June 27, 2014

F. Thomas Lubozynski, P.E.
Waste & Air Resource Programs Administrator
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Subject: Groundwater Contamination Assessment
Quarter 3 Evaluation Monitoring Report
J.E.D. Solid Waste Management Facility
Osceola County, Florida
Permit Nos. 0199726-023-SC-MM and SO49-0199726-022

Dear Mr. Lubozynski:

On behalf of Omni Waste of Osceola County, LLC (Omni), HDR is submitting this sampling report for the three evaluation monitoring wells CW-1A, CW-2A and CW-3A installed in December 2013 at the J.E.D. Solid Waste Management Facility (facility). This is the third of four quarterly evaluation monitoring reports, as required by the Work Plan submitted on October 31, 2013. The wells were installed to address volatile organic compound (VOC) detections in groundwater samples collected from select groundwater monitoring wells at the facility. Routine groundwater monitoring has at times detected Benzene in groundwater at levels slightly above the Primary Drinking Water Standard (PDWS) in samples collected from eleven shallow groundwater monitoring wells and vinyl chloride from three shallow groundwater monitoring wells located along the disposal boundary of the northern portion of the landfill. To evaluate these detections, Omni conducted several investigations which indicated the probable source of these VOCs was landfill gas migration beyond the lined disposal boundary.

Omni subsequently implemented a Soil Vapor Extraction (SVE) pilot test study in March 2013. As discussed in a July 23, 2013 meeting with the Florida Department of Environmental Protection (Department) (and subsequent July 30, 2013 letter from Omni), based on the groundwater quality data collected since installation of the SVE pilot system Omni recommended that the SVE pilot test study be discontinued and instead focus continued efforts on proactively expanding the Landfill Gas Collection Control System (GCCS) within the landfill disposal footprint. Additionally, as summarized in an August 6, 2013 letter to the Department, Omni prepared a contamination evaluation Work Plan to delineate the extent of the impacts and predict the likelihood that water quality standards will be violated outside the zone of discharge (ZOD) (if any) and evaluate potential preventative methods. The Work Plan outlined the installation procedures for three new temporary delineation wells CW-1A, CW-2A and CW-3A. The three evaluation monitoring wells are shown in Attachment 1, Figure 1.

Well Sampling and Analysis

The Work Plan requires four quarterly compliance well sampling events/ reports as follows:

Quarter 1 – December 2013 (complete)

Quarter 2 – February 2014 /March 2014 (complete)

Quarter 3 – May 2014/June 2014 (herein)

Quarter 4 – August 2014/September 2014

The samples collected in Quarter 1 were analyzed for parameters required for an initial sampling event as listed in Chapter 62-701.510(7)(a) and (c).

The required sample parameters collected for Quarters 2, 3, and 4 include those listed in Chapter 62-701.510(7)(a) only. The parameter lists have been provided below for reference.

Chapter 62-701.510(7)(a)

Field Parameters	Laboratory Parameters
Static water level before purge	Total ammonia – N
Specific conductivity	Chlorides
pH	Iron
Dissolved Oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and sheens by observation	Total dissolved solids (TDS)
ALS Environmental	Those parameters listed in 40 CFR Part 258 Appendix I

Chapter 62-701.510(7)(c)

Those parameters listed in 40 CFR Part 258 Appendix II.

Results

The lab analysis results for the Quarter 3 sampling event are provided in Attachment 2 – Laboratory and Field Data. The detected parameters have been listed in Tables 1 – CW-1A, Table 2 – CW-2A, and Table 3 – CW-3A below.

Table 1 – Summary of Parameters detected during Lab Analysis CW-1A

Parameters	CW-1A Result				MCL	MDL	PQL	Units
	Q1	*Q2*	*Q3*	*Q4*				
Chloride	21.7	21.2	17.6		250**	0.11	0.5	mg/L
Ammonia as Nitrogen	1.05	0.783	0.575		2.8***	0.007	0.01	mg/L
Iron, Total Recoverable	**11,900**	**9,870**	**6,390**		300**	3	100	ug/L
Sodium, Total Recoverable	20.4	17.1	15.1		160*	0.03	0.5	mg/L
Arsenic, Total Recoverable	**278**	**166**	**77.6**		10*	0.5	1	ug/L
Barium, Total Recoverable	55.2	46.4	33.3		2000*	0.5	2	ug/L
Beryllium, Total Recoverable	0.15 I	0.06 I	0.05 I		4*	0.04	0.5	ug/L
Cadmium, Total Recoverable	0.87	ND	ND		5*	0.1	0.4	ug/L
Cobalt, Total Recoverable	3.2	2.2	1.4		420	0.03	1	ug/L
Chromium, Total Recoverable	11.1	6.6	3.2		100*	0.2	1	ug/L
Copper, Total Recoverable	0.8 I	ND	ND		1000**	0.3	1	ug/L
Nickel, Total Recoverable	6.1	1 I	0.8		100*	0.5	2	ug/L
Lead, Total Recoverable	1.05	0.16 I	0.27		15*	0.12	0.5	ug/L
Selenium, Total Recoverable	2.8	ND	ND		50*	1.1	2	ug/L
Thallium, Total Recoverable	0.05 I	ND	ND		2*	0.05	0.2	ug/L
Vanadium, Total Recoverable	12.3	3.5	2.9		49***	0.3	2	ug/L
Zinc, Total Recoverable	2.8 I	4.9 I	5.2		5000**	1.6	5	ug/L
Toluene	0.23 I	ND	ND		1000**	0.19	1	ug/L
Solids, Total Dissolved	445	268	237		500**	10	10	mg/L

Notes:

ND = Not Detect

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

I = The reported value is between the laboratory method detection limit and the laboratory PQL.

MCL = Maximum Contaminant Level (PDWS*, SDWS**, GCTL***)

PDWS = Primary Drinking Water Standard

SDWS = Secondary Drinking Water Standard

GCTL = Groundwater Cleanup Target Level

Table 2 – Summary of Parameters detected during Lab Analysis CW-2A

Parameters	CW-2A Result				MCL	MDL	PQL	Units
	Q1	*Q2*	*Q3*	*Q4*				
Chloride	76.3	92.1	106		250**	0.11	0.5	mg/L
Ammonia as Nitrogen	**6.72**	**6.83**	**7.19**		2.8***	0.007	0.01	mg/L
Iron, Total Recoverable	**8,070**	**4,050**	**3,270**		300**	3	100	ug/L
Sodium, Total Recoverable	50.4	59.4	66.8		160*	0.03	0.5	mg/L
Arsenic, Total Recoverable	1 I	2.2	1.3		10*	0.5	1	ug/L
Barium, Total Recoverable	54	54.1	54.2		2000*	0.5	2	ug/L
Beryllium, Total Recoverable	0.54	0.38	0.36		4*	0.04	0.5	ug/L
Cobalt, Total Recoverable	2.6	1.8	1.4		420	0.03	1	ug/L
Chromium, Total Recoverable	1.5	1.9	1.6		100*	0.2	1	ug/L
Copper, Total Recoverable	0.4 I	0.4	0.3		1000**	0.3	1	ug/L
Nickel, Total Recoverable	2.5	2.9	2.5		100*	0.5	2	ug/L
Vanadium, Total Recoverable	9.2	8.6	7.8		49***	0.3	2	ug/L
Zinc, Total Recoverable	3.7 I	3.8	4.1		5000**	1.6	5	ug/L
Mercury, Total	0.03 I	ND	ND		2*	0.02	0.1	ug/L
Solids, Total Dissolved	**918**	**952**	**958**		500**	10	10	mg/L

Notes:

ND = Not Detect

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

I = The reported value is between the laboratory method detection limit and the laboratory PQL.

MCL = Maximum Contaminant Level (PDWS*, SDWS**, GCTL***)

PDWS = Primary Drinking Water Standard

SDWS = Secondary Drinking Water Standard

GCTL = Groundwater Cleanup Target Level

Table 3 – Summary of Parameters detected during Lab Analysis CW-3A

Parameters	CW-3A Result				MCL	MDL	PQL	Units
	Q1	*Q2*	*Q3*	*Q4*				
Chloride	62	63	59.6		250**	0.11	0.5	mg/L
Ammonia as Nitrogen	**11.1**	**8.17**	**7.8**		2.8***	0.007	0.01	mg/L
Iron, Total Recoverable	**126,000**	**115,000**	**123,000**		300**	3	100	ug/L
Sodium, Total Recoverable	65.5	68.5	57.9		160*	0.03	0.5	mg/L
Arsenic, Total Recoverable	2.1	2	1.7		10*	0.5	1	ug/L
Barium, Total Recoverable	173	108	121		2000*	0.5	2	ug/L
Beryllium, Total Recoverable	0.63	0.67	0.61		4*	0.04	0.5	ug/L
Cobalt, Total Recoverable	12.9	13	12.6		420	0.03	1	ug/L
Chromium, Total Recoverable	12.5	8.3	9.3		100*	0.2	1	ug/L
Copper, Total Recoverable	0.6 I	.4 I	0.5		1000**	0.3	1	ug/L
Nickel, Total Recoverable	3.1	2.1	2.5		100*	0.5	2	ug/L
Lead, Total Recoverable	2.08	ND	ND		15*	0.12	0.5	ug/L
Selenium, Total Recoverable	1.8 I	ND	ND		50*	1.1	2	ug/L
Vanadium, Total Recoverable	15	11.3	10.9		49***	0.3	2	ug/L
Zinc, Total Recoverable	3.7 I	6.5	4.5		5000**	1.6	5	ug/L
Mercury, Total	0.05 I	ND	ND		2*	0.02	0.1	ug/L
Solids, Total Dissolved	**1,190**	**1,230**	**1,360**		500**	10	10	mg/L

Notes:

ND = Not Detect

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

I = The reported value is between the laboratory method detection limit and the laboratory PQL.

