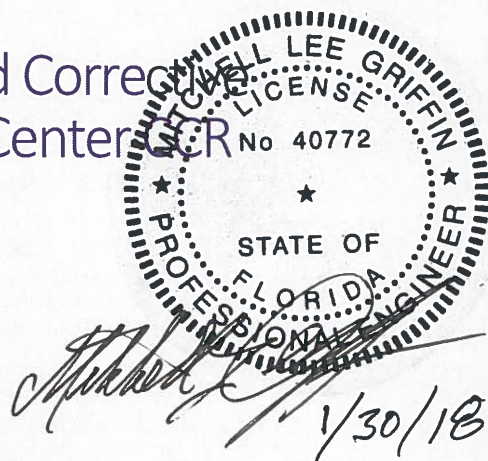


Annual Groundwater Monitoring and Corrective Action Report: OUC Stanton Energy Center CCR

PREPARED FOR: OUC
PREPARED BY: CH2M HILL Engineers, Inc.
DATE: January 30, 2018
PROJECT NUMBER: 694060



Purpose

On April 17, 2015, the United States Environmental Protection Agency (EPA) published the final rule for the Coal Combustion Residuals (CCR) Rule, Subtitle D of 40 Code of Federal Regulations 257. The CCR Rule established national minimum criteria for CCR disposal and became effective October 19, 2015. The CCR Rule applies to Orlando Utilities Commission (OUC) Stanton Energy Center (SEC) due to the disposal of CCR material generated from the combustion of coal at this facility. This technical memorandum fulfills the reporting requirements associated with the annual groundwater monitoring and corrective action report, §257.90 (2)(e).

The CCR Rule includes deadlines for the establishment of a groundwater monitoring system, the sampling and analysis of groundwater samples, the statistical analysis of the groundwater quality data, and corrective actions (if necessary) for facilities disposing of CCR. Monitoring requirements for compliance are included in §257 sub-sections:

- Applicability (§257.90)
- Groundwater Monitoring Systems (§257.91)
- Groundwater Sampling and Analysis Requirements (§257.93)
- Detection Monitoring Program (§257.94)
- Assessment Monitoring Program (§257.95)
- Assessment of Corrective Measures (§257.96)
- Selection of Remedy (§257.97)
- Implementation of Corrective Action Program (§257.98)

Background and Setting

SEC is located 12 miles southeast of Orlando, Florida. OUC has been operating SEC since 1987 and dry-managing CCR in landfills on the west side of the property. The original, now closed, landfill received CCR from July 1987 through August 28, 2015. Because of this operational change, the old landfill is exempt from the CCR Rule. The old landfill has been closed (hereinafter "closed landfill"), is undergoing post-closure monitoring under OUC's Conditions of Certification under the Florida Department of Environmental Protection (FDEP), and has a 6.42-megawatt solar power generation farm installed over its top. The new landfill (hereinafter "active landfill") began receiving CCR in May 28, 2015 as a monofill that receives CCR produced by the SEC coal-fired power generating process. From the period of May 28 through August 15 the CCR directed to the closed landfill was used to form part of the landfill cap. The cap was completed with 2 feet of soil and then sodded to stabilize the soil.

The new landfill is positioned immediately west of and adjacent to the closed landfill and immediately east of the SEC western property boundary, Figure 1. The design standards for active landfill were those compliant with Florida's municipal solid waste landfill requirements under Chapter 62-701, Florida Administrative Code.

Groundwater conditions at SEC are regulated under two separate programs: the FDEP Power Plant Siting Act and the U.S. Environmental Protection Agency (EPA) CCR Rule. The FDEP monitoring program has been active since August 1986 while the CCR monitoring program began in October 2015. OUC has made a conscious effort to keep these programs separate because different regulatory requirements, different groundwater quality standards, and different monitored constituents. However, the groundwater conditions near the two landfills are common. The juxtaposition of the two landfills, proximity of the active landfill to the site boundary, and the history of groundwater investigations and FDEP program groundwater monitoring results were used to locate the monitoring wells for the CCR program. Figure 2 presents an aerial photograph of SEC, the full field of monitoring wells and the surficial aquifer groundwater elevation contours at SEC for October 30, 2015.

The western property boundary is the regional upgradient edge of the SEC site with surficial aquifer groundwater generally flowing from an apparent groundwater level high under the closed landfill toward the southwest between the two landfills. As a result, the groundwater quality conditions near the active landfill and monitored under the CCR program do not represent unaffected background conditions; they represent baseline conditions for the beginning of the CCR groundwater monitoring program. The Orange County municipal solid waste landfill is immediately west of SEC.

Groundwater Monitoring and Correction Action Program

The CCR Groundwater Monitoring and Corrective Action program is described in Sections 257.90 through 257.98 of the CCR Rule. The requirements for the program are briefly described below, followed by the screening and selection process, and the results of groundwater monitoring at SEC. As this is the first annual report, this report contains the results of the Groundwater Monitoring and Corrective Action program from July 2015 through December 2017. Subsequent annual reports will describe the status of the program for those particular years.

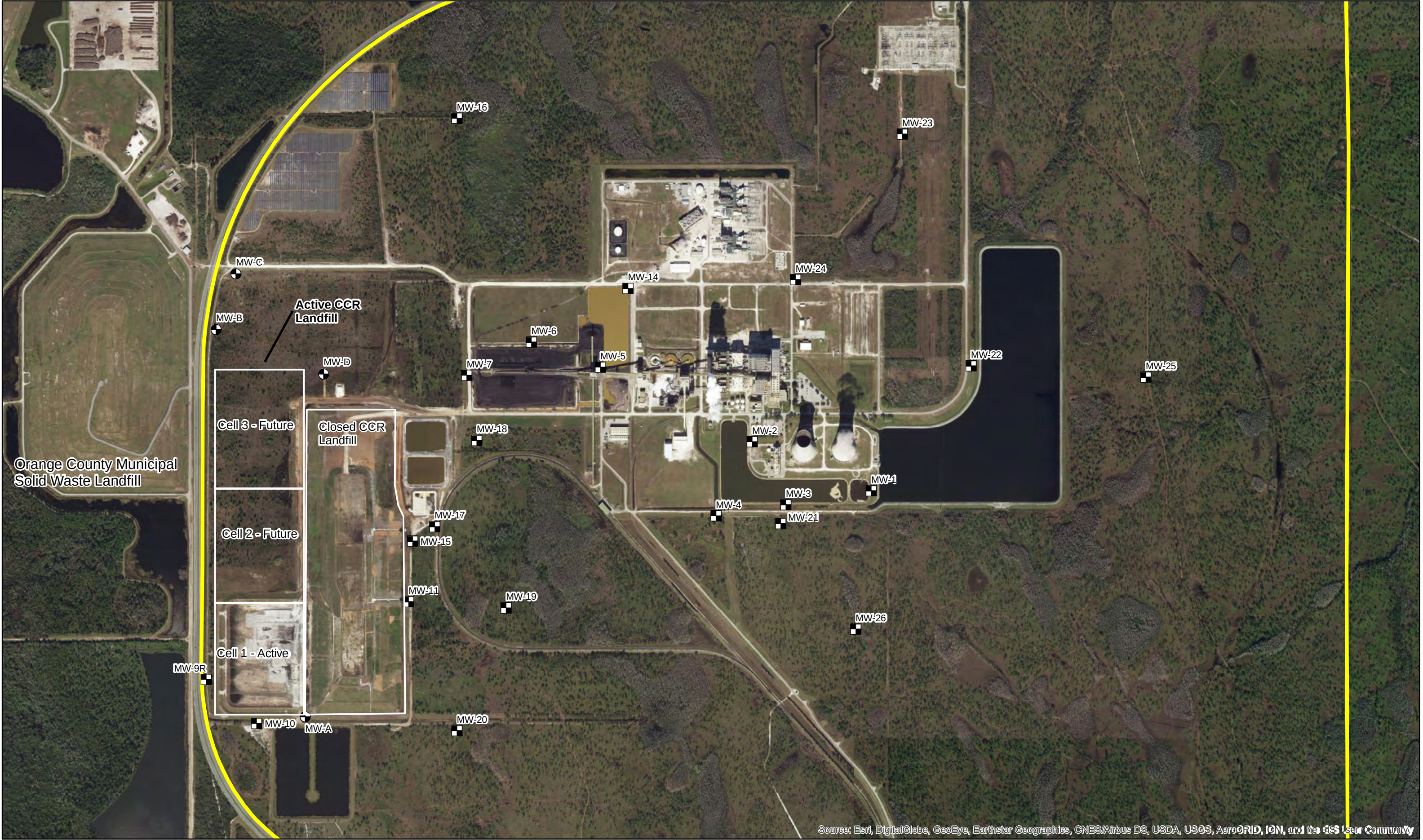
No problems were encountered in the CCR monitoring program from July 2015 through 2017. The key actions for 2017 were

1. Constructed the CCR groundwater monitoring wells in August 2015
2. Completed the background groundwater monitoring September 2015 through July 2017
3. Prepared the *Groundwater Monitoring Well Certification of Compliance* and uploaded the document to the OUC CCR Web site by October 17, 2017
4. Analyzed background groundwater quality data for Appendix III and IV constituents to select statistical analysis methods, prepared and uploaded *Groundwater Monitoring Well Data Statistical Methods Certification* to the OUC CCR Web site by October 17, 2017
5. On October 30, 2017, collected and analyzed the first detection program groundwater samples for Appendix III constituents

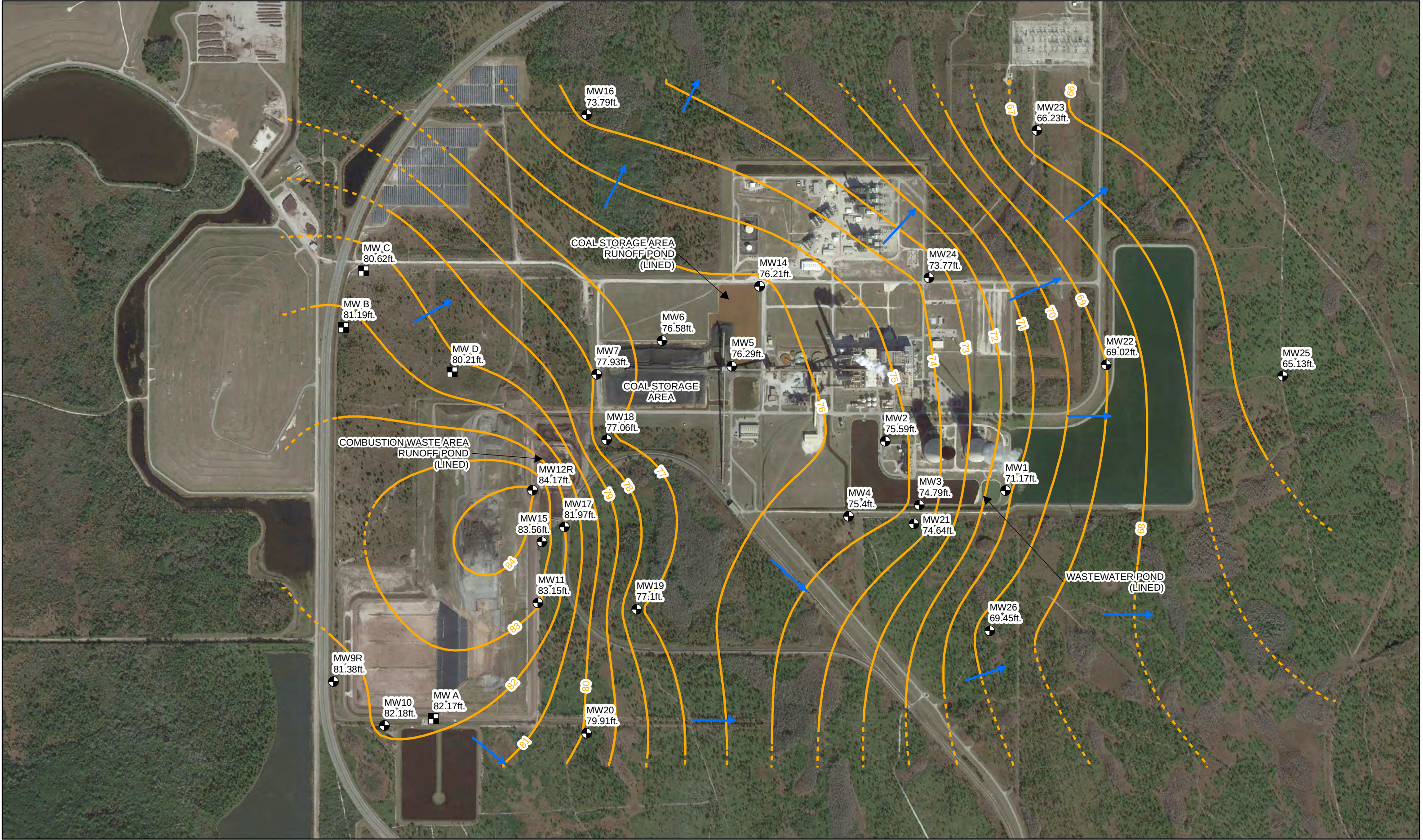
Key program activities for 2018 are to continue with CCR detection monitoring.

