/18 18:54	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**10.4**	mg/L			1		10/02/18 15:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 02:30	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 02:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 U**	mg/L	0.050	0.025	1		09/21/18 08:33	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: MW 100-6 **Lab ID: 35419086002** Collected: 09/20/18 10:45 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	**9.8 I**	ug/L	10.0	3.0	1		09/26/18 11:30	74-84-0	
Ethene	**2.9 U**	ug/L	10.0	2.9	1		09/26/18 11:30	74-85-1	
Methane	**1500**	ug/L	10.0	4.9	1		09/26/18 11:30	74-82-8	
Field Data	Analytical Method:								
Field pH	**6.38**	Std. Units			1		09/20/18 10:45		
Field Temperature	**23.8**	deg C			1		09/20/18 10:45		
Field Specific Conductance	**711**	umhos/cm			1		09/20/18 10:45		
Oxygen, Dissolved	**0.68**	mg/L			1		09/20/18 10:45	7782-44-7	
REDOX	**68.4**	mV			1		09/20/18 10:45		
Turbidity	**19.37**	NTU			1		09/20/18 10:45		
Depth to Water	**8.88**	feet			1		09/20/18 10:45		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	09/27/18 11:18	09/28/18 09:21	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	09/27/18 11:18	09/28/18 09:21	106-93-4	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Sodium	**39.1**	mg/L	2.0	0.27	1	09/26/18 21:53	09/28/18 00:52	7440-23-5	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/01/18 19:18	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/01/18 19:18	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/01/18 19:18	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/01/18 19:18	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/01/18 19:18	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 19:18	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/01/18 19:18	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/01/18 19:18	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/01/18 19:18	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	75-35-4	
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	0.50	1		10/01/18 19:18	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	156-60-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: MW 100-6 **Lab ID: 35419086002** Collected: 09/20/18 10:45 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 19:18	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/01/18 19:18	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/01/18 19:18	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/01/18 19:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/01/18 19:18	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/01/18 19:18	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/01/18 19:18	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/01/18 19:18	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/01/18 19:18	108-05-4	
Vinyl chloride	**1.9**	ug/L	1.0	0.50	1		10/01/18 19:18	75-01-4	
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/01/18 19:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/01/18 19:18	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/01/18 19:18	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/01/18 19:18	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Carbon Dioxide, Free	**47.8**	mg/L			1		10/02/18 15:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**55.4**	mg/L	5.0	2.5	1		09/30/18 02:52	16887-00-6	
Sulfate	**2.5 U**	mg/L	5.0	2.5	1		09/30/18 02:52	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025 U**	mg/L	0.050	0.025	1		09/21/18 08:44	14797-55-8	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: Trip Blank 9/20/18 **Lab ID: 35419086003** Collected: 09/20/18 00:00 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/02/18 17:07	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/02/18 17:07	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/02/18 17:07	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/02/18 17:07	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/02/18 17:07	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/02/18 17:07	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/02/18 17:07	74-87-3	
1,2-Dibromo-3-chloropropane	**1.0 U**	ug/L	5.0	1.0	1		10/02/18 17:07	96-12-8	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/02/18 17:07	124-48-1	
1,2-Dibromoethane (EDB)	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	106-93-4	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/02/18 17:07	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/02/18 17:07	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/02/18 17:07	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/02/18 17:07	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/02/18 17:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/02/18 17:07	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/02/18 17:07	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/02/18 17:07	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/02/18 17:07	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/02/18 17:07	75-01-4	

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ANALYTICAL RESULTS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Sample: Trip Blank 9/20/18 **Lab ID: 35419086003** Collected: 09/20/18 00:00 Received: 09/20/18 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Xylene (Total)	**1.0 U**	ug/L	3.0	1.0	1		10/02/18 17:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/02/18 17:07	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/02/18 17:07	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/02/18 17:07	2037-26-5	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 565332 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 3067770 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	3.0 U	10.0	3.0	09/26/18 09:38	
Ethene	ug/L	2.9 U	10.0	2.9	09/26/18 09:38	
Methane	ug/L	4.9 U	10.0	4.9	09/26/18 09:38	

LABORATORY CONTROL SAMPLE & LCSD: 3067771 3067772

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	115	115	101	101	85-115	0	20	
Ethene	ug/L	106	109	109	103	102	85-115	1	20	
Methane	ug/L	60.7	62.1	62.1	102	102	85-115	0	20	

SAMPLE DUPLICATE: 3068211

Parameter	Units	35418730002 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.2	63.6	18	20	
Ethene	ug/L	99.2	117	17	20	
Methane	ug/L	2680	3270	20	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 480915 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 35419086002

METHOD BLANK: 2603686 Matrix: Water
Associated Lab Samples: 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sodium	mg/L	0.27 U	2.0	0.27	09/28/18 00:09	

LABORATORY CONTROL SAMPLE: 2603687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	12.5	13.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2603688 2603689

Parameter	Units	35418730001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sodium	mg/L	0.27 U	12.5	12.5	13.3	13.0	106	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 481312 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 35419086001

METHOD BLANK: 2605719 Matrix: Water
Associated Lab Samples: 35419086001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sodium	mg/L	0.27 U	2.0	0.27	09/29/18 16:10	

LABORATORY CONTROL SAMPLE: 2605720

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sodium	mg/L	12.5	11.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2605721 2605722

Parameter	Units	35419304001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sodium	mg/L	26100 ug/L	12.5	12.5	39.2	39.0	105	103	75-125	0	20	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 481942 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 2608519 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	10/01/18 11:37	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	10/01/18 11:37	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
2-Hexanone	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Acetone	ug/L	10.0 U	20.0	10.0	10/01/18 11:37	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Benzene	ug/L	0.10 U	1.0	0.10	10/01/18 11:37	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	10/01/18 11:37	
Bromoform	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Bromomethane	ug/L	0.50 U	5.0	0.50	10/01/18 11:37	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	10/01/18 11:37	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Chloroethane	ug/L	0.50 U	10.0	0.50	10/01/18 11:37	
Chloroform	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Chloromethane	ug/L	0.62 U	1.0	0.62	10/01/18 11:37	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/01/18 11:37	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	10/01/18 11:37	
Dibromomethane	ug/L	0.50 U	2.0	0.50	10/01/18 11:37	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Iodomethane	ug/L	0.50 U	10.0	0.50	10/01/18 11:37	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	10/01/18 11:37	
Styrene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Toluene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/01/18 11:37	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	10/01/18 11:37	
Trichloroethene	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

METHOD BLANK: 2608519 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	10/01/18 11:37	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	10/01/18 11:37	
Xylene (Total)	ug/L	1.0 U	3.0	1.0	10/01/18 11:37	
1,2-Dichloroethane-d4 (S)	%	89	70-130		10/01/18 11:37	
4-Bromofluorobenzene (S)	%	107	70-130		10/01/18 11:37	
Toluene-d8 (S)	%	96	70-130		10/01/18 11:37	