MCL = Maximum Contaminant Level (PDWS*, SDWS**, GCTL***)

PDWS = Primary Drinking Water Standard

SDWS = Secondary Drinking Water Standard

GCTL = Groundwater Cleanup Target Level

VOCs were not detected during Quarter 1, Quarter 2 or Quarter 3, with the exception of very low level toluene in CW-1A during Quarter 1. The Quarter 1 toluene concentration (0.23 I ug/L) was between the MDL and the PQL and well below the SDWS of 1000 ug/L, and toluene was not confirmed during Quarter 2 or Quarter 3. Ammonia (N), iron, TDS, and arsenic have been the only parameters detected above groundwater standards. Each of these parameters has been historically detected in the "A" Zone wells, and both arsenic and TDS levels are frequently associated with high iron concentrations. Iron exceeded the SDWS in each of the three evaluation monitoring wells, however with the exception of CW-3A, levels were within the historical range. Iron was reported in CW-3A at 126,000 ug/L (Quarter 1), at 115,000 ug/L (Quarter 2), and 123,000 ug/L (Quarter 3). Laboratory error was suspected in the Quarter 1 analysis, but the Quarter 2 and Quarter 3 result have confirmed high iron concentration. High turbidity and low Oxidation/Reduction Potential (ORP) can also result in high levels of dissolved iron, but the reported levels of turbidity and ORP in CW-3A do not support that conclusion. Turbidity in CW-3A in Quarter 1 (32 to 35 NTU) was higher than the other evaluation monitoring wells, but in Quarters 2 and 3, turbidity was very low (<0.4 and 1.1 NTU, respectively) as comparable to the other wells. The ORP level in CW-3A was also comparable to levels in CW-1A and CW-2A. ORP ranged from 58 to 61.1 mV in CW-1A,76 to 77.7 mV in CW-2A, and 67 to 72.5 mV in CW-3A. ORP levels during Quarter 3 were higher in all three wells than in previous events.

Arsenic was also reported above the PDWS of 10 ug/L in CW-1A at 278 ug/L in Quarter 1, at 166 ug/L in Quarter 2, and at 77.6 ug/L in Quarter 3. CW-1A was installed at a location west of the landfill to delineate MW-3A, however MW-3A rarely reports arsenic levels above 2 ug/L, and CW-2A and CW-3A reported arsenic at < 2.2 ug/L in both Quarter 1 and Quarter 2. The Quarter 2 and Quarter 3 samples confirmed arsenic above the PDWS. Based on low arsenic levels in the detection wells, there may be a secondary source, such as the nearby electrical power pole that may have been treated with an arsenic compound such as CCA. Although the arsenic level in CW-1A was again reported above the PDWS, levels have decreased by an order of magnitude (from 278 ug/L to 77.6 ug/L) since Quarter 1. The decreasing trend in CW-1A combined with the fact that arsenic in groundwater has not been reported at similar levels in other "A" Zone wells may indicate that arsenic was introduced from a surface source (e.g. CCA treated power pole), and there is no longer a connection.

Based on historical detections, arsenic, which has a geochemical association with iron, is frequently detected in "A" Zone monitoring wells. Arsenic is occasionally detected above the MCL, but when reported above the MCL the range is typically between 10 and 20 ug/L in two wells (MW-11A and MW-13A) on the east side of the landfill. However, arsenic was barely detected in the wells downgradient of MW-11A and MW-13A. TDS levels reported exceeding the SDWS in CW-2A and CW-3A and just below the MCL in CW-1A are attributable to the high iron levels in these wells

In summary, the three evaluation monitoring wells were installed to delineate VOCs (primarily benzene and vinyl chloride) that have been reported from samples collected in the shallow ("A" Zone) wells. Neither of these VOCs has been detected in the evaluation monitoring wells. Additionally, chloride, which is an excellent conservative indicator of leachate in groundwater, was detected at low levels and well balanced with sodium. These findings support the suggestion that the VOCs which have been detected above groundwater standards in upgradient wells were likely associated with landfill gas.

Recommendations

The Work Plan submitted October 31, 2013 required installing the three evaluation monitoring wells described herein. The Work Plan requires sampling and analyzing groundwater from the three wells for the purpose of delineating VOCs, primarily benzene and vinyl chloride, within the landfill compliance zone. This report is the third of four quarterly reports required for submittal during the evaluation monitoring described in the Work Plan. Based on the results of the first, second, and third quarterly sampling events, it is recommended to continue as outlined in the Work Plan. The Quarter 4 sampling event will be scheduled in August/September 2014, and the FDEP will be notified at least 14 days prior to sampling. The wells will be sampled for those parameters listed in Chapter 62-701.510(7)(a) during the next quarterly sampling event (Quarter 4). It is also recommended to sample iron and arsenic during Quarter 4 since both parameters were confirmed in the Quarter 2 and Quarter 3 sampling events. It is also recommended that groundwater elevations be taken in all "A" zone wells to produce groundwater contour maps for each quarterly event that does not coincide with a semi-annual sampling event. The "A" zone groundwater contour map for Quarter 3 is included as Attachment 1, Figure 2.

Closing

HDR has prepared this report on behalf of Omni to maintain compliance with the Florida Water Quality Regulations. Thank you in advance for your review. If you have any questions or comments, please contact me at (904) 598-8900 or Mr. Mike Kaiser at (904) 673-0446.

Sincerely,

John S. Catches, P.G.
Sr. Project Manager

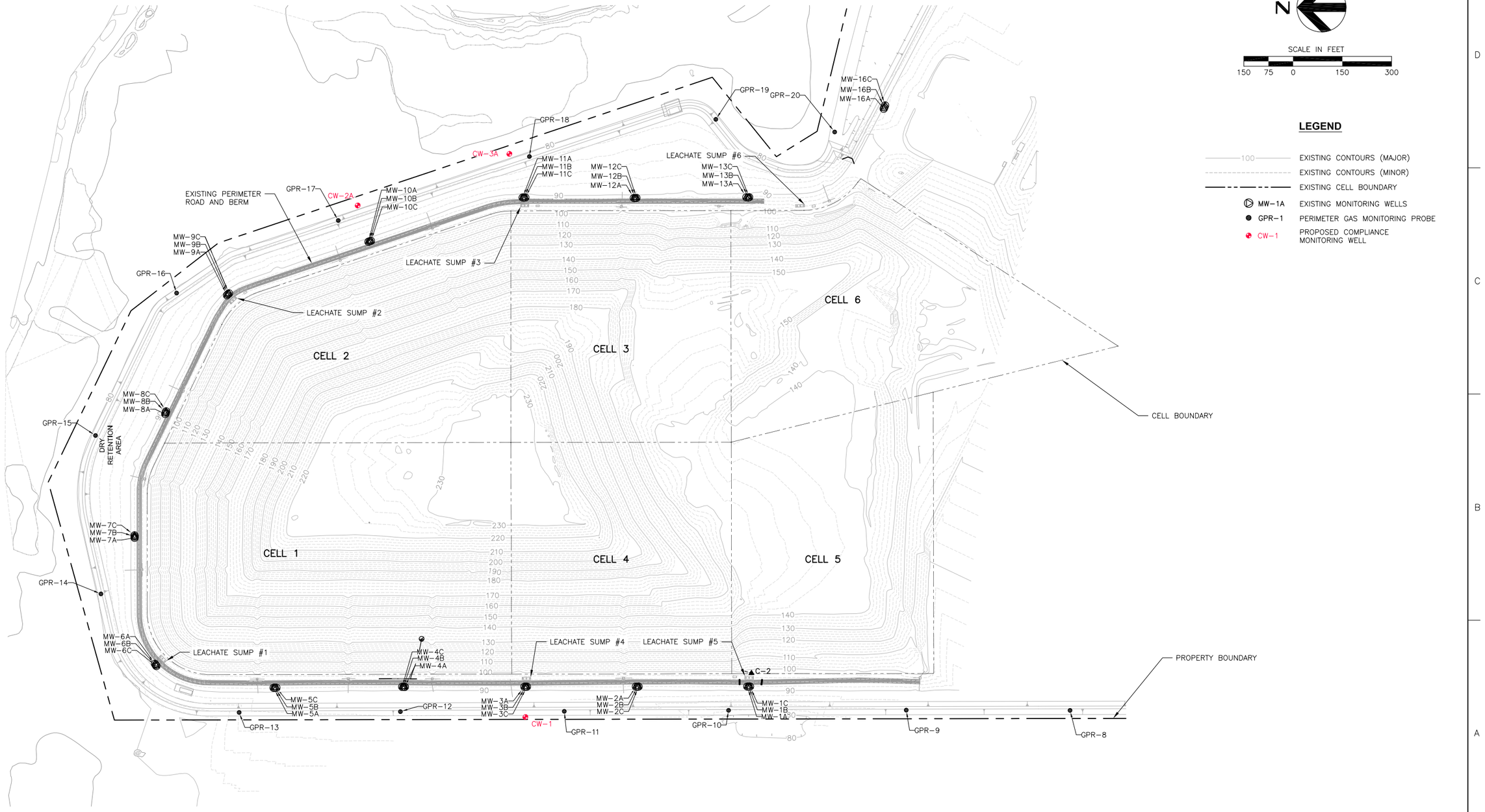
Attachments

Cc: Mike Kaiser, Progressive Waste Solutions, Inc.