Applicability (§257.90)

Owners of CCR landfills and impoundments are required to initiate a groundwater monitoring system, the perform sampling and analysis of groundwater, and identify the statistical analysis methods for groundwater quality data by October 17, 2017. The monitoring system requirements are described in



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



0 500 1,000 2,000 Feet

- CCR Rule Compliance Monitoring Wells
- FDEP Compliance Monitoring Wells
- Groundwater Elevation Contours - Dashed Where Inferred
- Groundwater Flow Direction

Figure 1.
Groundwater Level Elevation at OUC Stanton Energy Center
October 30, 2015



§257.90(b), whereas no later than October 17, 2017, the owner or operator of the CCR unit must be in compliance with the following groundwater monitoring requirements:

1. Install the groundwater monitoring system as required by §257.91
2. Develop the groundwater sampling and analysis program to include selection of the statistical methods for evaluating groundwater quality data as required by §257.93
3. Initiate the detection monitoring program to include obtaining a minimum of eight independent samples for each background and downgradient well as required by §257.94(b)
4. Begin evaluating the groundwater monitoring data for statistically significant increases over background levels for the constituents listed in appendix III of this part as required by §257.94

Groundwater Monitoring Systems (§257.91)

The SEC CCR active landfill groundwater monitoring system was installed in August 2015 to meet the conditions of the CCR Rule. Certification the OUC SEC groundwater monitoring wells met the intent of the CCR program was provided on October 16, 2017 and posted to the OUC Web site on October 17, 2017.

Groundwater Sampling and Analysis Program (§257.93)

The SEC active landfill groundwater monitoring program has been designed to provide an accurate representation for groundwater quality near the active landfill under §257.93 of the CCR Rule, Groundwater Sampling and Analysis Program. The CCR Rule monitoring program began with the establishment of background groundwater conditions at the time that the Rule was promulgated. Data to establish background conditions relative to the CCR Rule were to be collected from July 2015 through October 2017. These data were to be evaluated to select appropriate statistical methods to track constituent data, documented, and posted to the OUC CCR Web site by October 17, 2017.

Detection Monitoring Program (§257.94)

The detection monitoring program began to establish background groundwater quality conditions that consisted of collecting and analyzing quarterly samples between September 2015 and July 2017 for Appendix III and IV constituents. Sampling events to establish background water quality conditions were completed by October 17, 2017 in accordance with §257.94(b).

Statistical Method Selection for OUC Stanton Energy Center CCR Groundwater Monitoring Technical Memorandum (CH2M HILL Engineers, Inc., October 13, 2017) provides an evaluation for the statistical method selection. The statistical methods identified in the technical memorandum will be used to determine if a statistically significant increase over background concentrations has occurred. This technical memorandum was prepared in accordance with §257.93(f)(6). The western property boundary is the upgradient edge of the site with surficial aquifer groundwater generally flowing toward the north-northeast. As a result, the groundwater quality conditions near the active landfill and monitored under this sampling plan do not represent unaffected background conditions.

Assessment Monitoring Program (§257.95)

An assessment monitoring program is not required based on the results of the sampling events completed through October 30, 2017 and covered under this annual report. No statistical increase over background water quality has occurred.

Assessment of Corrective Measures (§257.96)

An assessment of corrective measures is not required based the results of the sampling events completed through October 30, 2017 and covered under this annual report. No statistical increase over background water quality has occurred.

Selection of Remedy (§257.97)

Selection of remedy is not required based the results of the sampling events completed through October 30, 2017 and covered under this annual report. No statistical increase over background water quality has occurred.

Implementation of Corrective Action Program (§257.98)

Implementation of corrective action program is not required based the results of the sampling events completed through October 30, 2017 and covered under this annual report. No statistical increase over background water quality has occurred.

Annual Groundwater Monitoring and Corrective Action Report (§257.90(e))

The CCR annual groundwater monitoring and corrective action report requirements are listed below.

1. A map, aerial image, or diagram showing the CCR unit and the background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
3. In addition to the monitoring data obtained under §§257.90 through §257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
4. A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
5. Other information required to be included in the annual report as specified in §257.90 through §257.98.

This technical memorandum provides the required documentation to demonstrate the OUC SEC's compliance with the CCR Rule annual groundwater monitoring and corrective action report.

CCR Groundwater Data Screening and Decision Process through the Assessment Monitoring Program

The groundwater data and screening and decision process was derived from §257.90 through §257.98 of the CCR Rule. For the purposes of this report ends at the Assessment Monitoring Program §257.95 because assessment of corrective measures, selection of remedy, and implementation of corrective action program are well into the future, if they would occur at all for SEC. The process is

1. Collect CCR period background water quality data, Appendix III and IV constituents. This step occurred between September 9, 2015 and July 20, 2017 at SEC and is completed.
2. Identify method(s) to evaluate the data for statistically significant trend changes for each well and constituent for Appendix III and IV constituents by well. This step was completed and documented on October 17, 2017.

3. Quantify criteria that define the limits for statistically significant change from background for each Appendix III and IV constituent by well. This was completed and documented in this report.
4. Establish a groundwater protection standard for each Appendix IV constituent [§257.95(h)]. Note that the CCR Rule does not list Appendix III constituents to establish groundwater protection standards. This was completed and documented in this report.
5. Collect detection program water quality data, Appendix III constituents (§257.94). The single detection monitoring program sampling results are presented in this report.
6. Assess groundwater flow direction and rate. The single detection monitoring program sampling results are presented in this report.
7. Compare detection program water quality data to the statistical trend criteria to evaluate for no significant trend change, or a significant trend change, from the background water quality data.
 - a. If the result is no significant trend change then continue with detection program monitoring
 - b. If the result is a significant trend change may be indicated, then resample within 90 days
 - i. Compare data to the statistical criteria for no significant trend change or significant trend change
 1. If the result is no significant trend change then continue with detection program monitoring
 2. If the result is significant trend change of one or more constituents at the waste boundary [§257.94(e)]
 - a. Establish an assessment monitoring program and post a notification on the CCR Web site that an assessment monitoring program has been established, or
 - b. Demonstrate that a source other than the CCR unit caused the significant increase within 90 days. Continue with the detection monitoring program.
 - c. After approximately 3 years of detection program monitoring reassess the statistical analyses of the groundwater water quality trends against the background data to identify if changes are needed.
8. Assessment monitoring program (§257.95)
 - a. Within 90 days of establishing an assessment monitoring program sample the groundwater for Appendix IV constituents, and then sample annually thereafter.
 - b. The number of samples, N, needs to be sufficient to support the statistical evaluation of the data [§257.93(e)]. The owner may demonstrate that an alternative sampling frequency is necessary during the active life and post-closure of the CCR unit based on site conditions; however, sample no less frequently than annually.
 - c. After obtaining the results from the above, within 90 days sample all wells for Appendix III and IV constituents, at least semi-annually. The number of samples, N, needs to be sufficient to support the statistical evaluation of the data [§257.93(e)].
 - i. Establish groundwater protection standards consistent with [§257.95(h)] as described in Item 4, above.

- ii. If the sampling results for the Appendix III and IV constituents are below the established groundwater protection standards for two consecutive sampling events, the monitoring program may return to detection monitoring (Appendix III constituents). Notification that the detection monitoring program is resuming must be posted on the CCR Web site.
- iii. If concentrations of one or more constituents are above background but below the groundwater protection standard continue with the assessment monitoring program.
- iv. If concentrations of one or more constituents are statistically significant concentrations above the groundwater protection standard, post a notification on the CCR Web site [§257.95(g)] and characterize the nature of the release [§257.95(g)(1)].

Results of the Detection Monitoring Program – July 2015 through December 2017

Monitoring Wells

The SEC CCR active landfill groundwater monitoring system consists of 4 surficial aquifer monitoring wells. These wells are named MW-A, MW-B, MW-C, and MW-D. Monitoring well locations were selected based on the groundwater gradient characteristics, and the positions of the closed landfill and the western site boundary. The monitoring wells are about 20 to 25 feet deep into the surficial aquifer. MW-A has an approximate 10-foot deeper installation depth because the land surface elevation at its location is approximately 10 feet higher than the other wells. The horizon for the monitoring interval for MW-A is the same as the interval for MW-B, MW-C, and MW-D. MW-A is the upgradient well and the other wells are downgradient based on local groundwater levels.

The wells were installed in August 2015 using hollow-stem auger drilling construction techniques and the wells were developed after installation. Well completion documents (well diagrams, soil boring logs, well completion reports, and well construction permits) are provided in Appendix A. No CCR monitoring wells were installed or decommissioned since August 2015.

Groundwater Levels and Flow

Groundwater levels in the monitoring wells were collected with each sampling event and groundwater level elevation maps were prepared. Table 1 presents the well location and water level data. Figure 3 shows a chart of the quarterly groundwater elevations. The quarterly groundwater level maps are provided in Appendix B.

Table 1.

**Background and First Operations Period Groundwater Levels – MW-A, MW-B, MW-C, and MW-D,
OUC Stanton Energy Center**

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

DATE	Well	Florida State Plane East Zone (901)		Elevation TOC (feet, NAVD 88)	Depth to Water (feet)	Water Level Elevation (feet, NAVD 88)
		Northing (feet)	Easting (feet)			
10/30/2015	MW-A	1504260	597643.8	95.77	13.60	82.17
4/29/2016					13.96	81.81
10/31/2016					13.53	82.24
4/25/2017					15.64	80.13
10/31/2017					13.31	82.46
10/30/2015	MW-B	1508750	596609.8	86.05	4.86	81.19
4/29/2016					5.20	80.85
10/31/2016					4.90	81.15
4/25/2017					7.25	78.80
10/31/2017					4.41	81.64
10/30/2015	MW-C	1509398	596841.6	86.84	6.22	80.62
4/29/2016					6.56	80.28
10/31/2016					6.14	80.70
4/25/2017					8.36	78.48
10/31/2017					5.67	81.17
10/30/2015	MW-D	1508237	597858.3	85.10	4.89	80.21
4/29/2016					5.58	79.52
10/31/2016					5.14	79.96
4/25/2017					7.44	77.66
10/31/2017					3.96	81.14

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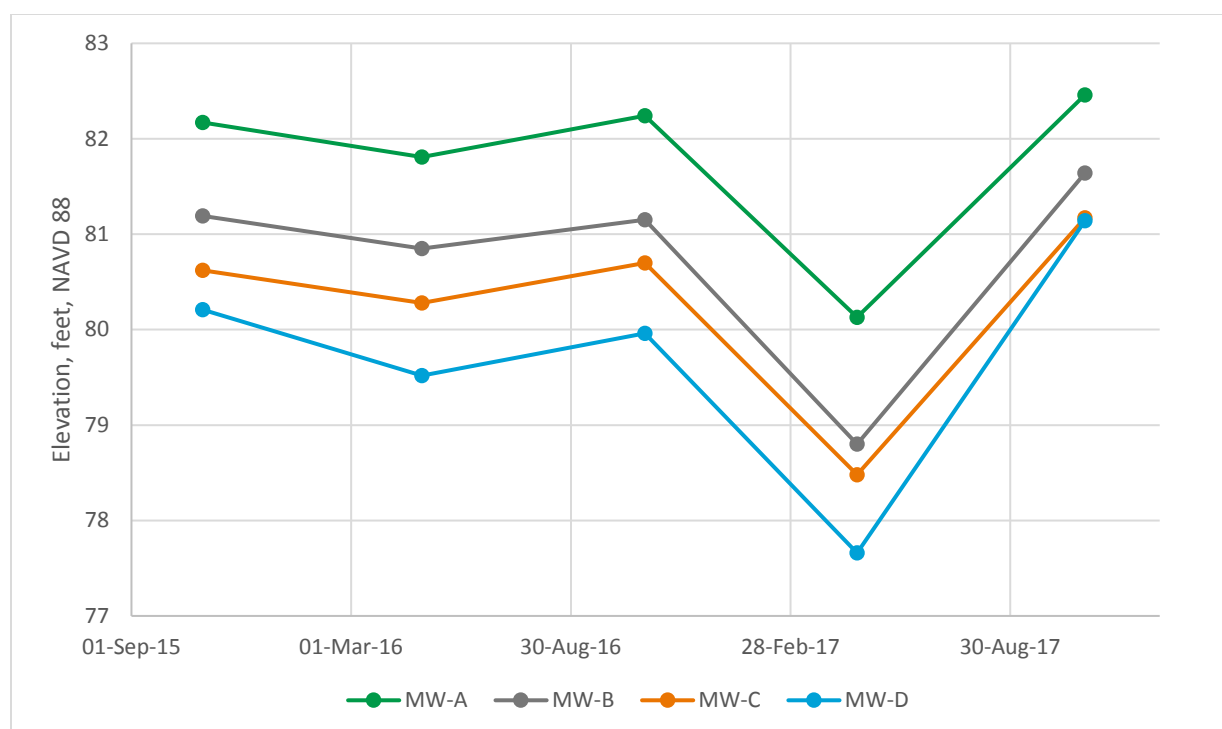


Figure 3.
Quarterly Groundwater Levels

The groundwater flow rates were calculated between the active landfill and MW-B and MW-D for the five sampling periods. The water level elevations for the approximate center of the active landfill at these times were inferred from the groundwater level elevation maps in Appendix B. The groundwater flow rate calculations results are presented in Table 2. The reasons for using MW-B and MW-D will be described with the results of the statistical analysis of the detection program monitoring later in this document.