LABORATORY CONTROL SAMPLE: 2608520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.7	114	70-130	
1,1,1-Trichloroethane	ug/L	20	19.6	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	21.7	109	68-125	
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	
1,1-Dichloroethene	ug/L	20	16.9	85	66-133	
1,2,3-Trichloropropane	ug/L	20	22.0	110	62-127	
1,2-Dichlorobenzene	ug/L	20	21.6	108	70-130	
1,2-Dichloroethane	ug/L	20	17.0	85	70-130	
1,2-Dichloropropane	ug/L	20	20.4	102	70-130	
1,4-Dichlorobenzene	ug/L	20	21.3	107	70-130	
2-Butanone (MEK)	ug/L	40	36.2	90	47-143	
2-Hexanone	ug/L	40	43.6	109	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	39.9	100	57-132	
Acetone	ug/L	40	39.8	100	46-148	
Acrylonitrile	ug/L	200	206	103	60-143	
Benzene	ug/L	20	20.8	104	70-130	
Bromochloromethane	ug/L	20	21.7	109	70-130	
Bromodichloromethane	ug/L	20	19.5	97	70-130	
Bromoform	ug/L	20	21.0	105	49-126	
Bromomethane	ug/L	20	7.5	37	10-165	
Carbon disulfide	ug/L	20	16.4	82	60-141	
Carbon tetrachloride	ug/L	20	19.3	97	63-126	
Chlorobenzene	ug/L	20	22.2	111	70-130	
Chloroethane	ug/L	20	18.7	94	71-142	
Chloroform	ug/L	20	19.7	98	70-130	
Chloromethane	ug/L	20	16.8	84	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	70-130	
cis-1,3-Dichloropropene	ug/L	20	21.4	107	70-130	
Dibromochloromethane	ug/L	20	21.1	106	62-118	
Dibromomethane	ug/L	20	22.6	113	70-130	
Ethylbenzene	ug/L	20	21.6	108	70-130	
Iodomethane	ug/L	40	4.3 I	11	10-164	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

LABORATORY CONTROL SAMPLE: 2608520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	20	17.9	89	65-136	
Styrene	ug/L	20	22.5	112	70-130	
Tetrachloroethene	ug/L	20	22.7	113	64-134	
Toluene	ug/L	20	22.0	110	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	68-127	
trans-1,3-Dichloropropene	ug/L	20	22.4	112	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	20.8	104	42-129	
Trichloroethene	ug/L	20	20.6	103	70-130	
Trichlorofluoromethane	ug/L	20	16.3	82	65-135	
Vinyl acetate	ug/L	20	19.0	95	60-144	
Vinyl chloride	ug/L	20	17.9	89	68-131	
Xylene (Total)	ug/L	60	66.2	110	70-130	
1,2-Dichloroethane-d4 (S)	%			89	70-130	
4-Bromofluorobenzene (S)	%			109	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 2608530

Parameter	Units	35420124005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	18.2	91	70-130	
1,1,1-Trichloroethane	ug/L	0.50 U	20	17.2	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	19.0	95	68-125	
1,1,2-Trichloroethane	ug/L	0.50 U	20	18.5	93	70-130	
1,1-Dichloroethane	ug/L	0.50 U	20	17.1	86	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	15.4	77	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	19.4	97	62-127	
1,2-Dichlorobenzene	ug/L	0.50 U	20	18.1	90	70-130	
1,2-Dichloroethane	ug/L	0.50 U	20	14.8	74	70-130	
1,2-Dichloropropane	ug/L	0.50 U	20	17.2	86	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	18.0	90	70-130	
2-Butanone (MEK)	ug/L	5.0 U	40	41.4	103	47-143	
2-Hexanone	ug/L	5.0 U	40	43.2	108	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	44.7	112	57-132	
Acetone	ug/L	10.0 U	40	43.7	109	46-148	
Acrylonitrile	ug/L	5.0 U	200	197	98	60-143	
Benzene	ug/L	0.10 U	20	17.6	88	70-130	
Bromochloromethane	ug/L	0.50 U	20	17.4	87	70-130	
Bromodichloromethane	ug/L	0.27 U	20	16.4	82	70-130	
Bromoform	ug/L	0.50 U	20	17.2	86	49-126	
Bromomethane	ug/L	0.50 U	20	7.4	37	10-165	
Carbon disulfide	ug/L	5.0 U	20	18.9	94	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	17.1	86	63-126	
Chlorobenzene	ug/L	0.50 U	20	18.0	90	70-130	
Chloroethane	ug/L	0.50 U	20	20.0	100	71-142	
Chloroform	ug/L	0.50 U	20	16.6	83	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

MATRIX SPIKE SAMPLE: 2608530

Parameter	Units	35420124005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	0.62 U	20	17.2	86	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	16.8	84	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	17.4	87	70-130	
Dibromochloromethane	ug/L	0.26 U	20	17.1	85	62-118	
Dibromomethane	ug/L	0.50 U	20	17.9	90	70-130	
Ethylbenzene	ug/L	0.50 U	20	17.9	90	70-130	
Iodomethane	ug/L	0.50 U	40	2.8 I	7	10-164	J(M1)
Methylene Chloride	ug/L	2.5 U	20	15.0	75	65-136	
Styrene	ug/L	0.50 U	20	17.9	89	70-130	
Tetrachloroethene	ug/L	0.50 U	20	18.1	91	64-134	
Toluene	ug/L	0.50 U	20	18.1	91	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	17.3	86	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	18.5	93	65-121	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	24.8	124	42-129	
Trichloroethene	ug/L	0.50 U	20	17.2	86	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	19.1	95	65-135	
Vinyl acetate	ug/L	1.0 U	20	21.3	106	60-144	
Vinyl chloride	ug/L	0.50 U	20	19.6	98	68-131	
Xylene (Total)	ug/L	1.0 U	60	53.8	90	70-130	
1,2-Dichloroethane-d4 (S)	%				93	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 2608529

Parameter	Units	35420124004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

SAMPLE DUPLICATE: 2608529

Parameter	Units	35420124004 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.0 U	1.0 U		40	
1,2-Dichloroethane-d4 (S)	%	87	89	2	40	
4-Bromofluorobenzene (S)	%	105	105	1	40	
Toluene-d8 (S)	%	96	96	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 482254 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35419086003

METHOD BLANK: 2609993 Matrix: Water
Associated Lab Samples: 35419086003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	10/02/18 12:19	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	10/02/18 12:19	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	5.0	1.0	10/02/18 12:19	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
2-Hexanone	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Acetone	ug/L	10.0 U	20.0	10.0	10/02/18 12:19	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Benzene	ug/L	0.10 U	1.0	0.10	10/02/18 12:19	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	10/02/18 12:19	
Bromoform	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Bromomethane	ug/L	0.50 U	5.0	0.50	10/02/18 12:19	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	10/02/18 12:19	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Chloroethane	ug/L	0.50 U	10.0	0.50	10/02/18 12:19	
Chloroform	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Chloromethane	ug/L	0.62 U	1.0	0.62	10/02/18 12:19	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/02/18 12:19	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	10/02/18 12:19	
Dibromomethane	ug/L	0.50 U	2.0	0.50	10/02/18 12:19	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Iodomethane	ug/L	0.50 U	10.0	0.50	10/02/18 12:19	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	10/02/18 12:19	
Styrene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Toluene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/02/18 12:19	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

METHOD BLANK: 2609993 Matrix: Water
Associated Lab Samples: 35419086003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	10/02/18 12:19	
Trichloroethene	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	10/02/18 12:19	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	10/02/18 12:19	
Xylene (Total)	ug/L	1.0 U	3.0	1.0	10/02/18 12:19	
1,2-Dichloroethane-d4 (S)	%	100	70-130		10/02/18 12:19	
4-Bromofluorobenzene (S)	%	98	70-130		10/02/18 12:19	
Toluene-d8 (S)	%	100	70-130		10/02/18 12:19	