1

Attachment One

FIGURES AND WATER TABLE ELEVATIONS



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	B. STONE, P.E.
DESIGN BY	C. KOENIG, P.E.
DESIGN BY	
CHECKED BY	B. STONE, P.E.
DRAWN BY	C. BREWER
PROJECT NUMBER	174075

HDR Engineering, Inc.
200 W Forsyth St
Jacksonville, FL 32202

Progressive Waste Solutions

J.E.D. Solid Waste Management Facility
Omni Waste of Osceola County, LLC

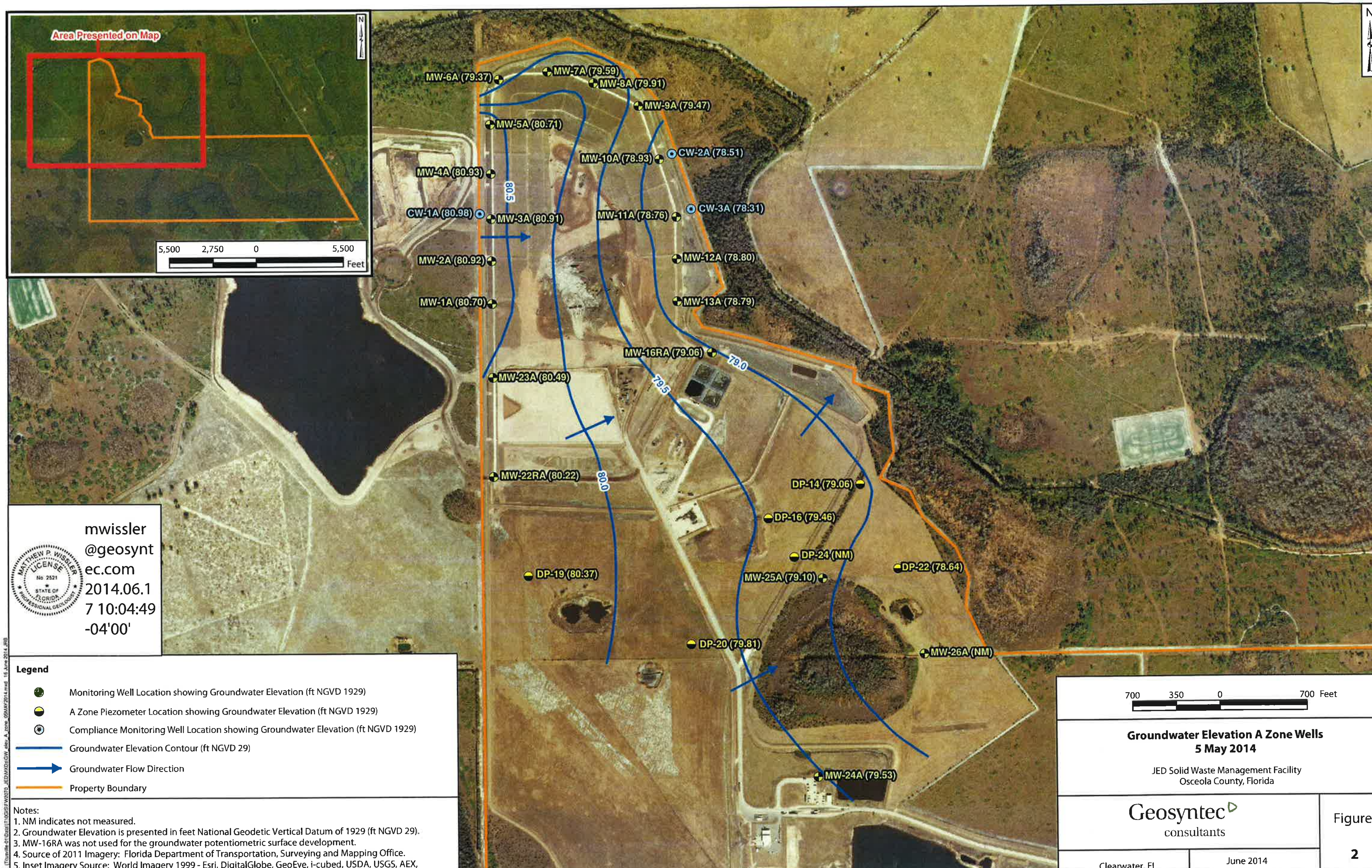
1501 Omni Way St. Cloud, FL. 34773
(407) 891-3720

2013 J.E.D. LANDFILL GROUNDWATER ASSESSMENT STUDY PLAN

0 1" 2"

FILENAME	00C-01.dwg
SCALE	AS SHOWN

SHEET Figure 1



mwissler@geosyntec.com
2014.06.17 10:04:49 -04'00'

Legend

- Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
- A Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
- Compliance Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
- Groundwater Elevation Contour (ft NGVD 29)
- Groundwater Flow Direction
- Property Boundary

Notes:
1. NM indicates not measured.
2. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
3. MW-16RA was not used for the groundwater potentiometric surface development.
4. Source of 2011 Imagery: Florida Department of Transportation, Surveying and Mapping Office.
5. Inset Imagery Source: World Imagery 1999 - Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

Groundwater Elevation A Zone Wells
5 May 2014

JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Clearwater, FL | June 2014

Figure 2

GROUNDWATER LEVEL MEASUREMENTS
QUARTERLY COMPLIANCE WELL SAMPLING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility
Location: Osceola County, Florida
Date: 5-May-2014

Well ID	Time	TOC Elevation	Depth to Water (ft)	GW Elevation
CW-1A	15:40	84.53	3.55	80.98
CW-2A	14:40	82.81	4.30	78.51
CW-3A	13:35	81.89	3.58	78.31
DP-19	10:37	84.34	3.97	80.37
DP-20	10:30	83.07	3.26	79.81
DP-22	10:00	81.00	2.36	78.64
MW-1A	11:00	95.12	14.42	80.70
MW-2A	11:10	95.21	14.29	80.92
MW-3A	11:15	94.64	13.73	80.91
MW-4A	11:20	95.48	14.55	80.93
MW-5A	11:25	95.32	14.61	80.71
MW-6A	11:30	94.72	15.35	79.37
MW-7A	11:35	95.48	15.89	79.59
MW-8A	11:45	94.67	14.76	79.91
MW-9A	11:50	94.66	15.19	79.47
MW-10A	12:00	96.25	17.32	78.93
MW-11A	12:05	93.56	14.80	78.76
MW-12A	12:15	95.10	16.30	78.80
MW-13A	12:20	95.19	16.40	78.79
MW-16RA	12:25	95.01	15.95	79.06
MW-22RA	10:45	95.00	14.78	80.22
MW-23A	10:55	97.90	17.41	80.49
MW-24A	9:12	86.97	7.44	79.53

2

Attachment Two

LABORATORY AND FIELD DATA

May 27, 2014 Service Request No:J1403216

Mike Kaiser
Waste Services of Florida, Inc.
1501 Omni Way
St Cloud, FL 34773

Laboratory Results for: JED Compliance Wells

Dear Mike,

Enclosed are the results of the sample(s) submitted to our laboratory May 06, 2014
For your reference, these analyses have been assigned our service request number **J1403216.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: CW-1A	Lab ID: J1403216-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	17.6		0.2	1.0	mg/L	300.0
Ammonia as Nitrogen	0.575		0.007	0.010	mg/L	350.1
Iron, Total Recoverable	6390		3	100	ug/L	6010B
Sodium, Total Recoverable	15.1		0.03	0.50	mg/L	6010B
Arsenic, Total Recoverable	77.6		0.5	1.0	ug/L	6020
Barium, Total Recoverable	33.3		0.5	2.0	ug/L	6020
Beryllium, Total Recoverable	0.05	I	0.04	0.50	ug/L	6020
Cobalt, Total Recoverable	1.4		0.03	1.0	ug/L	6020
Chromium, Total Recoverable	3.2		0.2	1.0	ug/L	6020
Nickel, Total Recoverable	0.8	I	0.5	2.0	ug/L	6020
Lead, Total Recoverable	0.27	I	0.12	0.50	ug/L	6020
Vanadium, Total Recoverable	2.9		0.3	2.0	ug/L	6020
Zinc, Total Recoverable	5.2		1.6	5.0	ug/L	6020
Solids, Total Dissolved	237		10	10	mg/L	SM 2540 C

CLIENT ID: CW-2A	Lab ID: J1403216-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	106		0.2	1.0	mg/L	300.0
Ammonia as Nitrogen	7.19		0.007	0.010	mg/L	350.1
Iron, Total Recoverable	3270		3	100	ug/L	6010B
Sodium, Total Recoverable	66.8		0.03	0.50	mg/L	6010B
Arsenic, Total Recoverable	1.3		0.5	1.0	ug/L	6020
Barium, Total Recoverable	54.2		0.5	2.0	ug/L	6020
Beryllium, Total Recoverable	0.36	I	0.04	0.50	ug/L	6020
Cobalt, Total Recoverable	1.4		0.03	1.0	ug/L	6020
Chromium, Total Recoverable	1.6		0.2	1.0	ug/L	6020
Copper, Total Recoverable	0.3	I	0.3	1.0	ug/L	6020
Nickel, Total Recoverable	2.5		0.5	2.0	ug/L	6020
Antimony, Total Recoverable	0.2	I	0.2	1.0	ug/L	6020
Vanadium, Total Recoverable	7.8		0.3	2.0	ug/L	6020
Zinc, Total Recoverable	4.1	I	1.6	5.0	ug/L	6020
Solids, Total Dissolved	958		20	20	mg/L	SM 2540 C

CLIENT ID: CW-3A	Lab ID: J1403216-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	59.6		0.2	1.0	mg/L	300.0
Ammonia as Nitrogen	7.80		0.007	0.010	mg/L	350.1
Iron, Total Recoverable	123000		3	100	ug/L	6010B
Sodium, Total Recoverable	57.9		0.03	0.50	mg/L	6010B
Arsenic, Total Recoverable	1.7		0.5	1.0	ug/L	6020
Barium, Total Recoverable	121		0.5	2.0	ug/L	6020
Beryllium, Total Recoverable	0.61		0.04	0.50	ug/L	6020

SAMPLE DETECTION SUMMARY

CLIENT ID: CW-3A	Lab ID: J1403216-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Cobalt, Total Recoverable	12.6		0.03	1.0	ug/L	6020
Chromium, Total Recoverable	9.3		0.2	1.0	ug/L	6020
Copper, Total Recoverable	0.5	I	0.3	1.0	ug/L	6020
Nickel, Total Recoverable	2.5		0.5	2.0	ug/L	6020
Vanadium, Total Recoverable	10.9		0.3	2.0	ug/L	6020
Zinc, Total Recoverable	4.5	I	1.6	5.0	ug/L	6020
Solids, Total Dissolved	1360		20	20	mg/L	SM 2540 C

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 | 904-739-2277 | www.alsglobal.com

Client: Waste Services of Florida, Inc.
Project: JED Compliance Wells
Sample Matrix: Water

Service Request: J1403216
Date Received: 5/6/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Three water samples and one trip blank were received for analysis at ALS Environmental on 05/06/2014. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

No significant data anomalies were noted with this analysis.