Table 2.

Groundwater Flow Rate Calculation Results

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

	Landfill Center Water Level (feet, NAVD 88)	MW-B			MW-D		
		Water Level (feet, NAVD 88)	Gradient	Flow Rate (ft/yr)	Water Level (feet, NAVD 88)	Gradient	Flow Rate (ft/yr)
Distance		4300 ft			3200 ft		
30-Oct-15	83.5	81.19	0.0006	1.9	80.21	0.0010	3.5
29-Apr-16	82.5	80.85	0.0004	1.3	79.52	0.0009	3.2
31-Oct-16	82.7	81.15	0.0004	1.2	79.96	0.0008	3.0
25-Apr-17	80.7	78.80	0.0005	1.5	77.66	0.0009	3.3
31-Oct-17	83.3	81.64	0.0004	1.3	81.14	0.0006	2.3

Assumed Hydraulic Conductivity = 0.001 cm/sec for fine sand, Fetter, 1980

Assumed porosity = 30%

Groundwater Sampling and Laboratory Analysis

The detection monitoring program began to establish background groundwater quality conditions that consisted of collecting and analyzing quarterly samples between September 2015 and July 2017 for Appendix III and IV constituents. Sampling events to establish background water quality conditions were completed by October 17, 2017 in accordance with §257.94(b). Table 3 provides the constituents required to be monitored and the maximum contaminant levels (MCLs).

Table 3.

CCR Rule Constituents for Monitoring

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Constituent	Appendix III	Appendix IV	Federal MCL
	Constituents for Detection Monitoring	Constituents for Assessment Monitoring	
Boron	x		none
Calcium	x		none
Chloride	x		250000 µg/L
Fluoride	x	x	none
Sulfate	x		250000 µg/L
pH	x		none
Total Dissolved Solids			500000 µg/L
Antimony		x	6 µg/L
Arsenic		x	10 µg/L
Barium		x	2000 mg/L
Beryllium		x	4 µg/L
Cadmium		x	5 µg/L
Chromium		x	100 µg/L
Cobalt		x	none
Lead		x	15 µg/L
Lithium		x	none
Mercury		x	2 µg/L
Molybdenum		x	none
Radium 226 and 228 combined		x	5 pCi/L
Selenium		x	50 µg/L
Thallium		x	2 µg/L

MCL = Maximum Contaminant Level
 mg/L = milligram per liter
 µg/L = microgram per liter
 pCi/L = picocurie per liter

Sample dates are summarized in Table 4. Samples collected October 30, 2017 are the first detection semiannual monitoring event for Appendix III constituents. The laboratory results of the background and first detection sampling events are summarized in Appendix C.

Table 4.

Monitoring Well Background and First Detection Sampling Schedule

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Sample Date	Purpose	Monitoring Well			
		MW-A	MW-B	MW-C	MW-D
Sample Date	Purpose	Upgradient	Down Gradient	Down Gradient	Down Gradient
9/9/2015	Background	no Ra	no Ra	no Ra	no Ra
10/12/2015	Background	III & IV w/o Ra	III & IV w/o Ra	III & IV w/o Ra	III & IV w/o Ra
10/29/2015	Background	Ra	Ra	Ra	Ra
12/2/2015	Background			III & IV	
1/6/2016	Background			III & IV	
1/13/2016	Background			III & IV	
2/3/2016	Background			III & IV	
2/18/2016	Background			III & IV	
3/2/2016	Background			III & IV	
3/22/2016	Background	III & IV	III & IV	III & IV	III & IV
4/27/2016	Background	no Mo, Se	no Mo, Se	no Mo, Se	no Mo, Se
7/20/2016	Background	III & IV	III & IV	III & IV	III & IV
11/29/2016	Background	III & IV	III & IV	III & IV	III & IV
1/18/2017	Background	III & IV	III & IV	III & IV	III & IV
4/4/2017	Background	III & IV	III & IV	III & IV	III & IV
7/20/2017	Background	III & IV	III & IV	III & IV	III & IV
10/30/2017	Detection	III	III	III	III

III & IV - Appendix and III and IV constituents

Statistical Assessment of Appendix III Constituents for Detection Monitoring

The CCR Rule provides for the collection of background period data from July 2015 through October 2017. OUC collected and analyzed groundwater samples at SEC from the CCR monitoring wells around the active landfill from September 9, 2015 through July 20, 2017. The first detection monitoring sample was collected on October 30, 2017. The CCR monitoring wells are positioned around the active landfill that went into service on May 28, 2015. Because the spatial variability analysis results indicated significant differences between the wells, each monitoring well's future concentrations were compared to its own background period concentrations. MW-A is considered an upgradient well and is not part of the detection monitoring assessment. OUC used the data collected quarterly through July 2017 to establish a background level for each well-constituent pair. The statistical methods certification letter (October 13, 2017) listed the type of analysis that would be appropriate at each location, given the

nature of the data. However, quantification of the actual limits and methods were reserved for this report.

In general, most of the Appendix III list of constituents had sufficient detected results to allow for parametric parameter prediction. Several of the datasets had trends, either increasing or decreasing, that must be accounted for when the prediction limits are set to assess future monitoring results. Also, some of the laboratory results need to be transformed to logarithms for analysis, if indicated. Table 3 lists the detection monitoring constituents by monitoring well (MW-B, MW-C, and MW-D), if there was a trend evident in the baseline data, whether the results need to be transformed, and type of statistical test (parametric or non-parametric).

The general equation for a prediction limit (PL) based on normal or transformed normal populations is given by:

$$PL = \bar{x} + \kappa s$$

where $\bar{x}$ is the sample mean in background, s is the background standard deviation, and κ is a multiplier depending on the type of prediction limit under construction (EPA, 2009). The multiplier depends on the number of comparisons being made, which is 1 of 2 for the semiannual (2 times per year) compliance monitoring. κ -multipliers were generated for a sample size of $n = 9$, number of compliance wells ($n_w = 3$), number of constituents ($n_c = 7$), number of annual evaluations ($n_E = 2$), and the site wide false positive rate (SWFPR) of 10 percent.

In this case, nearly all PLs are one-tailed, upper prediction limits (UPL) because the change of interest is whether the data are exceeding the baseline data. However, pH also has a lower bound limit (lower prediction limit, LPL) because decreases in values can have environmental consequences too. For this constituent, the prediction limits are based on a two-tailed limit. Table 5 lists the results of the trend analysis, the appropriate κ multiplier, and the UPL and LPL for each well-constituent pair. For constituents with trends, the UPL and LPL are based on the time-adjusted trend mean plus (or minus) the residual. The Mann-Kendall test was used for identifying trends and the Theil-Sen method was used to determine the trend parameters. Constituent data that were detrended are shown by "Yes" in the "Trend Removal Performed" column. Slope and intercept values resulting from the detrending process are provided in Table 5. When a trend analysis predicted future mean values would be negative, the future trend mean value was set to 0.

Fluoride results in MW-C were always non-detect during the baseline period. For this one case, the double quantification rule (DQR) will apply. In the future, if well-constituent pairs in the '100% non-detect' group has quantified measurements (that is, at or above the reporting limit [RL]) in two consecutive sample and resample events, then this result warrants further assessment. This does not necessarily mean that the levels are problematic, just that OUC will need to determine if these are confirmed detections and maybe perform other investigations.

The data set collected since the baseline (background) for the annual report is one data point for each monitoring well-constituent pair which was collected on October 30, 2017. For the first sample result, a statistically significant change is determined by comparing the single measured concentration (C) to the LPL or the UPL. For pH which has an LPL, a statistically significant change is when $C < LPL$. For constituents which have a UPL, and a statistically significant change is when $C > UPL$. The statistical analysis is provided in Table 6.

Discussion

The results of the statistical assessment of Appendix III constituents for detection monitoring show that calcium, chloride, pH (low) and TDS from MW-B, and calcium and chloride from MW-D concentrations from the October 30, 2017 detection sampling were statistically significantly greater than the

background concentrations of these constituents at these locations. As described by §257.94(e) OUC must establish an assessment monitoring program meeting the requirements of by §257.95 or may demonstrate that a source other than the CCR unit caused the statistically significant increase over background concentrations. OUC will resample MW-B for calcium, chloride, pH (low), and TDS; and MW-D for calcium and chloride. The data will be evaluated against the October 30, 2017 sample results to determine the next action. The groundwater flow rates to MW-B and MW-D (Table 2) were calculated to be used for this future evaluation.

Conclusion

The general purpose of the annual report is to document the results of the detection monitoring. The results indicated that analyses of calcium, chloride, pH (low) and TDS from MW-B, and calcium and chloride from MW-D fell outside the statistical confidence intervals. This does not mean that there is a problem, but additional activity has been started to assess the situation.

Table 5.
Summary of Statistical Analysis and Calculation of Prediction Levels for the Appendix III Detection Monitoring Constituents
Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Well	Constituents	Units	% NDs	Trend	Prediction Interval Method	Trend [Conc.] = Intercept + Slope* Time (days)				K Value	Residual r	LPL ^b x-r	UPL ^b x+r
						Trend Removal Performed	Intercept	Slope	Trend [Conc.] ^a				
							b	m	x=782m+b				
MW-B	Boron	µg/L	0	Increasing	Parametric Normal	Yes	12.60	0.11	98.62	2.36	28.60		127.22
MW-B	Calcium	µg/L	0	Decreasing	Parametric Normal	Yes	23,094.16	-37.26	0	2.36	5,270		5,270
MW-B	Chloride	µg/L	0	Decreasing	Parametric Normal	Yes	98,702.20	-127.10	0	2.36	24,300		24,300
MW-B	Fluoride	µg/L	55.56		Nonparametric								230
MW-B	pH	pH Units	0	Increasing	Parametric Normal	Yes	4.19	8.95E-04	4.89	2.71	0.36	4.57	5.25
MW-B	Sulfate	µg/L	0		Parametric Normal					2.36			61,300
MW-B	TDS	µg/L	0	Decreasing	Nonparametric	Yes	25,0464.90	-195.80	97,349		41,700		139,049.3
MW-C	Boron	µg/L	33.33		Parametric Normal with censored adjustment using Kaplan Meier					2.36			31.1
MW-C	Calcium	µg/L	0		Parametric Normal					2.36			8,370
MW-C	Chloride	µg/L	0	Increasing	Parametric Normal	Yes	6,102.50	12.50	15,878	2.36	2,450		18,327.5
MW-C	Fluoride	µg/L	100		DQR					2.36			DQR
MW-C	pH	pH Units	0	Decreasing	Parametric Normal	Yes	5.35	-4.34E-04	5.01	2.71	0.38	4.69	5.39
MW-C	Sulfate	µg/L	11.11		Parametric Lognormal with censored adjustment using Kaplan Meier					2.36			2,370
MW-C	TDS	µg/L	0		Parametric Normal					2.36			70,800
MW-D	Boron	µg/L	33.33		Parametric Lognormal with censored adjustment using Kaplan Meier					2.36			32.6
MW-D	Calcium	µg/L	0	Decreasing	Parametric Lognormal	Yes	3,353.76	-3.19	859.2	2.36	2,377		3,236.05
MW-D	Chloride	µg/L	0	Increasing	Parametric Lognormal	Yes	5,735.30	11.30	14,571.9	2.36	12,300		26,871.9
MW-D	Fluoride	µg/L	88.89		Nonparametric								120
MW-D	pH	pH Units	0	Decreasing	Parametric Normal	Yes	5.32	-2.03E-03	3.73	2.71	0.92	3.33	4.65
MW-D	Sulfate	µg/L	88.89		Nonparametric								330
MW-D	TDS	µg/L	0		Parametric Lognormal					2.36			114,000

Table 5.
Summary of Statistical Analysis and Calculation of Prediction Levels for the Appendix III Detection Monitoring Constituents
Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Notes:

NDs = non-detects

Days means days since September 9, 2015 for MW-B, MW-C, and MW-D

UPL and LPL = upper and lower prediction limits based on baseline.