LABORATORY CONTROL SAMPLE: 2609994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.4	102	70-130	
1,1,1-Trichloroethane	ug/L	20	19.7	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	68-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	70-130	
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	
1,1-Dichloroethene	ug/L	20	17.1	86	66-133	
1,2,3-Trichloropropane	ug/L	20	19.7	98	62-127	
1,2-Dibromo-3-chloropropane	ug/L	20	18.5	92	45-137	
1,2-Dibromoethane (EDB)	ug/L	20	19.6	98	70-130	
1,2-Dichlorobenzene	ug/L	20	19.5	98	70-130	
1,2-Dichloroethane	ug/L	20	17.7	89	70-130	
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	
1,4-Dichlorobenzene	ug/L	20	19.2	96	70-130	
2-Butanone (MEK)	ug/L	40	35.2	88	47-143	
2-Hexanone	ug/L	40	37.3	93	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	36.6	92	57-132	
Acetone	ug/L	40	39.9	100	46-148	
Acrylonitrile	ug/L	200	194	97	60-143	
Benzene	ug/L	20	19.8	99	70-130	
Bromochloromethane	ug/L	20	19.3	97	70-130	
Bromodichloromethane	ug/L	20	19.2	96	70-130	
Bromoform	ug/L	20	18.7	94	49-126	
Bromomethane	ug/L	20	29.1	145	10-165	
Carbon disulfide	ug/L	20	17.6	88	60-141	
Carbon tetrachloride	ug/L	20	19.6	98	63-126	
Chlorobenzene	ug/L	20	19.4	97	70-130	
Chloroethane	ug/L	20	19.7	98	71-142	
Chloroform	ug/L	20	19.5	98	70-130	
Chloromethane	ug/L	20	24.0	120	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	70-130	
cis-1,3-Dichloropropene	ug/L	20	20.4	102	70-130	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

LABORATORY CONTROL SAMPLE: 2609994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	19.1	95	62-118	
Dibromomethane	ug/L	20	20.0	100	70-130	
Ethylbenzene	ug/L	20	19.5	98	70-130	
Iodomethane	ug/L	40	32.5	81	10-164	
Methylene Chloride	ug/L	20	19.2	96	65-136	
Styrene	ug/L	20	20.0	100	70-130	
Tetrachloroethene	ug/L	20	19.7	98	64-134	
Toluene	ug/L	20	19.9	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	68-127	
trans-1,3-Dichloropropene	ug/L	20	20.8	104	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	20.6	103	42-129	
Trichloroethene	ug/L	20	19.1	96	70-130	
Trichlorofluoromethane	ug/L	20	17.6	88	65-135	
Vinyl acetate	ug/L	20	20.9	104	60-144	
Vinyl chloride	ug/L	20	21.1	105	68-131	
Xylene (Total)	ug/L	60	60.7	101	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 2611141

Parameter	Units	2084377002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.6	108	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	24.0	120	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.2	106	68-125	
1,1,2-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.2	111	70-130	
1,1-Dichloroethene	ug/L	ND	20	19.1	96	66-133	
1,2,3-Trichloropropane	ug/L	ND	20	20.4	102	62-127	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	22.6	113	45-137	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.6	103	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	21.0	105	70-130	
1,2-Dichloroethane	ug/L	ND	20	21.8	108	70-130	
1,2-Dichloropropane	ug/L	ND	20	21.4	107	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.4	102	70-130	
2-Butanone (MEK)	ug/L	ND	40	39.2	98	47-143	
2-Hexanone	ug/L	ND	40	41.8	105	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.2	98	57-132	
Acetone	ug/L	ND	40	44.9	106	46-148	
Acrylonitrile	ug/L	ND	200	199	100	60-143	
Benzene	ug/L	ND	20	21.6	108	70-130	
Bromochloromethane	ug/L	ND	20	20.8	104	70-130	
Bromodichloromethane	ug/L	ND	20	21.9	109	70-130	
Bromoform	ug/L	ND	20	20.6	103	49-126	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

MATRIX SPIKE SAMPLE: 2611141

Parameter	Units	2084377002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	ND	20	16.8	84	10-165	
Carbon disulfide	ug/L	ND	20	18.2	91	60-141	
Carbon tetrachloride	ug/L	ND	20	24.5	122	63-126	
Chlorobenzene	ug/L	ND	20	20.6	103	70-130	
Chloroethane	ug/L	ND	20	18.3	92	71-142	
Chloroform	ug/L	ND	20	22.0	108	70-130	
Chloromethane	ug/L	ND	20	22.0	110	40-140	
cis-1,2-Dichloroethene	ug/L	ND	20	21.9	110	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	20.7	103	70-130	
Dibromochloromethane	ug/L	ND	20	20.5	103	62-118	
Dibromomethane	ug/L	ND	20	20.8	104	70-130	
Ethylbenzene	ug/L	ND	20	21.0	105	70-130	
Iodomethane	ug/L	ND	40	9.1 I	23	10-164	
Methylene Chloride	ug/L	ND	20	20.6	103	65-136	
Styrene	ug/L	ND	20	20.7	103	70-130	
Tetrachloroethene	ug/L	ND	20	20.4	102	64-134	
Toluene	ug/L	ND	20	21.1	105	70-130	
trans-1,2-Dichloroethene	ug/L	ND	20	20.1	101	68-127	
trans-1,3-Dichloropropene	ug/L	ND	20	22.1	111	65-121	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	22.9	114	42-129	
Trichloroethene	ug/L	ND	20	20.8	104	70-130	
Trichlorofluoromethane	ug/L	ND	20	21.4	107	65-135	
Vinyl acetate	ug/L	ND	20	20.9	105	60-144	
Vinyl chloride	ug/L	ND	20	20.3	102	68-131	
Xylene (Total)	ug/L	ND	60	64.6	108	70-130	
1,2-Dichloroethane-d4 (S)	%				115	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2611140

Parameter	Units	2084377001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50 U		40	
1,1,1-Trichloroethane	ug/L	ND	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	ND	0.12 U		40	
1,1,2-Trichloroethane	ug/L	ND	0.50 U		40	
1,1-Dichloroethane	ug/L	ND	0.50 U		40	
1,1-Dichloroethene	ug/L	ND	0.50 U		40	
1,2,3-Trichloropropane	ug/L	ND	0.59 U		40	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0 U		40	
1,2-Dibromoethane (EDB)	ug/L	ND	0.50 U		40	
1,2-Dichlorobenzene	ug/L	ND	0.50 U		40	
1,2-Dichloroethane	ug/L	ND	0.50 U		40	
1,2-Dichloropropane	ug/L	ND	0.50 U		40	
1,4-Dichlorobenzene	ug/L	ND	0.50 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

SAMPLE DUPLICATE: 2611140

Parameter	Units	2084377001 Result	Dup Result	RPD	Max RPD	Qualifiers
2-Butanone (MEK)	ug/L	ND	5.0 U		40	
2-Hexanone	ug/L	ND	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0 U		40	
Acetone	ug/L	ND	10.0 U		40	
Acrylonitrile	ug/L	ND	5.0 U		40	
Benzene	ug/L	ND	0.10 U		40	
Bromochloromethane	ug/L	ND	0.50 U		40	
Bromodichloromethane	ug/L	ND	0.27 U		40	
Bromoform	ug/L	ND	0.50 U		40	
Bromomethane	ug/L	ND	0.50 U		40	
Carbon disulfide	ug/L	ND	5.0 U		40	
Carbon tetrachloride	ug/L	ND	0.50 U		40	
Chlorobenzene	ug/L	ND	0.50 U		40	
Chloroethane	ug/L	ND	0.50 U		40	
Chloroform	ug/L	ND	0.50 U		40	
Chloromethane	ug/L	ND	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	ND	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	ND	0.25 U		40	
Dibromochloromethane	ug/L	ND	0.26 U		40	
Dibromomethane	ug/L	ND	0.50 U		40	
Ethylbenzene	ug/L	ND	0.50 U		40	
Iodomethane	ug/L	ND	0.50 U		40	
Methylene Chloride	ug/L	ND	2.5 U		40	
Styrene	ug/L	ND	0.50 U		40	
Tetrachloroethene	ug/L	ND	0.50 U		40	
Toluene	ug/L	ND	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	ND	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	ND	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	ND	5.0 U		40	
Trichloroethene	ug/L	ND	0.50 U		40	
Trichlorofluoromethane	ug/L	ND	0.50 U		40	
Vinyl acetate	ug/L	ND	1.0 U		40	
Vinyl chloride	ug/L	ND	0.50 U		40	
Xylene (Total)	ug/L	ND	1.0 U		40	
1,2-Dichloroethane-d4 (S)	%	102	105	2	40	
4-Bromofluorobenzene (S)	%	99	98	1	40	
Toluene-d8 (S)	%	100	100	0	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 480860 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 2603327 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	09/28/18 08:22	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	09/28/18 08:22	