Semi-Volatile Organic Analyses:

Method 8011: The control criterion was exceeded for the following surrogate in sample J1403216-002 due to suspected matrix interference: 1,1,1,2-Tetrachloroethane. A re-extraction and reanalysis was performed, but produced similar results. The results of the second analysis are reported and no further corrective action was required.

Metals Analyses:

No significant data anomalies were noted with this analysis.

General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by _____ Date 5/27/2014

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Virginia Environmental Accreditation Program	460191	12/14/2014
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	11/1/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Waste Services of Florida, Inc. **Service Request:**J1403216

Project: JED Compliance Wells

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1403216-001	CW-1A	5/5/2014	1600
J1403216-002	CW-2A	5/5/2014	1510
J1403216-003	CW-3A	5/5/2014	1400
J1403216-004	Trip Blank	5/5/2014	0000

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 16:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-1A	**Units:**	ug/L
Lab Code:	J1403216-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/07/14 05:41	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/07/14 05:41	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/07/14 05:41	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/07/14 05:41	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/07/14 05:41	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/07/14 05:41	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	05/07/14 05:41	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/07/14 05:41	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/07/14 05:41	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/07/14 05:41	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/07/14 05:41	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/07/14 05:41	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/07/14 05:41	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/07/14 05:41	
2-Hexanone	2.2 U	25	2.2	1	05/07/14 05:41	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/07/14 05:41	
Acetone	5.6 U	50	5.6	1	05/07/14 05:41	
Acrylonitrile	1.5 U	10	1.5	1	05/07/14 05:41	
Benzene	0.21 U	1.0	0.21	1	05/07/14 05:41	
Bromochloromethane	0.27 U	5.0	0.27	1	05/07/14 05:41	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/07/14 05:41	
Bromoform	0.42 U	2.0	0.42	1	05/07/14 05:41	
Bromomethane	0.23 U	5.0	0.23	1	05/07/14 05:41	
Carbon Disulfide	2.4 U	10	2.4	1	05/07/14 05:41	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/07/14 05:41	
Chlorobenzene	0.16 U	1.0	0.16	1	05/07/14 05:41	
Chloroethane	0.52 U	5.0	0.52	1	05/07/14 05:41	
Chloroform	0.35 U	1.0	0.35	1	05/07/14 05:41	
Chloromethane	0.36 U	1.0	0.36	1	05/07/14 05:41	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/07/14 05:41	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/07/14 05:41	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/07/14 05:41	
Dibromomethane	0.36 U	5.0	0.36	1	05/07/14 05:41	
Ethylbenzene	0.21 U	1.0	0.21	1	05/07/14 05:41	
Iodomethane	2.7 U	5.0	2.7	1	05/07/14 05:41	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/07/14 05:41	
Methylene Chloride	0.21 U	5.0	0.21	1	05/07/14 05:41	
o-Xylene	0.14 U	1.0	0.14	1	05/07/14 05:41	
Styrene	0.29 U	1.0	0.29	1	05/07/14 05:41	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/07/14 05:41	
Toluene	0.19 U	1.0	0.19	1	05/07/14 05:41	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/07/14 05:41	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/07/14 05:41	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 16:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-1A	**Units:**	ug/L
Lab Code:	J1403216-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	20	2.2	1	05/07/14 05:41	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/07/14 05:41	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/07/14 05:41	
Vinyl Acetate	1.9 U	10	1.9	1	05/07/14 05:41	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/07/14 05:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	72 - 121	05/07/14 05:41	
4-Bromofluorobenzene	93	86 - 113	05/07/14 05:41	
Dibromofluoromethane	93	86 - 112	05/07/14 05:41	
Toluene-d8	100	88 - 115	05/07/14 05:41	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 16:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-1A	**Units:**	ug/L
Lab Code:	J1403216-001	**Basis:**	NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011
Prep Method: Method

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2-Dibromo-3-chloropropane (DBCP)	0.00700 U	0.0199	0.00700	1	05/13/14 00:22	5/12/14	
1,2-Dibromoethane (EDB)	0.00700 U	0.0199	0.00700	1	05/13/14 00:22	5/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	75	70 - 130	05/13/14 00:22	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 16:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-1A	**Basis:**	NA
Lab Code:	J1403216-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020	0.2	U	ug/L	1.0	0.2	1	05/07/14 19:10	05/07/14	
Arsenic, Total Recoverable	6020	**77.6**		ug/L	1.0	0.5	1	05/07/14 19:10	05/07/14	
Barium, Total Recoverable	6020	**33.3**		ug/L	2.0	0.5	1	05/07/14 19:10	05/07/14	
Beryllium, Total Recoverable	6020	**0.05**	**I**	ug/L	0.50	0.04	1	05/07/14 19:10	05/07/14	
Cadmium, Total Recoverable	6020	0.10	U	ug/L	0.40	0.10	1	05/07/14 19:10	05/07/14	
Chromium, Total Recoverable	6020	**3.2**		ug/L	1.0	0.2	1	05/07/14 19:10	05/07/14	
Cobalt, Total Recoverable	6020	**1.4**		ug/L	1.0	0.03	1	05/07/14 19:10	05/07/14	
Copper, Total Recoverable	6020	0.3	U	ug/L	1.0	0.3	1	05/07/14 19:10	05/07/14	
Iron, Total Recoverable	6010B	**6390**		ug/L	100	3	1	05/07/14 20:09	05/07/14	
Lead, Total Recoverable	6020	**0.27**	**I**	ug/L	0.50	0.12	1	05/07/14 19:10	05/07/14	
Mercury, Total	7470A	0.02	U	ug/L	0.10	0.02	1	05/13/14 14:35	05/09/14	
Nickel, Total Recoverable	6020	**0.8**	**I**	ug/L	2.0	0.5	1	05/07/14 19:10	05/07/14	
Selenium, Total Recoverable	6020	1.1	U	ug/L	2.0	1.1	1	05/07/14 19:10	05/07/14	
Silver, Total Recoverable	6020	0.06	U	ug/L	0.50	0.06	1	05/07/14 19:10	05/07/14	
Sodium, Total Recoverable	6010B	**15.1**		mg/L	0.50	0.03	1	05/07/14 20:09	05/07/14	
Thallium, Total Recoverable	6020	0.05	U	ug/L	0.20	0.05	1	05/07/14 19:10	05/07/14	
Vanadium, Total Recoverable	6020	**2.9**		ug/L	2.0	0.3	1	05/07/14 19:10	05/07/14	
Zinc, Total Recoverable	6020	**5.2**		ug/L	5.0	1.6	1	05/07/14 19:10	05/07/14	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 16:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-1A	**Basis:**	NA
Lab Code:	J1403216-001		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen	350.1	**0.575**	mg/L	0.010	0.007	1	05/12/14 14:09	
Chloride	300.0	**17.6**	mg/L	1.0	0.2	1	05/06/14 22:36	
Nitrate as Nitrogen	300.0	0.03 U	mg/L	0.20	0.03	1	05/06/14 22:36	
Solids, Total Dissolved	SM 2540 C	**237**	mg/L	10	10	1	05/07/14 14:23	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 15:10
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-2A	**Units:**	ug/L
Lab Code:	J1403216-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/07/14 06:09	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/07/14 06:09	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/07/14 06:09	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/07/14 06:09	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/07/14 06:09	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/07/14 06:09	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	05/07/14 06:09	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/07/14 06:09	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/07/14 06:09	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/07/14 06:09	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/07/14 06:09	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/07/14 06:09	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/07/14 06:09	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/07/14 06:09	
2-Hexanone	2.2 U	25	2.2	1	05/07/14 06:09	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/07/14 06:09	
Acetone	5.6 U	50	5.6	1	05/07/14 06:09	
Acrylonitrile	1.5 U	10	1.5	1	05/07/14 06:09	
Benzene	0.21 U	1.0	0.21	1	05/07/14 06:09	
Bromochloromethane	0.27 U	5.0	0.27	1	05/07/14 06:09	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/07/14 06:09	
Bromoform	0.42 U	2.0	0.42	1	05/07/14 06:09	
Bromomethane	0.23 U	5.0	0.23	1	05/07/14 06:09	
Carbon Disulfide	2.4 U	10	2.4	1	05/07/14 06:09	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/07/14 06:09	
Chlorobenzene	0.16 U	1.0	0.16	1	05/07/14 06:09	
Chloroethane	0.52 U	5.0	0.52	1	05/07/14 06:09	
Chloroform	0.35 U	1.0	0.35	1	05/07/14 06:09	
Chloromethane	0.36 U	1.0	0.36	1	05/07/14 06:09	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/07/14 06:09	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/07/14 06:09	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/07/14 06:09	
Dibromomethane	0.36 U	5.0	0.36	1	05/07/14 06:09	
Ethylbenzene	0.21 U	1.0	0.21	1	05/07/14 06:09	
Iodomethane	2.7 U	5.0	2.7	1	05/07/14 06:09	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/07/14 06:09	
Methylene Chloride	0.21 U	5.0	0.21	1	05/07/14 06:09	
o-Xylene	0.14 U	1.0	0.14	1	05/07/14 06:09	
Styrene	0.29 U	1.0	0.29	1	05/07/14 06:09	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/07/14 06:09	
Toluene	0.19 U	1.0	0.19	1	05/07/14 06:09	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/07/14 06:09	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/07/14 06:09	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 15:10
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-2A	**Units:**	ug/L
Lab Code:	J1403216-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	20	2.2	1	05/07/14 06:09	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/07/14 06:09	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/07/14 06:09	
Vinyl Acetate	1.9 U	10	1.9	1	05/07/14 06:09	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/07/14 06:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	72 - 121	05/07/14 06:09	
4-Bromofluorobenzene	92	86 - 113	05/07/14 06:09	
Dibromofluoromethane	97	86 - 112	05/07/14 06:09	
Toluene-d8	102	88 - 115	05/07/14 06:09	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 15:10
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-2A	**Units:**	ug/L
Lab Code:	J1403216-002	**Basis:**	NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011
Prep Method: Method

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2-Dibromo-3-chloropropane (DBCP)	0.00700 U	0.0200	0.00700	1	05/19/14 21:21	5/19/14	
1,2-Dibromoethane (EDB)	0.00700 U	0.0200	0.00700	1	05/19/14 21:21	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	52	70 - 130	05/19/14 21:21	*