µg/L = micrograms per liter

DQR = double quantification rule (2 successive data points > minimum detection limit)

^a Trend [Conc.] is the projected mean based on the time trend, or 782 days between September 9, 2015 and October 30, 2017.

^b LPL or UPL = the time-adjusted trend mean minus or plus the listed residual value, respectively.

Table 6.**Summary of Annual Data Detection Monitoring Results***Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report*

Well	Constituents	Units	LPL	UPL	Observed values Oct. 30, 2017	Statistically Significant
MW-B	Boron	µg/L		127.22	71.50	No
MW-B	Calcium	µg/L		5,270	17,100	Yes
MW-B	Chloride	µg/L		24,300	72,200	Yes
MW-B	Fluoride	µg/L		230	140	No
MW-B	pH	pH Units	4.57	5.25	4.37	No
MW-B	Sulfate	µg/L		61,300	60,400	No
MW-B	TDS	µg/L		139,049	239,000	Yes
MW-C	Boron	µg/L		31.1	20U	No
MW-C	Calcium	µg/L		8,370	6,770	No
MW-C	Chloride	µg/L		18,327.5	16,000	No
MW-C	Fluoride	µg/L		DQR	100U	No
MW-C	pH	pH Units	4.69	5.39	5.16	No
MW-C	Sulfate	µg/L		2,370	1,200	No
MW-C	TDS	µg/L		70,800	65,000	No
MW-D	Boron	µg/L		32.6	31	No
MW-D	Calcium	µg/L		3,236.05	3,720	Yes
MW-D	Chloride	µg/L		26,871.9	29,200	Yes
MW-D	Fluoride	µg/L		120	100U	No
MW-D	pH	pH Units	3.33	4.65	4.46	No
MW-D	Sulfate	µg/L		330	300	No
MW-D	TDS	µg/L		114,000	63,000	No

UPL and LPL = upper and lower prediction limits based on baseline.

References

CH2M HILL Engineers, Inc. *Stanton Energy Center Combustion Waste Landfill, WACS Facility: 97663, Monitoring Plan Implementation Schedule (MPIS)*. August 22, 2016.

CH2M HILL Engineers, Inc., *Statistical Method Selection for OUC Stanton Energy Center CCR Groundwater Monitoring Technical Memorandum*. October 13, 2017

CH2M HILL Engineers, Inc. *Groundwater Monitoring Well Certification of Compliance*, October 16, 2017.

EPA's Unified Guidance. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*. EPA 530/R-09-007. March 2009.

Fetter, C.W., *Applied Hydrogeology*, 1980

Appendix A

Well Construction Documents



PROJECT NUMBER 663384	BORING NUMBER MW-A	SHEET 1 OF 2
SOIL BORING LOG		

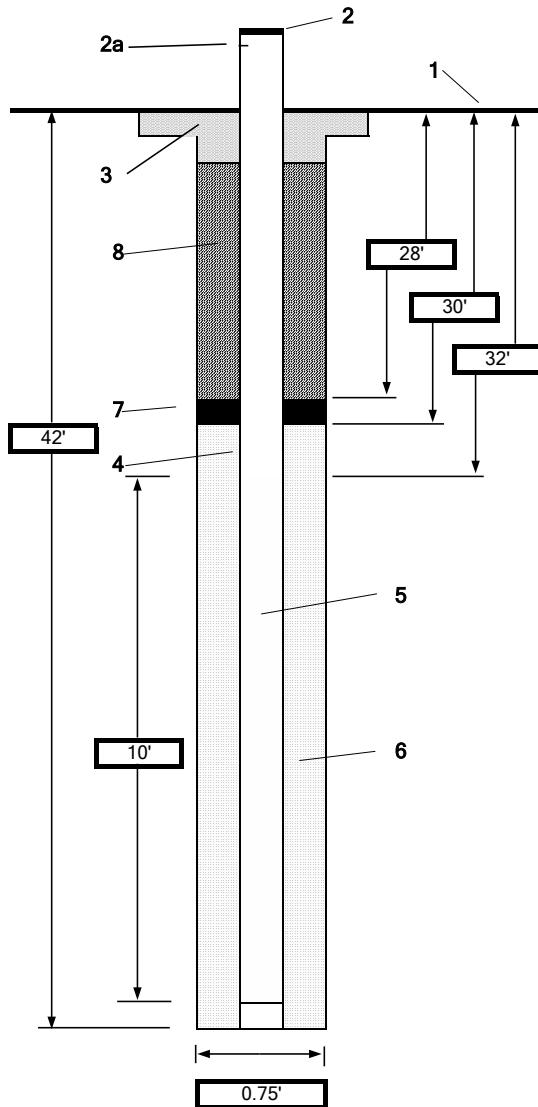
PROJECT : OUC Stanton Energy Center LOCATION : Orlando
 ELEVATION : 95.77 ft., NAVD88 DRILLING CONTRACTOR : Custom Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME 75 Hollow Stem Auger Rig
 WATER LEVELS : START : END : ~14' bls LOGGER : W. Elliott August 6 2015

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION		COMMENTS	
	RECOVERY (IN) #/TYPE	TEST RESULTS		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace		
0	0-5			Auger Flight Sample Fill - light gray to tan fine to medium sand with white limestone fragments, loose to dense, dry, not plastic	No PID readings taken; COCs are metals only		
5	5-10			SM- fine grained brown silty sand, loose to dense, dry to slightly moist, not plastic, color darker near 10'	Driller reports natural ground at 10' BLS		
10	10-15			SM - medium dark brown fine grained silty sand, approx. 10 to 20% dark brown organic silt, moist to very moist, not plastic			
15	15-20	70%		Split Spoon sample 15.0-15.5' - SM - fine grained brown silty sand, as at 10', dense, wet, not plastic 15.5-16.5' - SM - very dark brown very fine grained silty sand, very dense, wet, slightly plastic			
20	20-25	50%		Split Spoon sample SM - as at 16.5' - very fine grained very dark brown silty sand, very dense, wet, slightly plastic, becomes coarser grained and less silty toward 22'			
25	25-30	50%		Split Spoon sample 25.0-25.5' - SP - poorly graded (well sorted) fine grained to medium grained, well rounded grains gold color, dense, not plastic, downward grades finer grained, darker color, and more silt			
30	25-30	50%		25.5-26.0' - SM - fine to very fine grained gold silty sand, up to 20% brown silt, dense to very dense, wet, slightly plastic			



PROJECT NUMBER 683384	WELL NUMBER MW-A
SHEET 1 OF 1	
WELL COMPLETION DIAGRAM	

PROJECT : OUC Stanton Energy Center	LOCATION : Orlando	DATE: August 6 2015
DRILLING CONTRACTOR : Custom Drilling		
DRILLING METHOD AND EQUIPMENT USED : CME 75 Hollow Stem Auger with 2 foot split spoons		
WATER LEVELS :	START :	END : LOGGER : W. Elliott



1- Ground elevation at well	TBD
2- Top of casing elevation	95.77 ft, NAVD88
a) vent hole?	no
3- concrete pad dimensions	2' x 2' x 4"
4- Dia./type of well casing	2" I.D. SCH 40 flush-threaded PVC
5- Type/slot size of screen	2" I.D. SCH 40 flush-threaded PVC with 0.010" factory slotted screen
6- Type screen filter	20-30 Standard silica sand
a) Quantity used	8 bags
7- Type of seal	30-45 mesh fine silica sand
a) Quantity used	1 bag
8- Grout	
a) Grout mix used	Type I/II portland cement
b) Method of placement	tremie/hand pour
c) Vol. of well casing grout	
Development method	submersible pump
Development time	1.5 hours 1.75 gpm
Estimated purge volume	150 gallons
Comments	threaded bottom cap installed



PROJECT NUMBER 663384	BORING NUMBER MW-B	SHEET 1 OF 2
SOIL BORING LOG		

PROJECT : OUC Stanton Energy Center LOCATION : Orlando
 ELEVATION : 86.05 ft, NAVD88 DRILLING CONTRACTOR : Custom Drilling
 DRILLING METHOD AND EQUIPMENT USED : AMS Power Probe 9500 DPT Rig and 4 foot samplers August 5 2015
 WATER LEVELS : START : END : LOGGER : W. Elliott

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)			STANDARD	SOIL DESCRIPTION	COMMENTS
		RECOVERY (IN)	#/TYPE	PENETRATION	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
				TEST RESULTS		
				6"-6"-6"-6" (N)		
0		75%			SM - fine grained silty sand, medium grayish brown, well rounded, dense, not plastic Color grades to very dark brown/black at 3', wet, siltier toward 4'	No PID readings, COCs are metals
4		100%			4.0' - 6.8' - SM - same silty fine black sand as at 4', 6.8' - 8.0' - SM - color change to brown, less silty, gold color well rounded sand grains, dense, wet, not plastic	
8		100%			8.0' - 10.0' - SM - as at 6.8', but color grading darker to black at 8 feet 10.0' - 12.0' - SP - fine grained sand, no silt, well-rounded gold color grains, very dense, wet, not plastic	
12		100%			SP - fine grained sand as at 12', trace fine black silt in upper 2 feet, color change to orange at 14 feet, very dense, moist to wet, not plastic	
16		100%			SP - as at 16' in previous sample, orange, very dense, wet, not plastic, grading finer at 19'	difficult to collect sample due to very dense sand
20					SP - as at 20' in previous sample, but color is grading to yellow/gold at 23', very dense, compact and finer grained (very fine grained)	



PROJECT NUMBER 663384	BORING NUMBER MW-B	SHEET 1 OF 2
SOIL BORING LOG		

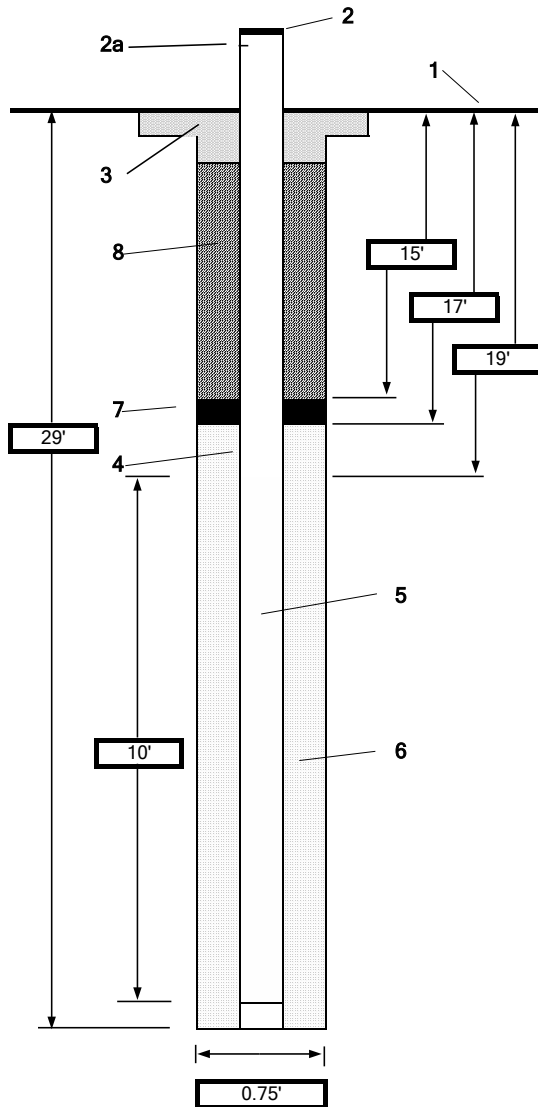
PROJECT : OUC Stanton Energy Center LOCATION : Orlando
 ELEVATION : 86.05 ft, NAVD88 DRILLING CONTRACTOR : Custom Drilling
 DRILLING METHOD AND EQUIPMENT USED : AMS Power Probe 9500 DPT Rig and 4 foot samplers August 5 2015
 WATER LEVELS : START : END : LOGGER : W. Elliott

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)			STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION	COMMENTS
		RECOVERY (IN)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
		#/TYPE				
22					see previous page	
24		0%			No sample - sampler jammed - no pushed samples recovered below 20 feet due to dense fine sands, auger flight samples only very fine yellow sand	sand heaving and jamming sampler
28					very fine grayish-tan to yellow sand	driller reports flowing fine sand
32					END OF BORING 29 FT	



PROJECT NUMBER 683384	WELL NUMBER MW-B
SHEET 1 OF 1	
WELL COMPLETION DIAGRAM	

PROJECT : OUC Stanton Energy Center	LOCATION : Orlando	DATE: August 5 2015
DRILLING CONTRACTOR : Custom Drilling		
DRILLING METHOD AND EQUIPMENT USED : AMS Power Probe 9500 DPT rig with hollow stem auger conversion		
WATER LEVELS :	START :	END : LOGGER : W. Elliott