LABORATORY CONTROL SAMPLE: 2603328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.25	102	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.25	100	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2603890 2603891

Parameter	Units	35420114001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0062 U	.25	.25	0.31	0.31	124	124	60-140	0	40	
1,2-Dibromoethane (EDB)	ug/L	0.0073 U	.25	.25	0.26	0.28	105	111	60-140	5	40	L

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 482192 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 2609649 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon Dioxide, Free	mg/L	10.9			10/02/18 13:23	

SAMPLE DUPLICATE: 2609651

Parameter	Units	35419410002 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	7.8	8.2	5		

SAMPLE DUPLICATE: 2609652

Parameter	Units	35418905001 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon Dioxide, Free	mg/L	0.19	0.17	11		

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 481729 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 2607950 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	09/29/18 22:50	
Sulfate	mg/L	2.5 U	5.0	2.5	09/29/18 22:50	

LABORATORY CONTROL SAMPLE: 2607951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.2	96	90-110	
Sulfate	mg/L	50	48.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2607952 2607953

Parameter	Units	35420009001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	60.9	50	50	116	116	110	110	90-110	0	20	L
Sulfate	mg/L	25.4	50	50	77.1	77.2	103	104	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

QC Batch: 479312 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 35419086001, 35419086002

METHOD BLANK: 2596067 Matrix: Water
Associated Lab Samples: 35419086001, 35419086002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.050	0.025	09/21/18 08:19	

SAMPLE DUPLICATE: 2596069

Parameter	Units	35419099001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.043 I	0.045 I		20	

SAMPLE DUPLICATE: 2596071

Parameter	Units	35418933001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.025 U	0.025 U		20	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
L	Off-scale high. Actual value is known to be greater than value given.

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5 Remediation
Pace Project No.: 35419086

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35419086001	**EQ Blank 9/20/18**	RSK 175	565332		
35419086002	**MW 100-6**	RSK 175	565332		
35419086002	**MW 100-6**				
35419086001	**EQ Blank 9/20/18**	EPA 8011	480860	EPA 8011	481203
35419086002	**MW 100-6**	EPA 8011	480860	EPA 8011	481203
35419086001	**EQ Blank 9/20/18**	EPA 3010	481312	EPA 6010	481358
35419086002	**MW 100-6**	EPA 3010	480915	EPA 6010	480918
35419086001	**EQ Blank 9/20/18**	EPA 8260	481942		
35419086002	**MW 100-6**	EPA 8260	481942		
35419086003	**Trip Blank 9/20/18**	EPA 8260	482254		
35419086001	**EQ Blank 9/20/18**	SM 2320B	482192		
35419086002	**MW 100-6**	SM 2320B	482192		
35419086001	**EQ Blank 9/20/18**	EPA 300.0	481729		
35419086002	**MW 100-6**	EPA 300.0	481729		
35419086001	**EQ Blank 9/20/18**	EPA 353.2	479312		
35419086002	**MW 100-6**	EPA 353.2	479312		

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WO# : 35419086

35419086

lytical Request Document

1ENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Invoice Information:	
Company:	Volusia County Solid Waste Management	Report To:	Ms. Jennifer Stirk	Attention:	
Address:	1990 Tomoka Farms Road	Copy To:		Company Name:	
Daytona Beach, FL 32124				Address:	Regulatory Agency
Email:		Purchase Order #:		Pace Quote:	
Phone:	Fax:	Project Name:	Tomoka LF B5 Remediation	Pace Project Manager:	jeff.baylor@pacelabs.com, State / Location
Requested Due Date:		Project #:		Pace Profile #:	1721

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS Unpreserved	Preservatives H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: 8260 Full List	EDB and DBCP EPA 8011	Alkalinity/NO3/CL/SO4	Dissolved Gases (Methane,	Metals by 6010	Trip Blank DO NOT OPEN -							Residual Chlorine (Y/N)	
1	EQ BLANK						9-20-18	9:35											X	X	X	X	X								
2	MW 100-6						9-20-18	10:15											X	X	X	X	X								
3	Trip BLANK						9-20-18	0000																X							
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[illegible] Pace	9/8/10	1620				
		9-20-18	1600	Pace	9/20/18	1600	Y Y Y
					9/21/18	1535	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Bruce Foster

SIGNATURE of SAMPLER: [signature]

DATE Signed: 9-20-18

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

n (SCUR)

WO# : 35419086

PM: JSB Due Date: 10/04/18

CLIENT: VOLDPW

Project #

Project Manager

Client:

Date and Initials of person:
Examining contents:_____
Label:_____
Deliver:_____
pH:_____

Thermometer Used: T-345 Date: 9/20/18 Time: 1600 Initials: NKS

State of Origin: _____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.2 (Visual)	0.2 (Correction Factor)	1.4 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other_____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other_____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** Wet Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☑ Other_____

Samples shorted to lab (If Yes, complete) Shorted Date:_____ Shorted Time:_____ Qty:_____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☑ Yes ☐ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☑ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A	Preservative:_____ Lot #/Trace #:_____ Date:_____ Time:_____ Initials:_____
Headspace in VOA Vials? (>6mm):	☑ Yes ☐ No ☐ N/A	
Trip Blank Present:	☑ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted:_____ Date/Time:_____

Comments/ Resolution (use back for additional comments):
Headspace in lots vials for samples 002 and 003

Project Manager Review:_____ Date:_____

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County	SITE LOCATION: TOMOKA LF B5 REMEDIATION	
WELL NO: EQ	SAMPLE ID: EQ	DATE: 9-20-16

PURGING DATA

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

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

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: BRUCE FOSTER	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:35	SAMPLING ENDED AT: 9:40
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE			Alk, NO3SO4, Cl	APP	<500
	1	PE	250	HNO3			6010		
	3	CG	40	HCl/ICE			8260		
	2	CG	40	ICE			Dissolved Gas		
	2	CG	40	ICE			6020A 301		

REMARKS: ORP - TOC BP

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Volusia County	SITE LOCATION:	Tomoka LF B5 Remediation
WELL NO:	MW 100-6	SAMPLE ID:	MW 100-6
DATE:	9-20-18		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	52 feet to 15 feet	STATIC DEPTH TO WATER (feet):	8.88	PURGE PUMP TYPE OR BAILER:	PP

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

= (52.95 feet – 8.88 feet) X 0.16 gallons/foot = 7.0512 gallons

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10	PURGING INITIATED AT:	9:45	PURGING ENDED AT:	10:45	TOTAL VOLUME PURGED (gallons):	10.80

TIME (24hr)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:25	7.20	7.20	.18	9.14	6.30	23.8	761	0.91	15.27	clear	SULFUR
10:35	1.80	9.00	.18	9.14	6.36	23.8	710	0.76	13.22	"	"
10:45	1.80	~~10.80~~ 10.8	.18	9.14	6.38	23.6	711	0.68	19.37		

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Bruce Foster	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	10:45	SAMPLING ENDED AT:	10:57

PUMP OR TUBING DEPTH IN WELL (feet):	10	TUBING MATERIAL CODE:	HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	PE	500	ICE		6.38	Alk, M03, 504, Cl	APP	400
	1	PE	250	HNO3			6010		
	3	CG	40	HCl			8260		
	2	CG	40	ICE			Dissolved Gases		
	2	CG	40	ICE			6D DBCP 8011		

REMARKS: – 0.68 27.9 68.4

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

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

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

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

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

October 30, 2018

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on October 24, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor

Jeff Baylor
jeff.baylor@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: John Catches, HDR Engineering, Inc.
Handi Wang, HDR Engineering, Inc.