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 15:10
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-2A	**Basis:**	NA
Lab Code:	J1403216-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020	**0.2**	**I**	ug/L	1.0	0.2	1	05/07/14 19:36	05/07/14	
Arsenic, Total Recoverable	6020	**1.3**		ug/L	1.0	0.5	1	05/07/14 19:36	05/07/14	
Barium, Total Recoverable	6020	**54.2**		ug/L	2.0	0.5	1	05/07/14 19:36	05/07/14	
Beryllium, Total Recoverable	6020	**0.36**	**I**	ug/L	0.50	0.04	1	05/07/14 19:36	05/07/14	
Cadmium, Total Recoverable	6020	0.10	U	ug/L	0.40	0.10	1	05/07/14 19:36	05/07/14	
Chromium, Total Recoverable	6020	**1.6**		ug/L	1.0	0.2	1	05/07/14 19:36	05/07/14	
Cobalt, Total Recoverable	6020	**1.4**		ug/L	1.0	0.03	1	05/07/14 19:36	05/07/14	
Copper, Total Recoverable	6020	**0.3**	**I**	ug/L	1.0	0.3	1	05/07/14 19:36	05/07/14	
Iron, Total Recoverable	6010B	**3270**		ug/L	100	3	1	05/07/14 20:13	05/07/14	
Lead, Total Recoverable	6020	0.12	U	ug/L	0.50	0.12	1	05/07/14 19:36	05/07/14	
Mercury, Total	7470A	0.02	U	ug/L	0.10	0.02	1	05/13/14 14:43	05/09/14	
Nickel, Total Recoverable	6020	**2.5**		ug/L	2.0	0.5	1	05/07/14 19:36	05/07/14	
Selenium, Total Recoverable	6020	1.1	U	ug/L	2.0	1.1	1	05/07/14 19:36	05/07/14	
Silver, Total Recoverable	6020	0.06	U	ug/L	0.50	0.06	1	05/07/14 19:36	05/07/14	
Sodium, Total Recoverable	6010B	**66.8**		mg/L	0.50	0.03	1	05/07/14 20:13	05/07/14	
Thallium, Total Recoverable	6020	0.05	U	ug/L	0.20	0.05	1	05/07/14 19:36	05/07/14	
Vanadium, Total Recoverable	6020	**7.8**		ug/L	2.0	0.3	1	05/07/14 19:36	05/07/14	
Zinc, Total Recoverable	6020	**4.1**	**I**	ug/L	5.0	1.6	1	05/07/14 19:36	05/07/14	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 15:10
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-2A	**Basis:**	NA
Lab Code:	J1403216-002		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen	350.1	**7.19**	mg/L	0.010	0.007	1	05/12/14 14:10	
Chloride	300.0	**106**	mg/L	1.0	0.2	1	05/06/14 23:24	
Nitrate as Nitrogen	300.0	0.03 U	mg/L	0.20	0.03	1	05/06/14 23:24	
Solids, Total Dissolved	SM 2540 C	**958**	mg/L	20	20	2	05/07/14 14:23	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 14:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-3A	**Units:**	ug/L
Lab Code:	J1403216-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/07/14 06:38	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/07/14 06:38	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/07/14 06:38	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/07/14 06:38	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/07/14 06:38	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/07/14 06:38	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	05/07/14 06:38	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/07/14 06:38	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/07/14 06:38	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/07/14 06:38	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/07/14 06:38	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/07/14 06:38	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/07/14 06:38	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/07/14 06:38	
2-Hexanone	2.2 U	25	2.2	1	05/07/14 06:38	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/07/14 06:38	
Acetone	5.6 U	50	5.6	1	05/07/14 06:38	
Acrylonitrile	1.5 U	10	1.5	1	05/07/14 06:38	
Benzene	0.21 U	1.0	0.21	1	05/07/14 06:38	
Bromochloromethane	0.27 U	5.0	0.27	1	05/07/14 06:38	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/07/14 06:38	
Bromoform	0.42 U	2.0	0.42	1	05/07/14 06:38	
Bromomethane	0.23 U	5.0	0.23	1	05/07/14 06:38	
Carbon Disulfide	2.4 U	10	2.4	1	05/07/14 06:38	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/07/14 06:38	
Chlorobenzene	0.16 U	1.0	0.16	1	05/07/14 06:38	
Chloroethane	0.52 U	5.0	0.52	1	05/07/14 06:38	
Chloroform	0.35 U	1.0	0.35	1	05/07/14 06:38	
Chloromethane	0.36 U	1.0	0.36	1	05/07/14 06:38	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/07/14 06:38	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/07/14 06:38	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/07/14 06:38	
Dibromomethane	0.36 U	5.0	0.36	1	05/07/14 06:38	
Ethylbenzene	0.21 U	1.0	0.21	1	05/07/14 06:38	
Iodomethane	2.7 U	5.0	2.7	1	05/07/14 06:38	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/07/14 06:38	
Methylene Chloride	0.21 U	5.0	0.21	1	05/07/14 06:38	
o-Xylene	0.14 U	1.0	0.14	1	05/07/14 06:38	
Styrene	0.29 U	1.0	0.29	1	05/07/14 06:38	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/07/14 06:38	
Toluene	0.19 U	1.0	0.19	1	05/07/14 06:38	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/07/14 06:38	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/07/14 06:38	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 14:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-3A	**Units:**	ug/L
Lab Code:	J1403216-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	20	2.2	1	05/07/14 06:38	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/07/14 06:38	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/07/14 06:38	
Vinyl Acetate	1.9 U	10	1.9	1	05/07/14 06:38	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/07/14 06:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	72 - 121	05/07/14 06:38	
4-Bromofluorobenzene	92	86 - 113	05/07/14 06:38	
Dibromofluoromethane	100	86 - 112	05/07/14 06:38	
Toluene-d8	100	88 - 115	05/07/14 06:38	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 14:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-3A	**Units:**	ug/L
Lab Code:	J1403216-003	**Basis:**	NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011
Prep Method: Method