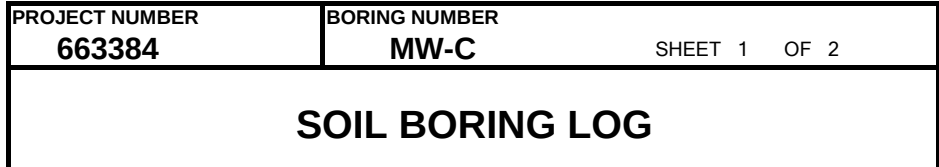
1- Ground elevation at well	TBD
2- Top of casing elevation	86.05 ft., NAVD88
a) vent hole?	no
3- concrete pad dimensions	2' x 2' x 4"
4- Dia./type of well casing	2" I.D. SCH 40 flush-threaded PVC
5- Type/slot size of screen	2" I.D. SCH 40 flush-threaded PVC with 0.010" factory slotted screen
6- Type screen filter	20-30 Standard silica sand
a) Quantity used	6 bags
7- Type of seal	30-45 mesh fine silica sand
a) Quantity used	1 bag
8- Grout	
a) Grout mix used	Type I/II portland cement
b) Method of placement	tremie/hand pour
c) Vol. of well casing grout	
Development method	submersible pump
Development time	1.5 hours 1.75 gpm
Estimated purge volume	150 gallons
Comments	threaded bottom cap installed



PROJECT NUMBER 663384	BORING NUMBER MW-C	SHEET 1 OF 2
SOIL BORING LOG		

PROJECT : OUC Stanton Energy Center LOCATION : Orlando
 ELEVATION : 86.84 ft., NAVD88 DRILLING CONTRACTOR : Custom Drilling
 DRILLING METHOD AND EQUIPMENT USED : AMS Power Probe 9500 DPT Rig and 4 foot samplers August 4 2015
 WATER LEVELS : START : END : LOGGER : W. Elliott

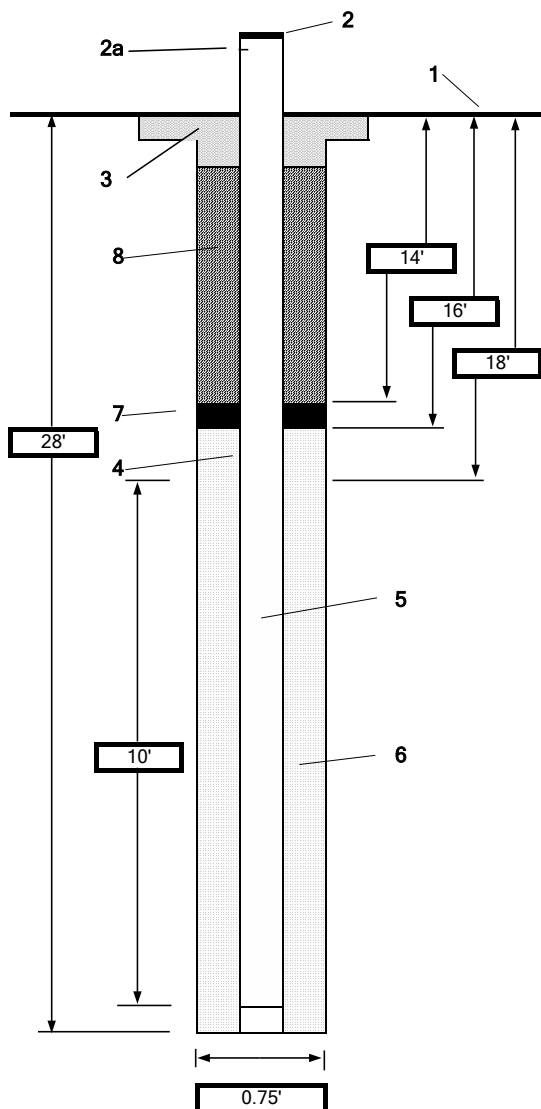
DEPTH BELOW SURFACE (FT)	INTERVAL (FT)			STANDARD	SOIL DESCRIPTION	COMMENTS
		RECOVERY (IN)	#/TYPE	PENETRATION	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
				TEST RESULTS		
				6"-6"-6"-6" (N)		
0						OVM (ppm): Breathing Zone Headspace
4		75%			SM - fine grained silty sand, medium gray, well rounded, dense, moist to wet, not plastic color grades to medium brown at 3', wet, siltier toward 4'	No PID readings, COCs are metals
8		100%			SM - same silty fine black sand as at 4', wet, dense, color change to very dark brown/black and increase in silt content at 7' - SM/ML	
12		100%			8.0' - 10.0' - SM - as at 6.8', but color grading darker to black at 8 feet 10.0' - 12.0' - ML - black very dense silt with fine sand, very dense, saturated, slightly plastic	
16		100%			SM - very dark brown silty fine grained sand, trace dark brown organic matter/silt, wet, dense, slightly plastic, sand grains are well-rounded and golden/bronze in color	
20		100%			SW - very fine to medium grained orange/gold sand, very dense, saturated, not plastic, trace brown silt - ("tight sand"), finer grained toward 20'	difficult to collect sample due to very dense sand
		25%			SW/SP - gold dense sand as at 16', but grading finer to SP at around 21', color is grading to yellow/gold, very dense, compact - plastic liner is jammed in sampler barrel, preventing full sample recovery	driller reports tight sand

[illegible]



PROJECT NUMBER 683384	WELL NUMBER MW-C
SHEET 1 OF 1	
WELL COMPLETION DIAGRAM	

PROJECT : OUC Stanton Energy Center	LOCATION : Orlando	DATE: August 4 2015
DRILLING CONTRACTOR : Custom Drilling		
DRILLING METHOD AND EQUIPMENT USED : AMS Power Probe 9500 DPT rig with hollow stem auger conversion		
WATER LEVELS :	START :	END : LOGGER : W. Elliott



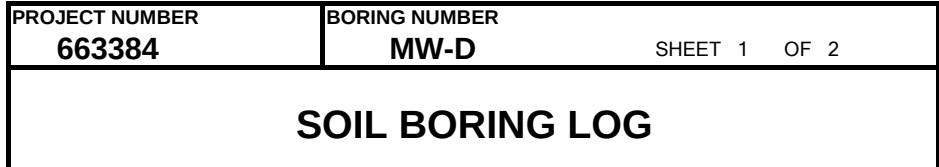
1- Ground elevation at well	TBD
2- Top of casing elevation	86.84 ft. NAVD88
a) vent hole?	no
3- concrete pad dimensions	2' x 2' x 4"
4- Dia./type of well casing	2" I.D. SCH 40 flush-threaded PVC
5- Type/slot size of screen	2" I.D. SCH 40 flush-threaded PVC with 0.010" factory slotted screen
6- Type screen filter	20-30 Standard silica sand
a) Quantity used	6 bags
7- Type of seal	30-45 mesh fine silica sand
a) Quantity used	1 bag
8- Grout	
a) Grout mix used	Type I/II portland cement
b) Method of placement	tremie/hand pour
c) Vol. of well casing grout	
Development method	submersible pump
Development time	1.5 hours 1.75 gpm
Estimated purge volume	150 gallons
Comments	threaded bottom cap installed



PROJECT NUMBER 663384	BORING NUMBER MW-D	SHEET 1 OF 2
SOIL BORING LOG		

PROJECT : OUC Stanton Energy Center LOCATION : Orlando
 ELEVATION : 85.10 ft., NAVD88 DRILLING CONTRACTOR : Custom Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME 75 Hollow Stem Auger Rig August 6 2015
 WATER LEVELS : START : END : LOGGER : W. Elliott

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)			STANDARD	SOIL DESCRIPTION	COMMENTS
		RECOVERY (IN)	#/TYPE	PENETRATION	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
				TEST RESULTS		
				6"-6"-6"-6" (N)		
0					SM - fine grained silty sand, medium gray, well rounded, dense, moist to wet, not plastic	No PID readings, COCs are metals Due to time constraints in construction are well was installed using auger cuttings instead of split spoon sampling -
4					SM - same silty fine sand as at 4', wet, dense, not plastic, color is more brown	
8					SM - very dark brown silty fine grained sand, trace dark brown organic matter/silt, wet, dense, slightly plastic, sand grains are well-rounded and golden/bronze in color	
12					SM - very dark brown silty fine grained sand, trace dark brown organic matter/silt, wet, dense, slightly plastic, sand grains are well-rounded and golden/bronze in color	
16					SW - very fine to medium grained gold sand, very dense, saturated, not plastic, trace brown silt , finer grained toward 20'	
20					SW/SP - very fine to medium-grained sand, but grading finer to SP at around 22', color is grading to light greenish gray, very dense, compact -	driller reports tight sand

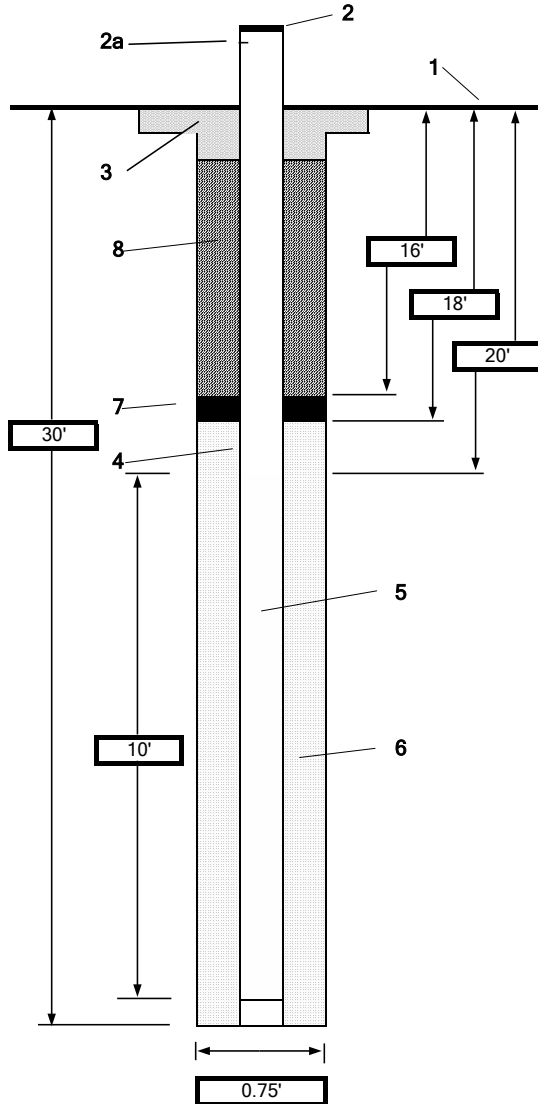


DEPTH BELOW SURFACE (FT)	INTERVAL (FT)			STANDARD	SOIL DESCRIPTION	COMMENTS
	RECOVERY (IN)	#/TYPE	PENETRATION	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	
			TEST RESULTS			
			6"-6"-6"-6" (N)			
OVM (ppm): Breathing Zone Headspace						
24					see previous page	
28		0%			SM - Fine grained silty silty sand, greenish gray, dense, wet, ~25% silt, slightly plastic trace olive gray clay	
		0%			SM/CL - silty fine to medium grained grayish-green sand as above, dense, wet, slightly to moderately plastic SM/CL - Olive gray sandy clay on auger flight at 29' bgs when removed from boring	
					END OF BORING 30 FT	



PROJECT NUMBER 683384	WELL NUMBER MW-D
SHEET 1 OF 1	
WELL COMPLETION DIAGRAM	

PROJECT : OUC Stanton Energy Center	LOCATION : Orlando	DATE: August 6 2015
DRILLING CONTRACTOR : Custom Drilling		
DRILLING METHOD AND EQUIPMENT USED : CME 75 Hollow Stem Auger with 2 foot split spoons		
WATER LEVELS :	START :	END : LOGGER : W. Elliott



1- Ground elevation at well	TBD
2- Top of casing elevation	85.10 ft NAVD88
a) vent hole?	no
3- concrete pad dimensions	2' x 2' x 4"
4- Dia./type of well casing	2" I.D. SCH 40 flush-threaded PVC
5- Type/slot size of screen	2" I.D. SCH 40 flush-threaded PVC with 0.010" factory slotted screen
6- Type screen filter	20-30 Standard silica sand
a) Quantity used	6 bags
7- Type of seal	30-45 mesh fine silica sand
a) Quantity used	1 bag
8- Grout	
a) Grout mix used	Type I/II portland cement
b) Method of placement	tremie/hand pour
c) Vol. of well casing grout	
Development method	submersible pump
Development time	1.5 hours 1.75 gpm
Estimated purge volume	150 gallons
Comments	threaded bottom cap installed