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35426217001	**EQ Blank 10/24/18**	Water	10/24/18 09:25	10/24/18 16:40
35426217002	**B5-37A**	Water	10/24/18 09:51	10/24/18 16:40
35426217003	**B5-35**	Water	10/24/18 10:34	10/24/18 16:40
35426217004	**B37-8**	Water	10/24/18 11:34	10/24/18 16:40
35426217005	**Trip Blank 10/24/18**	Water	10/24/18 00:00	10/24/18 16:40

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SAMPLE ANALYTE COUNT

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35426217001	**EQ Blank 10/24/18**	EPA 8011	SMH	2	PASI-O
		EPA 8260	BTN	48	PASI-O
35426217002	**B5-37A**	EPA 8011	SMH	2	PASI-O
		EPA 8260	BTN	48	PASI-O
35426217003	**B5-35**	EPA 8011	SMH	2	PASI-O
		EPA 8260	BTN	48	PASI-O
35426217004	**B37-8**	EPA 8011	SMH	2	PASI-O
		EPA 8260	BTN	48	PASI-O
35426217005	**Trip Blank 10/24/18**	EPA 8260	BTN	50	PASI-O

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SUMMARY OF DETECTION

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35426217001	**EQ Blank 10/24/18**					
EPA 8260	Acetone	19.3 I	ug/L	20.0	10/25/18 14:17	
35426217002	**B5-37A**					
	Field pH	6.36	Std. Units		10/24/18 09:51	
	Field Temperature	24.4	deg C		10/24/18 09:51	
	Field Specific Conductance	1303	umhos/cm		10/24/18 09:51	
	Oxygen, Dissolved	1.37	mg/L		10/24/18 09:51	
	Turbidity	2.31	NTU		10/24/18 09:51	
	Depth to Water	2.31	feet		10/24/18 09:51	
EPA 8260	Chlorobenzene	3.8	ug/L	1.0	10/25/18 19:13	
35426217003	**B5-35**					
	Field pH	6.14	Std. Units		10/24/18 10:34	
	Field Temperature	25.4	deg C		10/24/18 10:34	
	Field Specific Conductance	607	umhos/cm		10/24/18 10:34	
	Oxygen, Dissolved	1.20	mg/L		10/24/18 10:34	
	Turbidity	19.12	NTU		10/24/18 10:34	
	Depth to Water	2.75	feet		10/24/18 10:34	
35426217004	**B37-8**					
	Field pH	5.48	Std. Units		10/24/18 11:34	
	Field Temperature	25.1	deg C		10/24/18 11:34	
	Field Specific Conductance	186	umhos/cm		10/24/18 11:34	
	Oxygen, Dissolved	0.67	mg/L		10/24/18 11:34	
	Turbidity	0.68	NTU		10/24/18 11:34	
	Depth to Water	3.75	feet		10/24/18 11:34	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: EQ Blank 10/24/18 **Lab ID: 35426217001** Collected: 10/24/18 09:25 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.020	0.0062	1	10/29/18 13:39	10/30/18 05:19	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	10/29/18 13:39	10/30/18 05:19	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**19.3 I**	ug/L	20.0	10.0	1		10/25/18 14:17	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/25/18 14:17	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/25/18 14:17	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/25/18 14:17	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/25/18 14:17	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 14:17	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/25/18 14:17	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/25/18 14:17	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/25/18 14:17	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 14:17	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 14:17	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 14:17	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/25/18 14:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:17	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/25/18 14:17	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/25/18 14:17	96-18-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: EQ Blank 10/24/18 **Lab ID: 35426217001** Collected: 10/24/18 09:25 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/25/18 14:17	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:17	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		10/25/18 14:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	112	%	70-130		1		10/25/18 14:17	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		10/25/18 14:17	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/25/18 14:17	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B5-37A **Lab ID: 35426217002** Collected: 10/24/18 09:51 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.36**	Std. Units			1		10/24/18 09:51		
Field Temperature	**24.4**	deg C			1		10/24/18 09:51		
Field Specific Conductance	**1303**	umhos/cm			1		10/24/18 09:51		
Oxygen, Dissolved	**1.37**	mg/L			1		10/24/18 09:51	7782-44-7	
Turbidity	**2.31**	NTU			1		10/24/18 09:51		
Depth to Water	**2.31**	feet			1		10/24/18 09:51		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	10/29/18 13:39	10/30/18 05:34	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	10/29/18 13:39	10/30/18 05:34	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/25/18 19:13	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/25/18 19:13	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/25/18 19:13	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/25/18 19:13	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/25/18 19:13	56-23-5	
Chlorobenzene	**3.8**	ug/L	1.0	0.50	1		10/25/18 19:13	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 19:13	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/25/18 19:13	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/25/18 19:13	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/25/18 19:13	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 19:13	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 19:13	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 19:13	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/25/18 19:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:13	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	630-20-6	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B5-37A **Lab ID: 35426217002** Collected: 10/24/18 09:51 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/25/18 19:13	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/25/18 19:13	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/25/18 19:13	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:13	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		10/25/18 19:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		10/25/18 19:13	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		10/25/18 19:13	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/25/18 19:13	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B5-35 **Lab ID: 35426217003** Collected: 10/24/18 10:34 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.14**	Std. Units			1		10/24/18 10:34		
Field Temperature	**25.4**	deg C			1		10/24/18 10:34		
Field Specific Conductance	**607**	umhos/cm			1		10/24/18 10:34		
Oxygen, Dissolved	**1.20**	mg/L			1		10/24/18 10:34	7782-44-7	
Turbidity	**19.12**	NTU			1		10/24/18 10:34		
Depth to Water	**2.75**	feet			1		10/24/18 10:34		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0062 U**	ug/L	0.019	0.0062	1	10/29/18 13:39	10/30/18 06:03	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0097	0.0073	1	10/29/18 13:39	10/30/18 06:03	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/25/18 19:37	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/25/18 19:37	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/25/18 19:37	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/25/18 19:37	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/25/18 19:37	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 19:37	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/25/18 19:37	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/25/18 19:37	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/25/18 19:37	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 19:37	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 19:37	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 19:37	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/25/18 19:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 19:37	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	630-20-6	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B5-35 **Lab ID: 35426217003** Collected: 10/24/18 10:34 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/25/18 19:37	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/25/18 19:37	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/25/18 19:37	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 19:37	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		10/25/18 19:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		10/25/18 19:37	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/25/18 19:37	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/25/18 19:37	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B37-8 **Lab ID: 35426217004** Collected: 10/24/18 11:34 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.48**	Std. Units			1		10/24/18 11:34		
Field Temperature	**25.1**	deg C			1		10/24/18 11:34		
Field Specific Conductance	**186**	umhos/cm			1		10/24/18 11:34		
Oxygen, Dissolved	**0.67**	mg/L			1		10/24/18 11:34	7782-44-7	
Turbidity	**0.68**	NTU			1		10/24/18 11:34		
Depth to Water	**3.75**	feet			1		10/24/18 11:34		
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromo-3-chloropropane	**0.0063 U**	ug/L	0.020	0.0063	1	10/29/18 13:39	10/30/18 06:18	96-12-8	
1,2-Dibromoethane (EDB)	**0.0073 U**	ug/L	0.0098	0.0073	1	10/29/18 13:39	10/30/18 06:18	106-93-4	
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/25/18 20:02	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/25/18 20:02	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/25/18 20:02	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/25/18 20:02	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/25/18 20:02	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 20:02	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/25/18 20:02	74-87-3	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/25/18 20:02	124-48-1	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/25/18 20:02	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 20:02	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 20:02	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 20:02	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/25/18 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 20:02	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	630-20-6	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: B37-8 **Lab ID: 35426217004** Collected: 10/24/18 11:34 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/25/18 20:02	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/25/18 20:02	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/25/18 20:02	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 20:02	75-01-4	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		10/25/18 20:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		10/25/18 20:02	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		10/25/18 20:02	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/25/18 20:02	2037-26-5	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: Trip Blank 10/24/18 **Lab ID: 35426217005** Collected: 10/24/18 00:00 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	**10.0 U**	ug/L	20.0	10.0	1		10/25/18 14:41	67-64-1	
Acrylonitrile	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	107-13-1	
Benzene	**0.10 U**	ug/L	1.0	0.10	1		10/25/18 14:41	71-43-2	
Bromochloromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	74-97-5	
Bromodichloromethane	**0.27 U**	ug/L	0.60	0.27	1		10/25/18 14:41	75-27-4	
Bromoform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	75-25-2	
Bromomethane	**0.50 U**	ug/L	5.0	0.50	1		10/25/18 14:41	74-83-9	
2-Butanone (MEK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	78-93-3	
Carbon disulfide	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	75-15-0	
Carbon tetrachloride	**0.50 U**	ug/L	3.0	0.50	1		10/25/18 14:41	56-23-5	
Chlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	108-90-7	
Chloroethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 14:41	75-00-3	
Chloroform	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	67-66-3	
Chloromethane	**0.62 U**	ug/L	1.0	0.62	1		10/25/18 14:41	74-87-3	
1,2-Dibromo-3-chloropropane	**1.0 U**	ug/L	5.0	1.0	1		10/25/18 14:41	96-12-8	
Dibromochloromethane	**0.26 U**	ug/L	2.0	0.26	1		10/25/18 14:41	124-48-1	
1,2-Dibromoethane (EDB)	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	106-93-4	
Dibromomethane	**0.50 U**	ug/L	2.0	0.50	1		10/25/18 14:41	74-95-3	
1,2-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	95-50-1	
1,4-Dichlorobenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	106-46-7	
trans-1,4-Dichloro-2-butene	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	110-57-6	
1,1-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	75-34-3	
1,2-Dichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	107-06-2	
1,1-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	75-35-4	
cis-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	156-59-2	
trans-1,2-Dichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	156-60-5	
1,2-Dichloropropane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	78-87-5	
cis-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 14:41	10061-01-5	
trans-1,3-Dichloropropene	**0.25 U**	ug/L	0.50	0.25	1		10/25/18 14:41	10061-02-6	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	100-41-4	
2-Hexanone	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	591-78-6	
Iodomethane	**0.50 U**	ug/L	10.0	0.50	1		10/25/18 14:41	74-88-4	
Methylene Chloride	**2.5 U**	ug/L	5.0	2.5	1		10/25/18 14:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.0 U**	ug/L	10.0	5.0	1		10/25/18 14:41	108-10-1	
Styrene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	100-42-5	
1,1,1,2-Tetrachloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	630-20-6	
1,1,2,2-Tetrachloroethane	**0.12 U**	ug/L	0.50	0.12	1		10/25/18 14:41	79-34-5	
Tetrachloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	127-18-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	108-88-3	
1,1,1-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	71-55-6	
1,1,2-Trichloroethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	79-00-5	
Trichloroethene	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	79-01-6	
Trichlorofluoromethane	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	75-69-4	
1,2,3-Trichloropropane	**0.59 U**	ug/L	2.0	0.59	1		10/25/18 14:41	96-18-4	
Vinyl acetate	**1.0 U**	ug/L	10.0	1.0	1		10/25/18 14:41	108-05-4	
Vinyl chloride	**0.50 U**	ug/L	1.0	0.50	1		10/25/18 14:41	75-01-4	