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2-Dibromo-3-chloropropane (DBCP)	0.00707 U	0.0202	0.00707	1	05/13/14 05:22	5/12/14	
1,2-Dibromoethane (EDB)	0.00707 U	0.0202	0.00707	1	05/13/14 05:22	5/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	100	70 - 130	05/13/14 05:22	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 14:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-3A	**Basis:**	NA
Lab Code:	J1403216-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020	0.2	U	ug/L	1.0	0.2	1	05/07/14 19:41	05/07/14	
Arsenic, Total Recoverable	6020	**1.7**		ug/L	1.0	0.5	1	05/07/14 19:41	05/07/14	
Barium, Total Recoverable	6020	**121**		ug/L	2.0	0.5	1	05/07/14 19:41	05/07/14	
Beryllium, Total Recoverable	6020	**0.61**		ug/L	0.50	0.04	1	05/07/14 19:41	05/07/14	
Cadmium, Total Recoverable	6020	0.10	U	ug/L	0.40	0.10	1	05/07/14 19:41	05/07/14	
Chromium, Total Recoverable	6020	**9.3**		ug/L	1.0	0.2	1	05/07/14 19:41	05/07/14	
Cobalt, Total Recoverable	6020	**12.6**		ug/L	1.0	0.03	1	05/07/14 19:41	05/07/14	
Copper, Total Recoverable	6020	**0.5**	**I**	ug/L	1.0	0.3	1	05/07/14 19:41	05/07/14	
Iron, Total Recoverable	6010B	**123000**		ug/L	100	3	1	05/07/14 20:17	05/07/14	
Lead, Total Recoverable	6020	0.12	U	ug/L	0.50	0.12	1	05/07/14 19:41	05/07/14	
Mercury, Total	7470A	0.02	U	ug/L	0.10	0.02	1	05/13/14 14:44	05/09/14	
Nickel, Total Recoverable	6020	**2.5**		ug/L	2.0	0.5	1	05/07/14 19:41	05/07/14	
Selenium, Total Recoverable	6020	1.1	U	ug/L	2.0	1.1	1	05/07/14 19:41	05/07/14	
Silver, Total Recoverable	6020	0.06	U	ug/L	0.50	0.06	1	05/07/14 19:41	05/07/14	
Sodium, Total Recoverable	6010B	**57.9**		mg/L	0.50	0.03	1	05/07/14 20:17	05/07/14	
Thallium, Total Recoverable	6020	0.05	U	ug/L	0.20	0.05	1	05/07/14 19:41	05/07/14	
Vanadium, Total Recoverable	6020	**10.9**		ug/L	2.0	0.3	1	05/07/14 19:41	05/07/14	
Zinc, Total Recoverable	6020	**4.5**	**I**	ug/L	5.0	1.6	1	05/07/14 19:41	05/07/14	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 14:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	CW-3A	**Basis:**	NA
Lab Code:	J1403216-003		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen	350.1	**7.80**	mg/L	0.010	0.007	1	05/12/14 14:14	
Chloride	300.0	**59.6**	mg/L	1.0	0.2	1	05/06/14 23:40	
Nitrate as Nitrogen	300.0	0.03 U	mg/L	0.20	0.03	1	05/06/14 23:40	
Solids, Total Dissolved	SM 2540 C	**1360**	mg/L	20	20	2	05/07/14 14:23	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 00:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1403216-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/07/14 03:54	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/07/14 03:54	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/07/14 03:54	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/07/14 03:54	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/07/14 03:54	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/07/14 03:54	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	05/07/14 03:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/07/14 03:54	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/07/14 03:54	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/07/14 03:54	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/07/14 03:54	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/07/14 03:54	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/07/14 03:54	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/07/14 03:54	
2-Hexanone	2.2 U	25	2.2	1	05/07/14 03:54	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/07/14 03:54	
Acetone	5.6 U	50	5.6	1	05/07/14 03:54	
Acrylonitrile	1.5 U	10	1.5	1	05/07/14 03:54	
Benzene	0.21 U	1.0	0.21	1	05/07/14 03:54	
Bromochloromethane	0.27 U	5.0	0.27	1	05/07/14 03:54	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/07/14 03:54	
Bromoform	0.42 U	2.0	0.42	1	05/07/14 03:54	
Bromomethane	0.23 U	5.0	0.23	1	05/07/14 03:54	
Carbon Disulfide	2.4 U	10	2.4	1	05/07/14 03:54	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/07/14 03:54	
Chlorobenzene	0.16 U	1.0	0.16	1	05/07/14 03:54	
Chloroethane	0.52 U	5.0	0.52	1	05/07/14 03:54	
Chloroform	0.35 U	1.0	0.35	1	05/07/14 03:54	
Chloromethane	0.36 U	1.0	0.36	1	05/07/14 03:54	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/07/14 03:54	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/07/14 03:54	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/07/14 03:54	
Dibromomethane	0.36 U	5.0	0.36	1	05/07/14 03:54	
Ethylbenzene	0.21 U	1.0	0.21	1	05/07/14 03:54	
Iodomethane	2.7 U	5.0	2.7	1	05/07/14 03:54	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/07/14 03:54	
Methylene Chloride	0.21 U	5.0	0.21	1	05/07/14 03:54	
o-Xylene	0.14 U	1.0	0.14	1	05/07/14 03:54	
Styrene	0.29 U	1.0	0.29	1	05/07/14 03:54	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/07/14 03:54	
Toluene	0.19 U	1.0	0.19	1	05/07/14 03:54	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/07/14 03:54	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/07/14 03:54	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	05/05/14 00:00
Sample Matrix:	Water	**Date Received:**	05/06/14 08:54
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1403216-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	20	2.2	1	05/07/14 03:54	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/07/14 03:54	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/07/14 03:54	
Vinyl Acetate	1.9 U	10	1.9	1	05/07/14 03:54	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/07/14 03:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	72 - 121	05/07/14 03:54	
4-Bromofluorobenzene	93	86 - 113	05/07/14 03:54	
Dibromofluoromethane	99	86 - 112	05/07/14 03:54	
Toluene-d8	101	88 - 115	05/07/14 03:54	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1403344-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/07/14 03:02	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/07/14 03:02	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/07/14 03:02	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/07/14 03:02	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/07/14 03:02	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/07/14 03:02	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	05/07/14 03:02	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/07/14 03:02	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/07/14 03:02	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/07/14 03:02	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/07/14 03:02	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/07/14 03:02	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/07/14 03:02	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/07/14 03:02	
2-Hexanone	2.2 U	25	2.2	1	05/07/14 03:02	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/07/14 03:02	
Acetone	5.6 U	50	5.6	1	05/07/14 03:02	
Acrylonitrile	1.5 U	10	1.5	1	05/07/14 03:02	
Benzene	0.21 U	1.0	0.21	1	05/07/14 03:02	
Bromochloromethane	0.27 U	5.0	0.27	1	05/07/14 03:02	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/07/14 03:02	
Bromoform	0.42 U	2.0	0.42	1	05/07/14 03:02	
Bromomethane	0.23 U	5.0	0.23	1	05/07/14 03:02	
Carbon Disulfide	2.4 U	10	2.4	1	05/07/14 03:02	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/07/14 03:02	
Chlorobenzene	0.16 U	1.0	0.16	1	05/07/14 03:02	
Chloroethane	0.52 U	5.0	0.52	1	05/07/14 03:02	
Chloroform	0.35 U	1.0	0.35	1	05/07/14 03:02	
Chloromethane	0.36 U	1.0	0.36	1	05/07/14 03:02	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/07/14 03:02	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/07/14 03:02	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/07/14 03:02	
Dibromomethane	0.36 U	5.0	0.36	1	05/07/14 03:02	
Ethylbenzene	0.21 U	1.0	0.21	1	05/07/14 03:02	
Iodomethane	2.7 U	5.0	2.7	1	05/07/14 03:02	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/07/14 03:02	
Methylene Chloride	0.21 U	5.0	0.21	1	05/07/14 03:02	
o-Xylene	0.14 U	1.0	0.14	1	05/07/14 03:02	
Styrene	0.29 U	1.0	0.29	1	05/07/14 03:02	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/07/14 03:02	
Toluene	0.19 U	1.0	0.19	1	05/07/14 03:02	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/07/14 03:02	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/07/14 03:02	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1403344-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	20	2.2	1	05/07/14 03:02	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/07/14 03:02	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/07/14 03:02	
Vinyl Acetate	1.9 U	10	1.9	1	05/07/14 03:02	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/07/14 03:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	72 - 121	05/07/14 03:02	
4-Bromofluorobenzene	94	86 - 113	05/07/14 03:02	
Dibromofluoromethane	97	86 - 112	05/07/14 03:02	
Toluene-d8	102	88 - 115	05/07/14 03:02	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1403444-01	**Basis:**	NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011
Prep Method: Method

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2-Dibromo-3-chloropropane (DBCP)	0.00700 U	0.0200	0.00700	1	05/12/14 23:39	5/12/14	
1,2-Dibromoethane (EDB)	0.00700 U	0.0200	0.00700	1	05/12/14 23:39	5/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	99	70 - 130	05/12/14 23:39	

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1403641-01	**Basis:**	NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011
Prep Method: Method

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2-Dibromo-3-chloropropane (DBCP)	0.00700 U	0.0200	0.00700	1	05/19/14 20:38	5/19/14	
1,2-Dibromoethane (EDB)	0.00700 U	0.0200	0.00700	1	05/19/14 20:38	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	79	70 - 130	05/19/14 20:38	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1403216-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020	0.2	U	ug/L	1.0	0.2	1	05/07/14 18:55	05/07/14	
Arsenic, Total Recoverable	6020	0.5	U	ug/L	1.0	0.5	1	05/07/14 18:55	05/07/14	
Barium, Total Recoverable	6020	0.5	U	ug/L	2.0	0.5	1	05/07/14 18:55	05/07/14	
Beryllium, Total Recoverable	6020	0.04	U	ug/L	0.50	0.04	1	05/07/14 18:55	05/07/14	
Cadmium, Total Recoverable	6020	0.10	U	ug/L	0.40	0.10	1	05/07/14 18:55	05/07/14	
Chromium, Total Recoverable	6020	0.2	U	ug/L	1.0	0.2	1	05/07/14 18:55	05/07/14	
Cobalt, Total Recoverable	6020	0.03	U	ug/L	1.0	0.03	1	05/07/14 18:55	05/07/14	
Copper, Total Recoverable	6020	0.3	U	ug/L	1.0	0.3	1	05/07/14 18:55	05/07/14	
Iron, Total Recoverable	6010B	**7**	**I**	ug/L	100	3	1	05/07/14 19:24	05/07/14	
Lead, Total Recoverable	6020	0.12	U	ug/L	0.50	0.12	1	05/07/14 18:55	05/07/14	
Mercury, Total	7470A	0.02	U	ug/L	0.10	0.02	1	05/13/14 14:32	05/09/14	
Nickel, Total Recoverable	6020	0.5	U	ug/L	2.0	0.5	1	05/07/14 18:55	05/07/14	
Selenium, Total Recoverable	6020	1.1	U	ug/L	2.0	1.1	1	05/07/14 18:55	05/07/14	
Silver, Total Recoverable	6020	0.06	U	ug/L	0.50	0.06	1	05/07/14 18:55	05/07/14	
Sodium, Total Recoverable	6010B	0.03	U	mg/L	0.50	0.03	1	05/07/14 19:24	05/07/14	
Thallium, Total Recoverable	6020	0.05	U	ug/L	0.20	0.05	1	05/07/14 18:55	05/07/14	
Vanadium, Total Recoverable	6020	0.3	U	ug/L	2.0	0.3	1	05/07/14 18:55	05/07/14	
Zinc, Total Recoverable	6020	**2.8**	**I**	ug/L	5.0	1.6	1	05/07/14 18:55	05/07/14	

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1403216-MB		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	PQL	MDL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen	350.1	0.007	U	mg/L	0.010	0.007	1	05/12/14 14:02	
Chloride	300.0	0.2	U	mg/L	1.0	0.2	1	05/06/14 20:13	
Nitrate as Nitrogen	300.0	0.03	U	mg/L	0.20	0.03	1	05/06/14 20:13	
Solids, Total Dissolved	SM 2540 C	10	U	mg/L	10	10	1	05/07/14 14:23	

Client: Waste Services of Florida, Inc. **Service Request:** J1403216

Project: JED Compliance Wells

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
CW-1A	J1403216-001	90	93	93
CW-2A	J1403216-002	94	92	97
CW-3A	J1403216-003	95	92	100
Trip Blank	J1403216-004	94	93	99
Lab Control Sample	JQ1403344-01	91	94	99
Duplicate Lab Control Sample	JQ1403344-02	92	96	97
Method Blank	JQ1403344-03	92	94	97

Client: Waste Services of Florida, Inc. **Service Request:** J1403216

Project: JED Compliance Wells

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
CW-1A	J1403216-001	100
CW-2A	J1403216-002	102
CW-3A	J1403216-003	100
Trip Blank	J1403216-004	101
Lab Control Sample	JQ1403344-01	104
Duplicate Lab Control Sample	JQ1403344-02	105
Method Blank	JQ1403344-03	102

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Analyzed:**	05/07/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	391499