Florida Dept. of Health in ORANGE COUNTY

Orange County Health Department
800 N. Mercy Dr., Suite 1 Orlando, FL 32808
Phone 407 -521-2630

Permit # 150583 Fee : \$160.00

Date Issued 7/30/2015

WellLocation 5100 S Alafaya Trl

S 13 T 23 R 31 Orlando

XXXXXXXXXX

Permit for: New Well Construction

Primary Use: Monitoring

Issued to

Custom Drilling Svcs Lic # 9271

Michael Johnson

100 Kid Ellis Rd.

Mulberry FL 33860

Well must meet all required setbacks
Authority Chapter 36-A Orange County Well Code

Construction Specifics

Drilling Meth:

Annular Mat:

Casing joined by

Grout:

Pump Type:

Tank Type:

Delineated:

Type Well:

Casing Mat:

Well Diameter 2 in

Casing depth 20 ft

Exceed 75psi No

Electric No

Florida Dept. of Health in **ORANGE COUNTY**

Orange County Health Department
800 N. Mercy Dr., Suite 1 Orlando, FL 32808
Phone 407 -521-2630

Permit # 150584 Fee : \$120.00

Date Issued 7/30/2015

Well Location 5100 S Alafaya Trl

S 13 T 23 R 31 Orlando

XXXXXXXXXX

Permit for: New Well Construction

Primary Use: Abandonment

Issued to

Custom Drilling Svcs Lic # 9271

Michael Johnson

100 Kid Ellis Rd.

Mulberry FL 33860

Well must meet all required setbacks
Authority Chapter 36-A Orange County Well Code

Construction Specifics

Drilling Meth:

Annular Mat:

Casing joined by

Grout:

Pump Type:

Tank Type:

Delineated:

Type Well:

Casing Mat:

Well Diameter 2 in

Casing depth 20 ft

Exceed 75psi No

Electric No



STATE OF FLORIDA WELL COMPLETION REPORT

- ☐ Southwest
☐ Northwest
☒ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☒ Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

Orange County

1. *Permit Number 150584 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name Orlando Utility Commission 4. *Completion Date 8/16/15 5. Florida Unique ID _____

6. 5100 S. Alafaya Trail Orlando, FL
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Orange *Section 13 Land Grant _____ *Township 23 *Range 31

8. Latitude _____ Longitude _____

9. Data Obtained From: _____ GPS _____ Map _____ Survey _____ Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10. *Type of Work: _____ Construction _____ Repair _____ Modification ☒ Abandonment

11. *Specify Intended Use(s) of Well(s):
____ Domestic _____ Landscape Irrigation _____ Agricultural Irrigation _____ Site Investigation
____ Bottled Water Supply _____ Recreation Area Irrigation _____ Livestock _____ ☒ Monitoring
____ Public Water Supply (Limited Use/DOH) _____ Nursery Irrigation _____ Test
____ Public Water Supply (Community or Non-Community/DEP) _____ Commercial/Industrial _____ Earth-Coupled Geothermal
____ Class I Injection _____ Golf Course Irrigation _____ HVAC Supply
____ Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage
Remediation: _____ Recovery _____ Air Sparge _____ Other (Describe) _____
____ Other (Describe) _____

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
____ Horizontal Drilling _____ Hydraulic Point (Direct Push) ☒ Other Plugged by approved method

13. *Measured Static Water Level 2 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) _____ Which is _____ ft. Above _____ Below Land Surface *Flowing: _____ Yes _____ No

15. *Casing Material: _____ Black Steel _____ Galvanized ☒ PVC _____ Stainless Steel _____ Not Cased _____ Other _____

16. *Total Well Depth 32 ft. Cased Depth _____ ft. *Open Hole: From _____ To _____ ft. *Screen: From _____ To _____ ft. Slot Size _____

17. *Abandonment: _____ Other (Explain) _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

18. *Surface Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

19. *Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 32 ft. No. of Bags 1 Seal Material (Check One): ☒ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

20. *Liner Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

21. *Telescope Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

22. Pump Type (If Known):
____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ ft. Intake Depth _____ ft.

23. Chemical Analysis (When Required):
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
____ Laboratory Test _____ Field Test Kit

24. Water Well Contractor:

*Contractor Name Michael Johnson *License Number 9271 E-mail Address mjohnson@custordrilling.net

*Contractor's Signature Michael Johnson *Driller's Name (Print or Type) Toby Hill

(I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

- ☐ Southwest
☐ Northwest
☒ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☒ Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

Orange County

1. *Permit Number 150584 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____
2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0
3. *Owner's Name Orlando Utility Commission 4. *Completion Date 8/16/15 5. Florida Unique ID _____

6. 5100 S. Alafaya Trail Orlando, FL
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Orange *Section 13 Land Grant _____ *Township 23 *Range 31

8. Latitude _____ Longitude _____

9. Data Obtained From: _____ GPS _____ Map _____ Survey _____ Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10. *Type of Work: _____ Construction _____ Repair _____ Modification ☒ Abandonment

11. *Specify Intended Use(s) of Well(s):
____ Domestic _____ Landscape Irrigation _____ Agricultural Irrigation _____ Site Investigation
____ Bottled Water Supply _____ Recreation Area Irrigation _____ Livestock ☒ Monitoring
____ Public Water Supply (Limited Use/DOH) _____ Nursery Irrigation _____ Test
____ Public Water Supply (Community or Non-Community/DEP) _____ Commercial/Industrial _____ Earth-Coupled Geothermal
____ Class I Injection _____ Golf Course Irrigation _____ HVAC Supply
____ Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage
Remediation: _____ Recovery _____ Air Sparge _____ Other (Describe) _____
____ Other (Describe) _____

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
____ Horizontal Drilling _____ Hydraulic Point (Direct Push) ☒ Other Plugged by approved method

13. *Measured Static Water Level 2 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) _____ Which is _____ ft. Above _____ Below Land Surface *Flowing: _____ Yes _____ No

15. *Casing Material: _____ Black Steel _____ Galvanized ☒ PVC _____ Stainless Steel _____ Not Cased _____ Other _____

16. *Total Well Depth 30 ft. Cased Depth _____ ft. *Open Hole: From _____ To _____ ft. *Screen: From _____ To _____ ft. Slot Size _____

17. *Abandonment: _____ Other (Explain) _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

18. *Surface Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

19. *Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 30 ft. No. of Bags 1 Seal Material (Check One): ☒ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
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20. *Liner Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____

21. *Telescope Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____
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22. Pump Type (If Known): _____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ ft. Intake Depth _____ ft.
23. Chemical Analysis (When Required):
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
____ Laboratory Test _____ Field Test Kit

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*Contractor Name Michael Johnson *License Number 9271 E-mail Address mjohnson@custordrilling.net

*Contractor's Signature Michael Johnson *Driller's Name (Print or Type) Toby Hill
(I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

- ☐ Southwest
☐ Northwest
☒ St. Johns River
☐ South Florida
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☐ DEP
☒ Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

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Orange County

1. *Permit Number <u>150583</u>		*CUP/WUP Number _____		*DID Number _____		62-524 Delineation No. _____																									
2. *Number of permitted wells constructed, repaired, or abandoned <u>2</u>		*Number of permitted wells not constructed, repaired, or abandoned <u>0</u>																													
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19. *Primary Casing Diameter and Depth: <table border="0"><tr><td>Dia <u>2</u> in. From <u>0</u> ft. To <u>17</u> ft. No. of Bags <u>1.5</u></td><td>Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr></table>								Dia <u>2</u> in. From <u>0</u> ft. To <u>17</u> ft. No. of Bags <u>1.5</u>	Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____														
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24. Water Well Contractor: *Contractor Name <u>Michael Johnson</u> *License Number <u>9271</u> E-mail Address <u>mdjohnson@customdrilling.net</u> *Contractor's Signature <u>Michael Johnson</u> *Driller's Name (Print or Type) <u>Toby Hill</u> (I certify that the information provided in this report is accurate and true.)																															

WWW.SWFWMD.STATE.FL.US

WWW.SJRWMD.COM

WWW.NWFWMD.STATE.FL.US

WWW.SFWMD.GOV

WWW.MYSUWANNEERIVER.COM

From _____ ft. To _____ ft.

Color _____

Grain Size (F, M, C) _____

Material

Rule 40D-3.411 (1) (a), F.A.C.



STATE OF FLORIDA WELL COMPLETION REPORT

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From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
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From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
18. *Surface Casing Diameter and Depth: <table border="0"><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr></table>								Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																				
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
19. *Primary Casing Diameter and Depth: <table border="0"><tr><td>Dia <u>2</u> in. From <u>0</u> ft. To <u>16</u> ft. No. of Bags <u>1.5</u></td><td>Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr></table>								Dia <u>2</u> in. From <u>0</u> ft. To <u>16</u> ft. No. of Bags <u>1.5</u>	Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____														
Dia <u>2</u> in. From <u>0</u> ft. To <u>16</u> ft. No. of Bags <u>1.5</u>	Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____																														
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20. *Liner Casing Diameter and Depth: <table border="0"><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr></table>								Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																		
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
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Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
21. *Telescope Casing Diameter and Depth: <table border="0"><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr><tr><td>Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____</td><td>Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____</td></tr></table>								Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____	Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																		
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____	Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____																														
22. Pump Type (If Known): ☐ Centrifugal ☐ Jet ☐ Submersible ☐ Turbine Horsepower _____ Pump Capacity (GPM) _____ Pump Depth _____ ft. Intake Depth _____ ft.				23. Chemical Analysis (When Required): Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm ____ Laboratory Test _____ Field Test Kit																											
24. Water Well Contractor: *Contractor Name <u>Michael Johnson</u> *License Number <u>9271</u> E-mail Address <u>mdjohnson@customdrilling.net</u> *Contractor's Signature <u>Michael Johnson</u> *Driller's Name (Print or Type) <u>Toby Hill</u> (I certify that the information provided in this report is accurate and true.)																															

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
(U.S. Highway 90, 10 miles west of Tallahassee)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
WWW.MYSUWANNEERIVER.COM

*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

[illegible]

Comments:

***Detailed Site Map of Well Location**



Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well.



STATE OF FLORIDA WELL COMPLETION REPORT

- ☐ Southwest
☐ Northwest
☒ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☒ Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Official Use Only

Orange County

1. *Permit Number 150583 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name Orlando Utility Commission 4. *Completion Date 8/16/15 5. Florida Unique ID _____

6. 5100 S. Abfaya Trail Orlando, FL
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Orange *Section 13 Land Grant _____ *Township 23 *Range 31

8. Latitude _____ Longitude _____

9. Data Obtained From: ☒ GPS ☐ Map ☐ Survey Datum: ☐ NAD 27 ☐ NAD 83 ☐ WGS 84

10. *Type of Work: ☒ Construction ☐ Repair ☐ Modification ☐ Abandonment

11. *Specify Intended Use(s) of Well(s):
☐ Domestic ☐ Landscape Irrigation ☐ Agricultural Irrigation ☐ Site Investigation
☐ Bottled Water Supply ☐ Recreation Area Irrigation ☐ Livestock ☒ Monitoring
☐ Public Water Supply (Limited Use/DOH) ☐ Nursery Irrigation ☐ Test
☐ Public Water Supply (Community or Non-Community/DEP) ☐ Commercial/Industrial ☐ Earth-Coupled Geothermal
☐ Class I Injection ☐ Golf Course Irrigation ☐ HVAC Supply
☐ HVAC Return

Class V Injection: ☐ Recharge ☐ Commercial/Industrial Disposal ☐ Aquifer Storage and Recovery ☐ Drainage

Remediation: ☐ Recovery ☐ Air Sparge ☐ Other (Describe) _____

12. *Drill Method: ☒ Auger ☐ Cable Tool ☐ Rotary ☐ Combination (Two or More Methods) ☐ Jetted ☐ Sonic
☐ Horizontal Drilling ☐ Hydraulic Point (Direct Push) ☐ Other _____

13. *Measured Static Water Level 2 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) _____ Which is _____ ft. Above _____ Below Land Surface *Flowing: ☐ Yes ☐ No

15. *Casing Material: ☐ Black Steel ☐ Galvanized ☒ PVC ☐ Stainless Steel ☐ Not Cased ☐ Other _____

16. *Total Well Depth 42 ft. Cased Depth 32 ft. *Open Hole: From _____ To _____ ft. *Screen: From 32 To 42 ft. Slot Size 0.10

17. *Abandonment: ☐ Other (Explain) _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____

18. *Surface Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____

19. *Primary Casing Diameter and Depth:
Dia 2 in. From 0 ft. To 29 ft. No. of Bags 3 Seal Material (Check One): ☒ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____

20. *Liner Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____

21. *Telescope Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): ☐ Neat Cement ☐ Bentonite ☐ Other _____

22. Pump Type (If Known): ☐ Centrifugal ☐ Jet ☐ Submersible ☐ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ ft. Intake Depth _____ ft.