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ANALYTICAL RESULTS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Sample: Trip Blank 10/24/18 **Lab ID: 35426217005** Collected: 10/24/18 00:00 Received: 10/24/18 16:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		10/25/18 14:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	110	%	70-130		1		10/25/18 14:41	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		10/25/18 14:41	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/25/18 14:41	2037-26-5	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

QC Batch: 488452 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 35426217001, 35426217002, 35426217003, 35426217004, 35426217005

METHOD BLANK: 2642253 Matrix: Water
Associated Lab Samples: 35426217001, 35426217002, 35426217003, 35426217004, 35426217005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,1,1-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.50	0.12	10/25/18 12:42	
1,1,2-Trichloroethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,1-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,1-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,2,3-Trichloropropane	ug/L	0.59 U	2.0	0.59	10/25/18 12:42	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	5.0	1.0	10/25/18 12:42	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,2-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,2-Dichloroethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,2-Dichloropropane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
1,4-Dichlorobenzene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
2-Butanone (MEK)	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
2-Hexanone	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
Acetone	ug/L	10.0 U	20.0	10.0	10/25/18 12:42	
Acrylonitrile	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
Benzene	ug/L	0.10 U	1.0	0.10	10/25/18 12:42	
Bromochloromethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Bromodichloromethane	ug/L	0.27 U	0.60	0.27	10/25/18 12:42	
Bromoform	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Bromomethane	ug/L	0.50 U	5.0	0.50	10/25/18 12:42	
Carbon disulfide	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
Carbon tetrachloride	ug/L	0.50 U	3.0	0.50	10/25/18 12:42	
Chlorobenzene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Chloroethane	ug/L	0.50 U	10.0	0.50	10/25/18 12:42	
Chloroform	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Chloromethane	ug/L	0.62 U	1.0	0.62	10/25/18 12:42	
cis-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/25/18 12:42	
Dibromochloromethane	ug/L	0.26 U	2.0	0.26	10/25/18 12:42	
Dibromomethane	ug/L	0.50 U	2.0	0.50	10/25/18 12:42	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Iodomethane	ug/L	0.50 U	10.0	0.50	10/25/18 12:42	
Methylene Chloride	ug/L	2.5 U	5.0	2.5	10/25/18 12:42	
Styrene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Tetrachloroethene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Toluene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
trans-1,2-Dichloroethene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.50	0.25	10/25/18 12:42	

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Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

METHOD BLANK: 2642253 Matrix: Water
Associated Lab Samples: 35426217001, 35426217002, 35426217003, 35426217004, 35426217005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	10.0	5.0	10/25/18 12:42	
Trichloroethene	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Trichlorofluoromethane	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Vinyl acetate	ug/L	1.0 U	10.0	1.0	10/25/18 12:42	
Vinyl chloride	ug/L	0.50 U	1.0	0.50	10/25/18 12:42	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	10/25/18 12:42	
1,2-Dichloroethane-d4 (S)	%	91	70-130		10/25/18 12:42	
4-Bromofluorobenzene (S)	%	110	70-130		10/25/18 12:42	
Toluene-d8 (S)	%	102	70-130		10/25/18 12:42	