	Lab Control Sample JQ1403344-01			Duplicate Lab Control Sample JQ1403344-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	53.7	50.0	107	54.0	50.0	108	77-118	<1	30
1,1,1-Trichloroethane (TCA)	48.3	50.0	97	46.6	50.0	93	70-122	4	30
1,1,2,2-Tetrachloroethane	52.0	50.0	104	50.8	50.0	102	66-135	2	30
1,1,2-Trichloroethane	50.9	50.0	102	51.8	50.0	104	75-122	2	30
1,1-Dichloroethane (1,1-DCA)	48.0	50.0	96	45.9	50.0	92	79-117	4	30
1,1-Dichloroethene (1,1-DCE)	46.3	50.0	93	44.2	50.0	88	72-128	5	30
1,2,3-Trichloropropane	52.0	50.0	104	51.6	50.0	103	70-123	<1	30
1,2-Dibromo-3-chloropropane (DBCP)	49.5	50.0	99	49.2	50.0	98	60-122	<1	30
1,2-Dibromoethane (EDB)	53.8	50.0	108	53.8	50.0	108	76-118	<1	30
1,2-Dichlorobenzene	50.4	50.0	101	50.3	50.0	101	81-115	<1	30
1,2-Dichloroethane	44.9	50.0	90	44.0	50.0	88	70-117	2	30
1,2-Dichloropropane	47.8	50.0	96	46.1	50.0	92	79-117	3	30
1,4-Dichlorobenzene	50.0	50.0	100	49.7	50.0	99	82-115	<1	30
2-Butanone (MEK)	44.8	50.0	90	42.3	50.0	85	62-138	6	30
2-Hexanone	46.4	50.0	93	45.4	50.0	91	74-127	2	30
4-Methyl-2-pentanone (MIBK)	46.4	50.0	93	45.5	50.0	91	77-120	2	30
Acetone	44.7	50.0	89	42.9	50.0	86	42-161	4	30
Acrylonitrile	43.2	50.0	86	42.2	50.0	84	63-132	2	30
Benzene	49.6	50.0	99	47.8	50.0	96	80-117	4	30
Bromochloromethane	49.4	50.0	99	49.0	50.0	98	78-118	<1	30
Bromodichloromethane	47.4	50.0	95	46.1	50.0	92	75-118	3	30
Bromoform	55.6	50.0	111	55.4	50.0	111	63-121	<1	30
Bromomethane	38.6	50.0	77	38.0	50.0	76	31-153	2	30
Carbon Disulfide	51.8	50.0	104	49.5	50.0	99	72-128	5	30
Carbon Tetrachloride	47.1	50.0	94	44.6	50.0	89	67-124	5	30
Chlorobenzene	54.7	50.0	109	53.5	50.0	107	83-118	2	30
Chloroethane	48.1	50.0	96	46.5	50.0	93	68-132	3	30
Chloroform	46.9	50.0	94	45.5	50.0	91	77-116	3	30
Chloromethane	41.0	50.0	82	37.7	50.0	75	60-128	8	30
cis-1,2-Dichloroethene	47.5	50.0	95	45.6	50.0	91	78-117	4	30
cis-1,3-Dichloropropene	48.8	50.0	98	50.2	50.0	100	80-119	3	30
Dibromochloromethane	53.7	50.0	107	54.9	50.0	110	74-121	2	30
Dibromomethane	49.9	50.0	100	49.2	50.0	98	76-117	1	30
Ethylbenzene	53.0	50.0	106	51.4	50.0	103	82-119	3	30
Iodomethane	43.7	50.0	87	43.8	50.0	88	51-137	<1	30
m,p-Xylenes	105	100	105	99.3	100	99	79-122	5	30
Methylene Chloride	48.9	50.0	98	47.7	50.0	95	75-123	3	30
o-Xylene	51.9	50.0	104	49.9	50.0	100	80-119	4	30
Styrene	53.7	50.0	107	52.0	50.0	104	80-121	3	30
Tetrachloroethene (PCE)	57.0	50.0	114	55.9	50.0	112	75-126	2	30
Toluene	54.3	50.0	109	53.0	50.0	106	52-152	2	30

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project:	JED Compliance Wells	**Date Analyzed:**	05/07/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	391499

	Lab Control Sample JQ1403344-01			Duplicate Lab Control Sample JQ1403344-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
trans-1,2-Dichloroethene	48.8	50.0	98	46.2	50.0	92	75-121	5	30
trans-1,3-Dichloropropene	48.6	50.0	97	49.5	50.0	99	76-118	2	30
trans-1,4-Dichloro-2-butene	38.2	50.0	76	39.9	50.0	80	10-198	4	30
Trichloroethene (TCE)	53.2	50.0	106	51.3	50.0	103	78-122	4	30
Trichlorofluoromethane	49.4	50.0	99	46.7	50.0	93	58-134	6	30
Vinyl Acetate	43.6	50.0	87	43.1	50.0	86	36-169	1	30
Vinyl Chloride	46.8	50.0	94	44.2	50.0	88	69-138	6	30

Client: Waste Services of Florida, Inc. **Service Request:** J1403216

Project: JED Compliance Wells

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and Gas Chromatography

Analysis Method: 8011

Extraction Method: Method

Sample Name	Lab Code	1,1,1,2-Tetrachloroethane 70 - 130
CW-1A	J1403216-001	75
CW-2A	J1403216-002	52 *
CW-3A	J1403216-003	100
Method Blank	JQ1403444-01	99
Lab Control Sample	JQ1403444-02	89
Method Blank	JQ1403641-01	79
Lab Control Sample	JQ1403641-02	79

QA/QC Report

Client: Waste Services of Florida, Inc.
Project: JED Compliance Wells
Sample Matrix: Water

Service Request:J1403216
Date Collected:05/05/14
Date Received:05/06/14
Date Analyzed:05/07/14 - 05/13/14

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: CW-1A
Lab Code: J1403216-001

Units:ug/L
Basis:NA

			Matrix Spike J1403216-001MS			Duplicate Matrix Spike J1403216-001DMS					
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Antimony, Total Recoverable	6020	0.2	49.9	50.0	100	50.0	50.0	100	75-125	<1	20
Arsenic, Total Recoverable	6020	77.6	128	50.0	101	130	50.0	104	75-125	1	20
Barium, Total Recoverable	6020	33.3	133	100	99	134	100	100	75-125	<1	20
Beryllium, Total Recoverable	6020	0.05	22.5	25.0	90	22.0	25.0	88	75-125	2	20
Cadmium, Total Recoverable	6020	0.10	19.3	20.0	97	19.8	20.0	99	75-125	2	20
Chromium, Total Recoverable	6020	3.2	53.0	50.0	100	53.9	50.0	101	75-125	2	20
Cobalt, Total Recoverable	6020	1.4	50.5	50.0	98	52.3	50.0	102	75-125	3	20
Copper, Total Recoverable	6020	0.3	49.7	50.0	99	50.4	50.0	101	75-125	1	20
Lead, Total Recoverable	6020	0.27	25.4	25.0	101	25.1	25.0	99	75-125	1	20
Mercury, Total	7470A	0.02	1.1	1.25	91	1.1	1.25	90	75-125	2	20
Nickel, Total Recoverable	6020	0.8	99.0	100	98	102	100	101	75-125	3	20
Selenium, Total Recoverable	6020	1.1	84.0	100	84	88.5	100	89	75-125	5	20
Silver, Total Recoverable	6020	0.06	24.1	25.0	96	23.8	25.0	95	75-125	<1	20
Thallium, Total Recoverable	6020	0.05	9.86	10.0	99	9.92	10.0	99	75-125	<1	20
Vanadium, Total Recoverable	6020	2.9	101	100	98	104	100	101	75-125	3	20
Zinc, Total Recoverable	6020	5.2	244	250	96	250	250	98	75-125	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Waste Services of Florida, Inc. **Service Request:**J1403216
Project: JED Compliance Wells **Date Analyzed:**05/07/14 - 05/13/14
Sample Matrix: Water

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
J1403216-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony, Total Recoverable	6020	50.2	50.0	100	80-120
Arsenic, Total Recoverable	6020	50.2	50.0	100	80-120
Barium, Total Recoverable	6020	102	100	102	80-120
Beryllium, Total Recoverable	6020	22.9	25.0	91	80-120
Cadmium, Total Recoverable	6020	20.5	20.0	102	80-120
Chromium, Total Recoverable	6020	50.5	50.0	101	80-120
Cobalt, Total Recoverable	6020	50.3	50.0	101	80-120
Copper, Total Recoverable	6020	51.2	50.0	102	80-120
Iron, Total Recoverable	6010B	5140	5000	103	80-120
Lead, Total Recoverable	6020	25.4	25.0	102	80-120
Mercury, Total	7470A	1.21	1.25	97	80-120
Nickel, Total Recoverable	6020	102	100	102	80-120
Selenium, Total Recoverable	6020	99.0	100	99	80-120
Silver, Total Recoverable	6020	25.3	25.0	101	80-120
Thallium, Total Recoverable	6020	9.95	10.0	99	80-120
Vanadium, Total Recoverable	6020	98.5	100	99	80-120
Zinc, Total Recoverable	6020	250	250	100	80-120

Client: Waste Services of Florida, Inc. **Service Request:**J1403216
Project: JED Compliance Wells **Date Analyzed:**5/7/14
Sample Matrix: Water

Lab Control Sample Summary
Inorganic Parameters

Units:mg/L
Basis:NA

Lab Control Sample
J1403216-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Sodium, Total Recoverable	6010B	25.6	25.0	102	80-120

Client: Waste Services of Florida, Inc.
Project JED Compliance Wells
Sample Matrix: Water

Service Request: J1403216
Date Collected: 05/05/14
Date Received: 05/06/14
Date Analyzed: 05/06/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name: CW-3A
Lab Code: J1403216-003

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	PQL	MDL	Sample Result	Duplicate Sample J1403216-003DUP Result	Average	RPD	RPD Limit
Chloride	300.0	1.0	0.2	59.6	60.3	60.0	1	20
Nitrate as Nitrogen	300.0	0.20	0.03	0.03	0.03	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1403216
Project	JED Compliance Wells	**Date Collected:**	05/05/14
Sample Matrix:	Water	**Date Received:**	05/06/14
		Date Analyzed:	05/07/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	CW-2A	**Units:**	mg/L
Lab Code:	J1403216-002	**Basis:**	NA

Analyte Name	Analysis Method	PQL	MDL	Sample Result	Duplicate Sample J1403216-002DUP Result	Average	RPD	RPD Limit
Solids, Total Dissolved	SM 2540 C	20	20	958	962	960	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Waste Services of Florida, Inc.
Project: JED Compliance Wells
Sample Matrix: Water

Service Request:J1403216
Date Collected:05/05/14
Date Received:05/06/14
Date Analyzed:5/7/14

Matrix Spike Summary
General Chemistry Parameters

Sample Name: CW-3A
Lab Code: J1403216-003

Units:mg/L
Basis:NA

Matrix Spike
J1403216-003MS

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	59.6	80.2	25.0	82 *	90-110
Nitrate as Nitrogen	300.0	0.03	5.03	5.00	101	90-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Waste Services of Florida, Inc.
Project: JED Compliance Wells
Sample Matrix: Water