23. Chemical Analysis (When Required):
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
____ Laboratory Test _____ Field Test Kit

24. Water Well Contractor:
*Contractor Name Michael Johnson *License Number 9271 E-mail Address mdjohnson@customdrilling.net
*Contractor's Signature Michael Johnson *Driller's Name (Print or Type) Toby Hill
(I certify that the information provided in this report is accurate and true.)

WWW.SWFWMD.STATE.FL.US

WWW.SJRWMD.COM

WWW.NWFWMD.STATE.FL.US

WWW.SFWMD.GOV

WWW.MYSUWANNEERIVER.COM

From 0 (fine) to 10 (coarse).

[illegible]

Comments:

***Detailed Site Map of Well Location**



Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well.

Appendix B

Groundwater Level Elevations and Maps

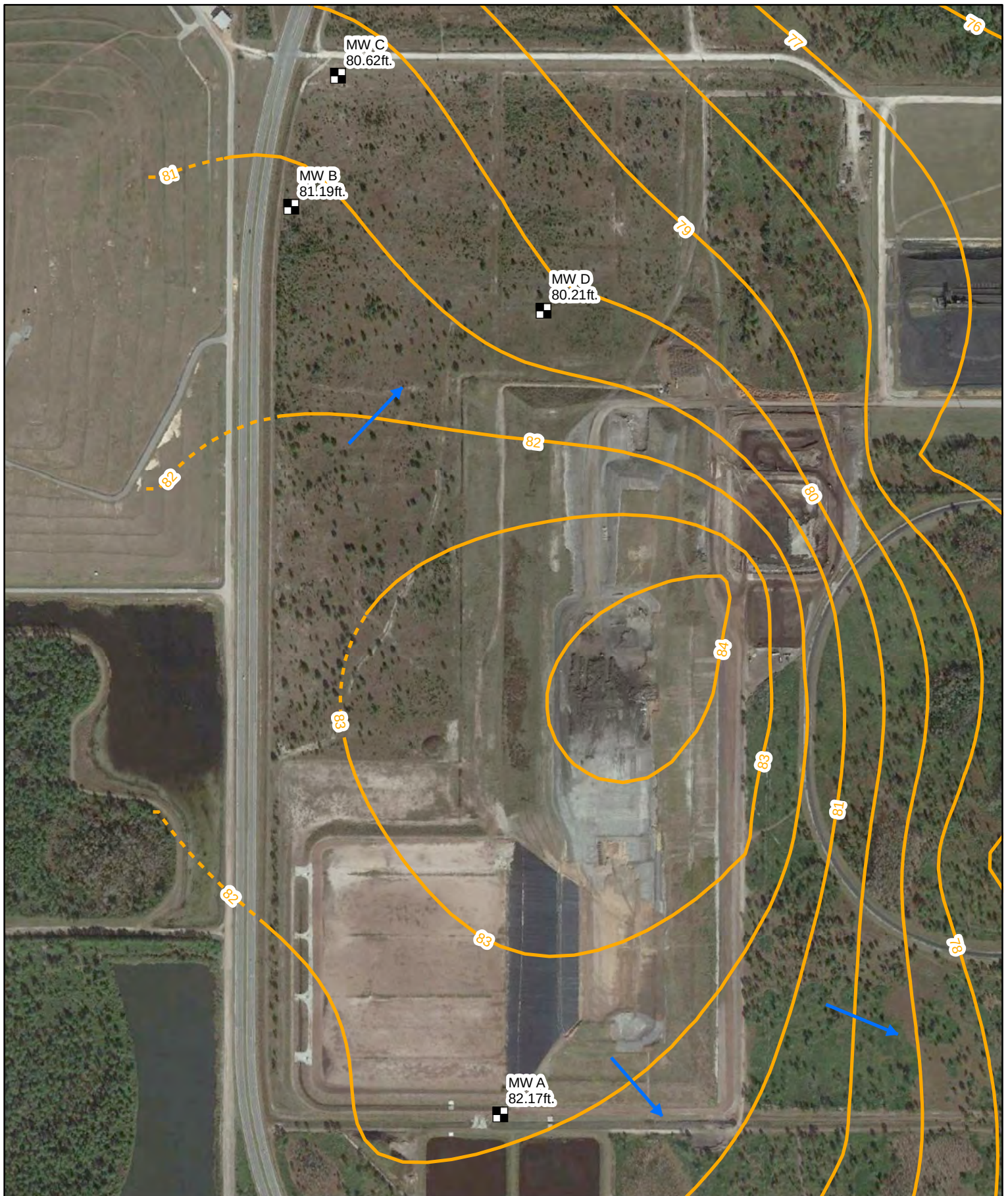
Table B-1

Quarterly Groundwater Levels from the Background Period and First Detection Samplings – MW-A, MW-B, MW-C, and MW-D, OUC Stanton Energy Center

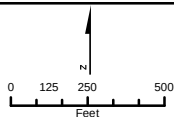
Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

DATE	Well ID	Florida State Plane East Zone (901)		Elevation TOC (feet, NAVD 88)	Depth to Water (feet)	Water Level Elevation (feet, NAVD 88)
		Northing (feet)	Easting (feet)			
10/30/2015	MW-A	1504260.1	597643.8	95.77	13.60	82.17
4/29/2016					13.96	81.81
10/31/2016					13.53	82.24
4/25/2017					15.64	80.13
10/31/2017					13.31	82.46
10/30/2015	MW-B	1508750.3	596609.8	86.05	4.86	81.19
4/29/2016					5.20	80.85
10/31/2016					4.90	81.15
4/25/2017					7.25	78.80
10/31/2017					4.41	81.64
10/30/2015	MW-C	1509397.7	596841.6	86.84	6.22	80.62
4/29/2016					6.56	80.28
10/31/2016					6.14	80.70
4/25/2017					8.36	78.48
10/31/2017					5.67	81.17
10/30/2015	MW-D	1508237.4	597858.3	85.10	4.89	80.21
4/29/2016					5.58	79.52
10/31/2016					5.14	79.96
4/25/2017					7.44	77.66
10/31/2017					3.96	81.14

TOC – Top of casing

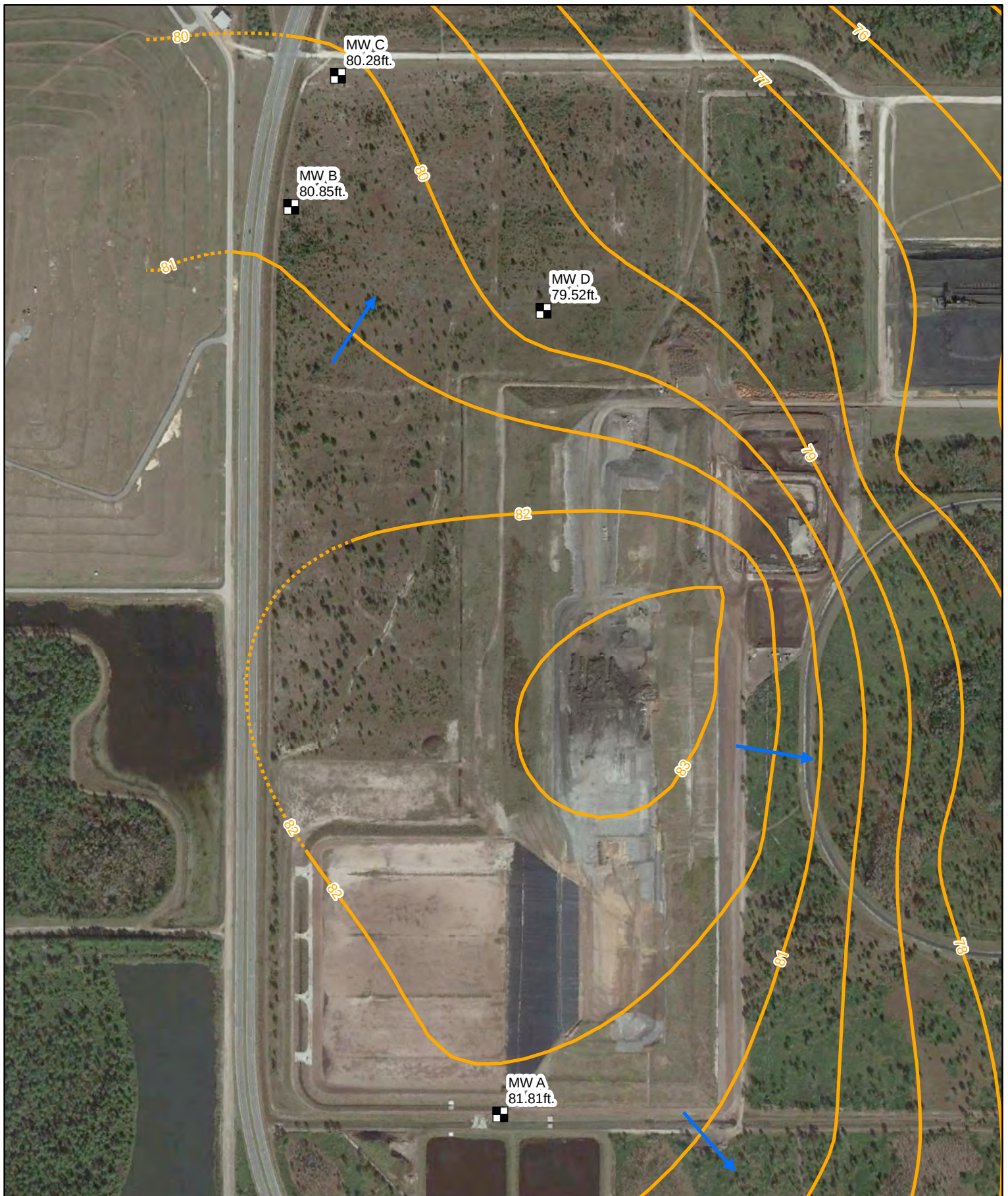


- CCR Rule Compliance Monitoring Wells
- Groundwater Elevation Contours - Dashed Where Inferred
- Groundwater Flow Direction

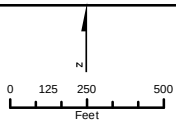


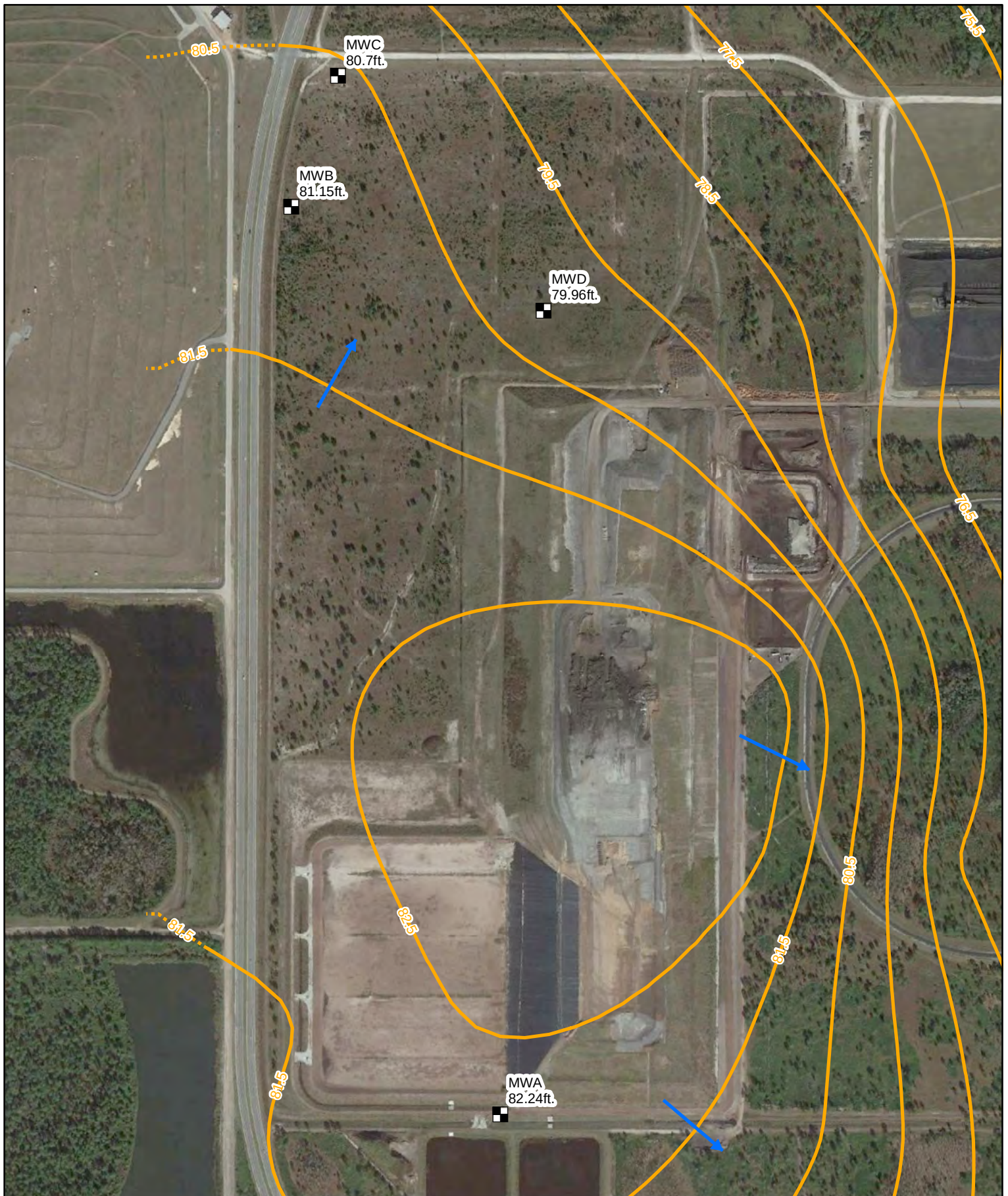
Groundwater Level Elevation at OUC Stanton Energy Center
October 30, 2015

ch2m



- CCR Rule Compliance Monitoring Wells
- Groundwater Elevation Contours - Dashed Where Inferred
- Groundwater Flow Direction