LABORATORY CONTROL SAMPLE: 2642254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.9	99	70-130	
1,1,1-Trichloroethane	ug/L	20	20.4	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	104	68-125	
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	
1,1-Dichloroethane	ug/L	20	19.4	97	70-130	
1,1-Dichloroethene	ug/L	20	17.3	87	66-133	
1,2,3-Trichloropropane	ug/L	20	19.2	96	62-127	
1,2-Dibromo-3-chloropropane	ug/L	20	17.8	89	45-137	
1,2-Dibromoethane (EDB)	ug/L	20	22.2	111	70-130	
1,2-Dichlorobenzene	ug/L	20	20.4	102	70-130	
1,2-Dichloroethane	ug/L	20	18.4	92	70-130	
1,2-Dichloropropane	ug/L	20	19.9	100	70-130	
1,4-Dichlorobenzene	ug/L	20	19.5	97	70-130	
2-Butanone (MEK)	ug/L	40	41.7	104	47-143	
2-Hexanone	ug/L	40	42.2	105	48-145	
4-Methyl-2-pentanone (MIBK)	ug/L	40	42.4	106	57-132	
Acetone	ug/L	40	43.0	107	46-148	
Acrylonitrile	ug/L	200	218	109	60-143	
Benzene	ug/L	20	20.3	101	70-130	
Bromochloromethane	ug/L	20	21.4	107	70-130	
Bromodichloromethane	ug/L	20	19.7	99	70-130	
Bromoform	ug/L	20	19.2	96	49-126	
Bromomethane	ug/L	20	7.8	39	10-165	
Carbon disulfide	ug/L	20	15.0	75	60-141	
Carbon tetrachloride	ug/L	20	17.8	89	63-126	
Chlorobenzene	ug/L	20	20.8	104	70-130	
Chloroethane	ug/L	20	17.2	86	71-142	
Chloroform	ug/L	20	19.6	98	70-130	
Chloromethane	ug/L	20	19.2	96	40-140	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	70-130	
cis-1,3-Dichloropropene	ug/L	20	17.8	89	70-130	

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

LABORATORY CONTROL SAMPLE: 2642254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.0	90	62-118	
Dibromomethane	ug/L	20	22.1	110	70-130	
Ethylbenzene	ug/L	20	20.3	101	70-130	
Iodomethane	ug/L	40	9.1 I	23	10-164	
Methylene Chloride	ug/L	20	18.6	93	65-136	
Styrene	ug/L	20	19.3	96	70-130	
Tetrachloroethene	ug/L	20	23.8	119	64-134	
Toluene	ug/L	20	21.9	110	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.7	94	68-127	
trans-1,3-Dichloropropene	ug/L	20	18.1	91	65-121	
trans-1,4-Dichloro-2-butene	ug/L	20	17.4	87	42-129	
Trichloroethene	ug/L	20	20.9	104	70-130	
Trichlorofluoromethane	ug/L	20	16.8	84	65-135	
Vinyl acetate	ug/L	20	18.2	91	60-144	
Vinyl chloride	ug/L	20	20.0	100	68-131	
Xylene (Total)	ug/L	60	62.0	103	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			113	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 2643465

Parameter	Units	35424797002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	20	14.5	72	70-130	
1,1,1-Trichloroethane	ug/L	0.50 U	20	19.3	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	20	10.3	51	68-125	J(M1)
1,1,2-Trichloroethane	ug/L	0.50 U	20	13.0	65	70-130	J(M1)
1,1-Dichloroethane	ug/L	0.50 U	20	19.9	99	70-130	
1,1-Dichloroethene	ug/L	0.50 U	20	16.8	84	66-133	
1,2,3-Trichloropropane	ug/L	0.59 U	20	10	50	62-127	J(M1)
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	20	5.3	27	45-137	J(M1)
1,2-Dibromoethane (EDB)	ug/L	0.50 U	20	12.7	64	70-130	J(M1)
1,2-Dichlorobenzene	ug/L	0.50 U	20	16.0	80	70-130	
1,2-Dichloroethane	ug/L	0.50 U	20	12.3	61	70-130	J(M1)
1,2-Dichloropropane	ug/L	0.50 U	20	16.4	82	70-130	
1,4-Dichlorobenzene	ug/L	0.50 U	20	16.2	81	70-130	
2-Butanone (MEK)	ug/L	5.0 U	40	13.1	33	47-143	J(M1)
2-Hexanone	ug/L	5.0 U	40	12.0	30	48-145	J(M1)
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	15.7	39	57-132	J(M1)
Acetone	ug/L	10.0 U	40	10.0 U	23	46-148	J(M1)
Acrylonitrile	ug/L	5.0 U	200	54.8	27	60-143	J(M1)
Benzene	ug/L	0.10 U	20	18.2	91	70-130	
Bromochloromethane	ug/L	0.50 U	20	16.5	82	70-130	
Bromodichloromethane	ug/L	0.27 U	20	13.9	70	70-130	
Bromoform	ug/L	0.50 U	20	7.9	39	49-126	J(M1)

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(386)672-5668

QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

MATRIX SPIKE SAMPLE: 2643465

Parameter	Units	35424797002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	0.50 U	20	15.7	78	10-165	
Carbon disulfide	ug/L	5.0 U	20	16.0	80	60-141	
Carbon tetrachloride	ug/L	0.50 U	20	16.1	80	63-126	
Chlorobenzene	ug/L	0.50 U	20	18.3	92	70-130	
Chloroethane	ug/L	0.50 U	20	13.9	69	71-142	J(M1)
Chloroform	ug/L	0.50 U	20	17.9	89	70-130	
Chloromethane	ug/L	0.62 U	20	19.0	95	40-140	
cis-1,2-Dichloroethene	ug/L	0.50 U	20	18.2	91	70-130	
cis-1,3-Dichloropropene	ug/L	0.25 U	20	10.2	51	70-130	J(M1)
Dibromochloromethane	ug/L	0.26 U	20	9.7	49	62-118	J(M1)
Dibromomethane	ug/L	0.50 U	20	12.8	64	70-130	J(M1)
Ethylbenzene	ug/L	0.50 U	20	18.6	93	70-130	
Iodomethane	ug/L	0.50 U	40	13.2	33	10-164	
Methylene Chloride	ug/L	2.5 U	20	17.9	90	65-136	
Styrene	ug/L	0.50 U	20	15.5	77	70-130	
Tetrachloroethene	ug/L	0.50 U	20	18.5	93	64-134	
Toluene	ug/L	0.50 U	20	20.1	100	70-130	
trans-1,2-Dichloroethene	ug/L	0.50 U	20	20.1	101	68-127	
trans-1,3-Dichloropropene	ug/L	0.25 U	20	8.8	44	65-121	J(M1)
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	20	5.0 U	0	42-129	J(M1)
Trichloroethene	ug/L	0.50 U	20	21.3	107	70-130	
Trichlorofluoromethane	ug/L	0.50 U	20	17.1	86	65-135	
Vinyl acetate	ug/L	1.0 U	20	10.6	53	60-144	J(M1)
Vinyl chloride	ug/L	0.50 U	20	18.2	91	68-131	
Xylene (Total)	ug/L	1.5 U	60	54.6	91	70-130	
1,2-Dichloroethane-d4 (S)	%				73	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	J(IS)
Toluene-d8 (S)	%				100	70-130	J(IS)

SAMPLE DUPLICATE: 2643464

Parameter	Units	35424797001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U		40	
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1,2,2-Tetrachloroethane	ug/L	0.12 U	0.12 U		40	
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,1-Dichloroethene	ug/L	0.50 U	0.50 U		40	
1,2,3-Trichloropropane	ug/L	0.59 U	0.59 U		40	
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	1.0 U		40	
1,2-Dibromoethane (EDB)	ug/L	0.50 U	0.50 U		40	
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	
1,2-Dichloroethane	ug/L	0.50 U	0.50 U		40	
1,2-Dichloropropane	ug/L	0.50 U	0.50 U		40	
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U		40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