Service Request:J1403216
Date Analyzed:05/06/14 - 05/12/14

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
J1403216-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen	350.1	1.09	1.00	109	90-110
Chloride	300.0	25.2	25.0	101	90-110
Nitrate as Nitrogen	300.0	5.29	5.00	106	90-110
Solids, Total Dissolved	SM 2540 C	302	300	101	85-115

ALS Environmental

Cooler Receipt Form

Client: PWSFL Service Request #: J1403216

Project: JED Compliance Wells

Cooler received on 5/6/14 and opened on 5/6/14 by SL

COURIER: ALS UPS (FEDEX) Client Other _____ Airbill # 8504 5193 0223

1	Were custody seals on outside of cooler?	(Yes)	No							
	If yes, how many and where?	#: 1	(on lid)	other						
2	Were seals intact and signature and date correct?	(Yes)	No	N/A						
3	Were custody papers properly filled out?	(Yes)	No	N/A						
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.9°								
5	Thermometer ID	171								
6	Temperature Blank Present?	(Yes)	No							
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No						
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A						
9	Type of packing material present	Netting	Vial Holder	(Bubble Wrap)						
		Paper	Styrofoam	Other	N/A					
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A						
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A						
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A						
13	Were all of the preserved bottles received with the appropriate preservative?	(Yes)	No	N/A						
	(HNO3 pH<2) (H2SO4 pH<2) ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2									
	Preservative additions noted below									
14	Were all samples received within analysis holding times?	(Yes)	No	N/A						
15	Were all VOA vials free of air bubbles? If present, note below	(Yes)	No	N/A						
16	Where did the bottles originate?	(ALS)	Client							

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1403216

CAS Contract

J1403216

5

Waste Services of Florida, Inc.
JED Compliance Wells

Project Name: JED Compliance Wells	Project Number:
Project Manager: Mike Kaiser	Email Address: mkaiser@wsii.us
Company/Address: PWSFL - JED SWDF 1501 Omni Way St. Cloud, FL 34773	
Phone #: 904-673-0446	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED (Include Method Number)

PRESERVATIVE: 1 0 3 2 0

NUMBER OF CONTAINERS: 8260 | 8011 | NH3 | Methane | TDS, Cl, NO3

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	REMARKS/ ALTERNATE DESCRIPTION
CW-1A		5.5.14	1600	GW	9 3 3 1 1 1
CW-2A			1510	GW	9 3 3 1 1 1
CW-3A			1400	GW	9 3 3 1 1 1
Trip Blank		5.5.14	0000	DI H_2O	1 1

SPECIAL INSTRUCTIONS/COMMENTS

Cooler ID: 14125-JED

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

__X__ STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

_____ I. Results Only

__X__ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

_____ III. Results + QC and Calibration Summaries

_____ IV. Data Validation Report with Raw Data

_____ V. Specialized Forms / Custom Report

Edata _____Yes _____No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature: Shawn Lightsey	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name: Shawn Lightsey	Printed Name	Printed Name	Printed Name	Printed Name
Firm: PWSFL	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 5.5.14/1630	Date/Time: 5/6/14 0859	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Returned to Originator, Yellow - Retained by Client

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: CW-1A	SAMPLE ID: CW-1A	DATE: May 5, 2014

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet	STATIC DEPTH TO WATER (feet): 3.55	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.46 feet − 3.55 feet) X 0.16 gallons/foot = 2.4 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 35 feet) + 0.12 gallons = 0.2 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13	PURGING INITIATED AT: 1540	PURGING ENDED AT: 1600	TOTAL VOLUME PURGED (gallons): 2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1550	1.0	1.0	0.1	3.67	4.78	25.62	388	1.11	1.2	clear	61.1
1555	0.5	1.5	0.1	3.67	4.78	25.60	385	1.00	1.0	clear	58.9
1600	0.5	2	0.1	3.67	4.78	25.59	382	0.98	0.9	clear	58.0

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: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1600	SAMPLING ENDED AT: 1615
PUMP OR TUBING DEPTH IN WELL (feet): 13	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: 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)
CW-1A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
CW-1A	3	CG	40mL	None	None		8011	RFPP	<100
CW-1A	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	380
CW-1A	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	380
CW-1A	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	380

REMARKS:
weather: Clear, 88°F

odor: none

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)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: CW-2A	SAMPLE ID: CW-2A	DATE: May 5, 2014

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches):0.25	WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet	STATIC DEPTH TO WATER (feet): 4.30	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.48 feet – 4.3 feet) X 0.16 gallons/foot = 2.3 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 4.0 feet) + 0.12 gallons = 0.2 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13	PURGING INITIATED AT: 1440	PURGING ENDED AT: 1510	TOTAL VOLUME PURGED (gallons): 3

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1500	2	2	0.1	4.42	3.94	24.90	1336	1.54	1.3	clear	77.7
1505	0.5	2.5	0.1	4.42	3.96	24.96	1338	1.45	1.0	clear	76.1
1510	0.5	3	0.1	4.42	3.96	24.98	1340	1.25	0.5	clear	76.0

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: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1510	SAMPLING ENDED AT: 1525
PUMP OR TUBING DEPTH IN WELL (feet): 13	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: 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)
CW-2A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
CW-2A	3	CG	40mL	None	None		8011	RFPP	<100
CW-2A	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	380
CW-2A	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	380
CW-2A	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	380

REMARKS:
weather: clear, 89°F
odor: sulfur-like

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)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: CW-3A	SAMPLE ID: CW-3A	DATE: May 5, 2014

PURGING DATA

WELL DIAMETER (inches): 2.0	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 8 feet to 18 feet	STATIC DEPTH TO WATER (feet): 3.58	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (18.42 feet – 3.58 feet) X 0.16 gallons/foot = 2.4 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.0 gallons + (0.0026 gallons/foot X 40 feet) + 0.12 gallons = 0.2 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13	PURGING INITIATED AT: 1335	PURGING ENDED AT: 1400	TOTAL VOLUME PURGED (gallons): 2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1350	1.5	1.5	0.1	3.82	4.35	25.26	1590	1.14	1.9	clear	72.5
1355	0.5	2	0.1	3.82	4.34	25.20	1578	0.8	1.5	clear	68.8
1400	0.5	2.5	0.1	3.82	4.34	25.21	1572	0.73	1.1	clear	67.0

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: Joe Terry / PWSFL	SAMPLER(S) SIGNATURE(S): Joe Terry	SAMPLING INITIATED AT: 1400	SAMPLING ENDED AT: 1410
PUMP OR TUBING DEPTH IN WELL (feet): 13	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP No	TUBING No (replaced)	DUPLICATE or EQUIPMENT BLANK: 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)
CW-3A	3	CG	40mL	HCL	Prefilled by lab		8260	RFPP	<100
CW-3A	3	CG	40mL	None	None		8011	RFPP	<100
CW-3A	1	PE	500mL	HNO_3	Prefilled by lab		Metals	APP	400
CW-3A	1	PE	125mL	H_2SO_4	Prefilled by lab		NH_3	APP	400
CW-3A	1	PE	250mL	None	None		TDS, Cl, NO_3	APP	400

REMARKS:
weather: clear, 88°F
odor: none

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)

Revision Date: February 12, 2009

Field Instrument Calibration Record

Site: JED SWMF Date: 4 May 2014

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 1730

Calibration Standard			Instrument Response	Percent Deviation[1] or Difference	Allowable Deviation[2]	Calibrated? Yes or No	Type of Calibration[3]	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
3AH355	Aug 2015	pH = 4.00	3.85	0.15	0.2	Y	C	JT
C358930	Feb 7, 2015	pH = 7.00	6.96	0.04	0.2	Y	C	JT
C256078	Oct 2014	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.23	2.3	10%	Y	C	JT
3AJ929	Oct 2014	Conductivity = 84 µS/cm	86	2.4	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	501	0.2	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm	1003	0.3	5%	Y	C	JT
	Per Table →	D.O. = 8.54 mg/L @ 23.4 °C	8.55	0.04	0.2 mg/l	Y	I	JT

Date: 6 May 2014 Time: 0530

Calibration Standard			Instrument Response	Percent Deviation[1] or Difference	Allowable Deviation[2]	Calibrated? Yes or No	Type of Calibration[3]	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
C359207	Feb 15, 2015	pH = 4.00	3.92	0.08	0.2	Y	C	JT
C358930	Feb 7, 2015	pH = 7.00	6.98	0.02	0.2	Y	C	JT
C256078	Oct 2014	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C364881	June 2015	Turbidity = 10 NTU	10.01	0.1	10%	Y	C	JT
3AJ929	Oct 2014	Conductivity = 84 µS/cm	84	0	5%	Y	C	JT
4AA137	Jan 2015	Conductivity = 500 µS/cm	502	0.4	5%	Y	C	JT
4AA941	Jan 2015	Conductivity = 1,000 µS/cm	1005	0.5	5%	Y	C	JT
	Per Table →	D.O. = 8.4 mg/L @ 24.1 °C	8.43	0.03	0.2 mg/l	Y	I	JT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ±8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ±5% of Standard Value

Note (3): Initial, Continual, Final

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR#

CAS Contract

Project Name: JED Compliance Wells	Project Number:
Project Manager: Mike Kaiser	Email Address: mkaiser@pwsfl.us
Company/Address: PWSFL - JED SWDF 1501 Omni Way St. Cloud, FL 34773	
Phone #: 904-673-0446	FAX #:
Sampler's Signature: Joe Terry	Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 0 3 2 0

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3	Metals	TDS	NO_3	REMARKS/ ALTERNATE DESCRIPTION
CW-1A		5.5.14	1600	GW	9	3	3	1	1	1		
CW-2A			1510	GW	9	3	3	1	1	1		
CW-3A			1400	GW	9	3	3	1	1	1		
Trip Blank		5.5.14	0000	DI H_2O	1	1						

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL I NSTRUCTIONS/COMMENTS

Cooler ID: 14125-JED

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature	Signature	Signature	Signature	Signature
Printed Name: Joe Terry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: PWSFL	Firm	Firm	Firm	Firm	Firm
Date/Time: 5.5.14/1630	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client