SAMPLE DUPLICATE: 2643464

Parameter	Units	35424797001 Result	Dup Result	RPD	Max RPD	Qualifiers
2-Butanone (MEK)	ug/L	5.0 U	5.0 U		40	
2-Hexanone	ug/L	5.0 U	5.0 U		40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	5.0 U		40	
Acetone	ug/L	10.0 U	10.0 U		40	
Acrylonitrile	ug/L	5.0 U	5.0 U		40	
Benzene	ug/L	0.10 U	0.10 U		40	
Bromochloromethane	ug/L	0.50 U	0.50 U		40	
Bromodichloromethane	ug/L	0.27 U	0.27 U		40	
Bromoform	ug/L	0.50 U	0.50 U		40	
Bromomethane	ug/L	0.50 U	0.50 U		40	
Carbon disulfide	ug/L	5.0 U	5.0 U		40	
Carbon tetrachloride	ug/L	0.50 U	0.50 U		40	
Chlorobenzene	ug/L	0.50 U	0.50 U		40	
Chloroethane	ug/L	0.50 U	0.50 U		40	
Chloroform	ug/L	0.50 U	0.50 U		40	
Chloromethane	ug/L	0.62 U	0.62 U		40	
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
Dibromochloromethane	ug/L	0.26 U	0.26 U		40	
Dibromomethane	ug/L	0.50 U	0.50 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
Iodomethane	ug/L	0.50 U	0.50 U		40	
Methylene Chloride	ug/L	2.5 U	2.5 U		40	
Styrene	ug/L	0.50 U	0.50 U		40	
Tetrachloroethene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U		40	
trans-1,3-Dichloropropene	ug/L	0.25 U	0.25 U		40	
trans-1,4-Dichloro-2-butene	ug/L	5.0 U	5.0 U		40	
Trichloroethene	ug/L	0.50 U	0.50 U		40	
Trichlorofluoromethane	ug/L	0.50 U	0.50 U		40	
Vinyl acetate	ug/L	1.0 U	1.0 U		40	
Vinyl chloride	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	92	95	3	40	
4-Bromofluorobenzene (S)	%	109	109	0	40	
Toluene-d8 (S)	%	101	100	1	40	

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QUALITY CONTROL DATA

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

QC Batch: 488928 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: 8011 EDB DBCP
Associated Lab Samples: 35426217001, 35426217002, 35426217003, 35426217004

METHOD BLANK: 2645031 Matrix: Water
Associated Lab Samples: 35426217001, 35426217002, 35426217003, 35426217004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0064 U	0.020	0.0064	10/30/18 03:19	
1,2-Dibromoethane (EDB)	ug/L	0.0075 U	0.010	0.0075	10/30/18 03:19	

LABORATORY CONTROL SAMPLE: 2645032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.24	95	60-140	
1,2-Dibromoethane (EDB)	ug/L	.25	0.23	94	60-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2645717 2645718

Parameter	Units	35426560004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0062 U	.44	.44	0.47	0.48	108	110	60-140	2	40	
1,2-Dibromoethane (EDB)	ug/L	0.0073 U	.44	.44	0.48	0.50	110	115	60-140	4	40	

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(386)672-5668

QUALIFIERS

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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TNI - The NELAC Institute.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(IS)	Estimated Value. The internal standard recovery associated with this result exceeds the lower control limit. The reported result should be considered an estimated value.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka LF B5/37 Study
Pace Project No.: 35426217

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35426217002	**B5-37A**				
35426217003	**B5-35**				
35426217004	**B37-8**				
35426217001	**EQ Blank 10/24/18**	EPA 8011	488928	EPA 8011	489392
35426217002	**B5-37A**	EPA 8011	488928	EPA 8011	489392
35426217003	**B5-35**	EPA 8011	488928	EPA 8011	489392
35426217004	**B37-8**	EPA 8011	488928	EPA 8011	489392
35426217001	**EQ Blank 10/24/18**	EPA 8260	488452		
35426217002	**B5-37A**	EPA 8260	488452		
35426217003	**B5-35**	EPA 8260	488452		
35426217004	**B37-8**	EPA 8260	488452		
35426217005	**Trip Blank 10/24/18**	EPA 8260	488452		

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WO# : 35426217

35426217

AIN-OF-CUSTODY / Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — **Required Client Information:**

Company:	Volusia County Solid Waste Management
Address:	1990 Tomoka Farms Road
	Daytona Beach, FL 32124
Email:	
Phone:	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ms. Jennifer Stirk
Copy To:	
Purchase Order #:	
Project Name:	Tomoka B5 study
Project #:	

Section C — **Invoice Information:**

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	jeff.baylor@pacelabs.com,
Pace Profile #:	1592

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 Full List	EDB 8011	Trip BLANK	Residual Chlorine (Y/N)
1	EQ					10-24-18	9:25												X	X		
2	B5-37A					10-24-18	9:51												X	X		
3	~~B5~~ B5-35					10-24-18	10:34												X	X		
4	B37-8					10-24-18	11:34												X	X		
5	TRIP BLANK					10-24-18	0000														X	
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		10/24/18	1600				
		10-24-18	1640	AS/Pace	10/24/18	1640	Y N Y
					3.7	TUBE	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: BRUCE FOSTER

SIGNATURE of SAMPLER:

DATE Signed: 10-24-18

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

WO#: 35426217
PM: JSB Due Date: 11/02/18
CLIENT: VOLDPW

Projec
Project Manag
Clier

Date and Initials of person:
Examining contents:_____
Label:_____
Deliver:_____
pH:_____

Thermometer Used: T338 Date: 10/24/18 Time: 1640 Initials: DLL

State of Origin: _____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	3.1 **(Visual)**	+0 **(Correction Factor)**	3.1 **(Actual)**	☑ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other_____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other_____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Samples shorted to lab (If Yes, complete) Shorted Date:_____ Shorted Time:_____ Qty:_____

		Comments:
Chain of Custody Present	☑Yes ☐ No ☐N/A	
Chain of Custody Filled Out	☑Yes ☐ No ☐N/A	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No ☐N/A	
Samples Arrived within Hold Time	☑Yes ☐ No ☐N/A	
Rush TAT requested on COC	☐Yes ☐ No ☑N/A	
Sufficient Volume	☑Yes ☐ No ☐N/A	
Correct Containers Used	☑Yes ☐ No ☐N/A	
Containers Intact	☑Yes ☐ No ☐N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑Yes ☐ No ☐N/A	
All containers needing acid/base preservation have been checked.	☐Yes ☐ No ☑N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐Yes ☐ No ☑N/A	Preservative:_____ Lot #/Trace #:_____ Date:_____ Time:_____ Initials:_____
Headspace in VOA Vials? (>6mm):	☑Yes ☐ No ☐N/A	
Trip Blank Present:	☑Yes ☐ No ☐N/A	

Client Notification/ Resolution:
Person Contacted:_____ Date/Time:_____

Comments/ Resolution (use back for additional comments):
Headspace in 2/3 vials for sample 004

Project Manager Review:_____ Date:_____

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County Solid Waste	SITE LOCATION: Tomoka B-5 Study	
WELL NO: EQ	SAMPLE ID: EQ	DATE: 10-24-14

PURGING DATA

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

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

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

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Bruce Foster	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:25	SAMPLING ENDED AT: 9:30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCl			8260	PP	400
	2	CG	40	Ice			9011	1	1

REMARKS:

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

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

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

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2212-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Volusia County Solid WASTER	SITE LOCATION: TOMOKA BS. STUDY	
WELL NO: B37-8	SAMPLE ID: B37-8	DATE: 10-24-18

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 3.75	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)

= (37.08 feet – 3.75 feet) X gallons/foot = 5.4844 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: 11:00	PURGING ENDED AT: 11:34	TOTAL VOLUME PURGED (gallons): 8.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:22	5.50	5.50	.25	4.92	5.49	25.2	186	0.69	9.25	clear	Soil
11:29	1.50	7.00	.25	4.92	5.49	25.1	186	0.68	0.58	1	1
11:34	1.50	8.50	.25	4.92	5.48	25.1	186	0.67	0.68	1	1

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

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Bruce Foster	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 11:34	SAMPLING ENDED AT: 11:40
PUMP OR TUBING DEPTH IN WELL (feet): 6	TUBING MATERIAL CODE: HDPE, S	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40	HCL		5.48	8260	APP	400
	2	CG	1	[illegible]			8011	1	1

REMARKS:

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

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

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

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

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