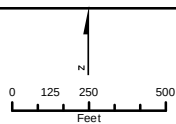
CCR Rule Compliance Monitoring Wells



Groundwater Elevation Contours - Dashed Where Inferred

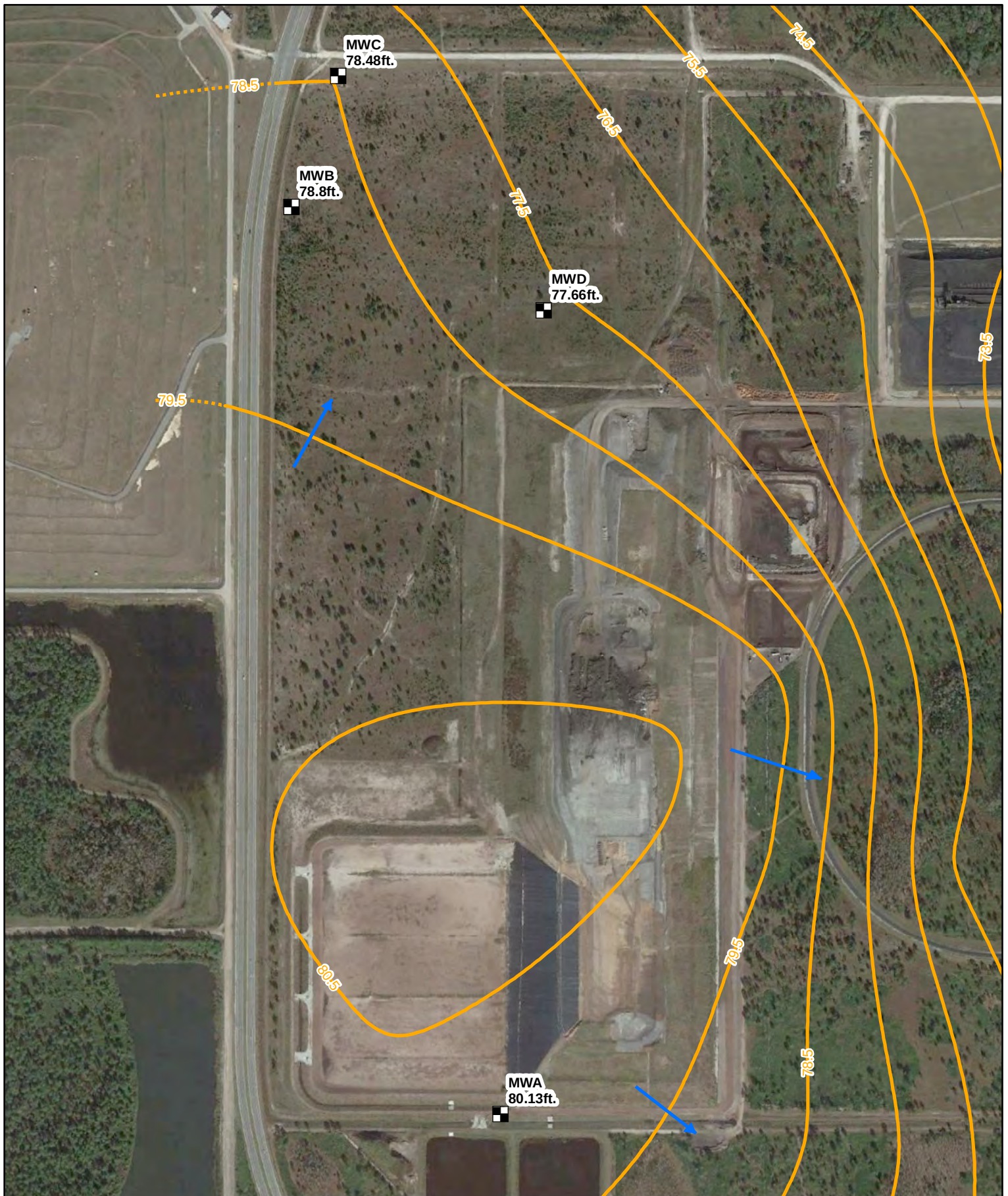


Groundwater Flow Direction

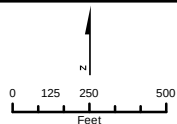


Groundwater Level Elevations at OUC Stanton Energy Center
October 31, 2016

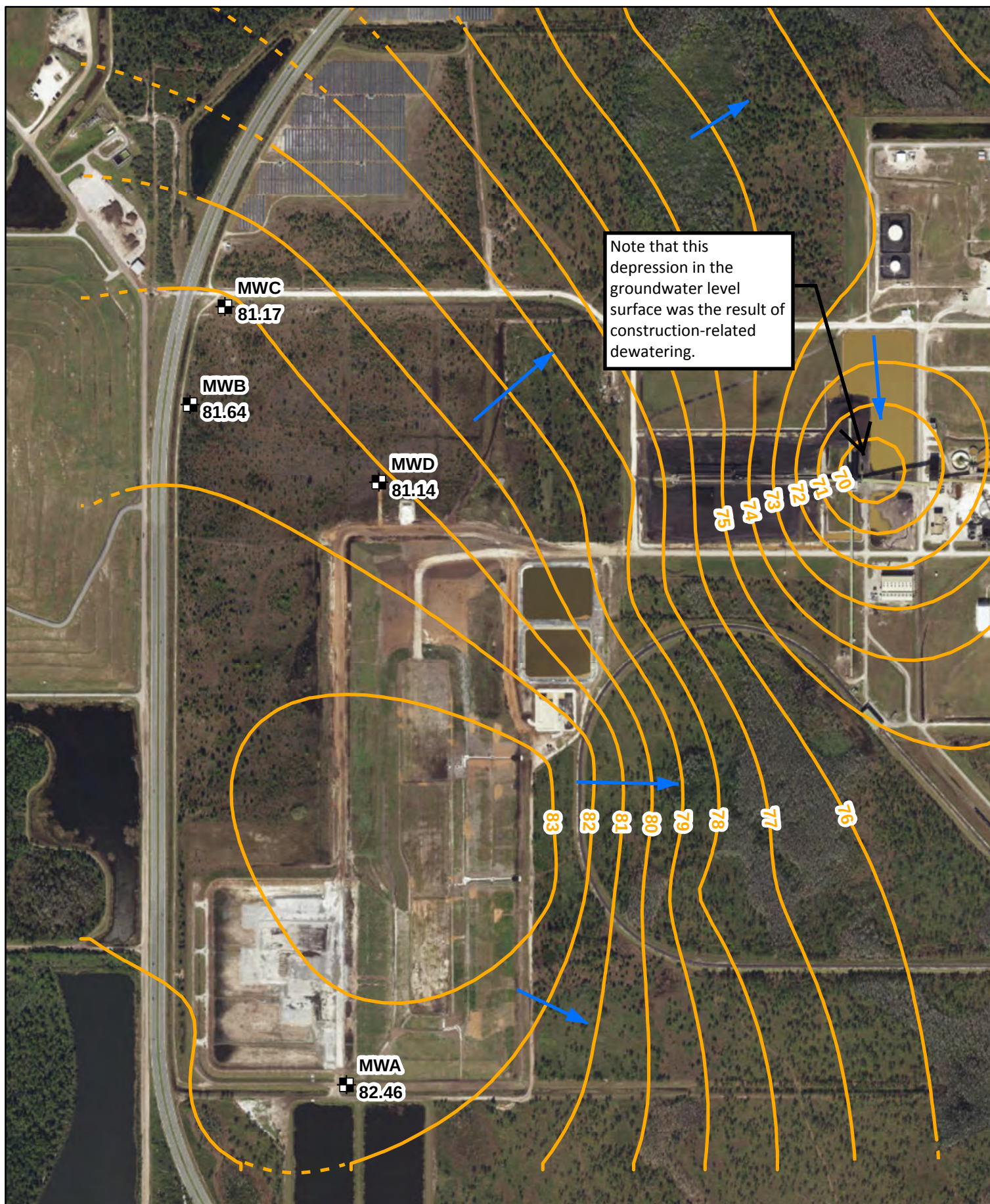
ch2m.



- CCR Rule Compliance Monitoring Wells
- Groundwater Elevation Contours - Dashed Where Inferred
- Groundwater Flow Direction



Groundwater Level Elevations at OUC Stanton Energy Center
April 25, 2017

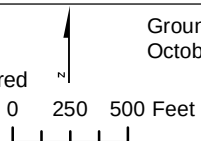


CCR Rule Compliance Monitoring Wells

Groundwater Elevation Contours, feet, NAVD88 - Dashed Where Inferred



Groundwater Flow Direction



Groundwater Level Elevation at OUC Stanton Energy Center
October 31, 2017

ch2m

Appendix C

Laboratory Analysis Results

Table C-1

Background and First Detection Period Sampling Results – MW-A, OUC Stanton Energy Center

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Constituent	MCL	Appendix	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection
			9/9/2015	10/12/2015	10/29/2015	3/22/2016	4/27/2016	7/20/2016	11/29/2016	1/18/2017	4/4/2017	7/20/2017	10/30/2017
Antimony (µg/L)	6	IV	1.10 U	1.10 U		1.10 U	1.10 U	2.2 U, R-01	3.75 U	5.00 U, R-01	2.5 U	125 U	
Arsenic (µg/L)	10	IV	80.0 U	5 U		8	39.1	160 U	53.8	251	207	160 U	
Barium (µg/L)	2000	IV	584	364		362	508	558	542	563	570	621	
Beryllium (µg/L)	4	IV	2.15	2		2	2.18	2.40 U	2.38 I	2.40 U	2.4 U	2.4 U	
Boron (µg/L)	none	III	57.9	92.0 I		57.7	57.5 V, J-01	80.5 IV, QB-01	1010	400 U	400 U	400 U	400 U
Cadmium (µg/L)	5	IV	0.280 U	2 U		2 U	1.61	5.60 U	2.25 U	9.00 U	9 U	9 U	
Calcium (µg/L)	none	III	2220000	2530000		2370000	2950000	2870000	3080000	3350000	3450000	3720000	3830000
Chloride (µg/L)	250000	III	9730000	10600000		11600000	12000000	12600000	13200000	14700000	13500000	14400000	14500000
Chromium (µg/L)	100	IV	1.10 U	2 U		2 U	1.38 I	22.0 U	5.50 U	22.0 U	22 U	22 U	
Cobalt (µg/L)	none	IV	16.7	9		5 U	15.5	33.1 I	20.2 I	30.0 U	30 U	30 U	
Field pH (pH Units)	6.5-8.5	III	4.24	4.15	4.01	4.06	4.05	3.99	4.09	4.35	4.23	4.26	4.01
Fluoride (µg/L)	none	III & IV	5000 U	100 U		100 U	100000 U	10000 U	100000 U	100000 U	10000 U	10000 U	100000 U
Lead (µg/L)	15	III	25 U	2 U		11.2	2.5 U	50.0 U	14.0 U	56.0 U	76 U	76 U	
Lithium (µg/L)	none	IV	36.3	52.0 U		99.4	88.5	170 I	234	295 I	201	146	
Mercury (µg/L)	2	IV	0.023 U	0.023 U		0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	
Molybdenum (µg/L)	35	IV	50 U	10 U		10 U		140 I	25.0 U	100 U	146 U	146 U	
Radium-226 plus Radium-228 - combined (pCi/L)	5	IV			16.1 +/- 3.71	23.1 +/- 1.0	27.0 +/- 1.5	21.9 +/- 1.1	0.9 U +/- 0.6	14.4 +/- 1.1	15.5 +/- 0.9	14.1 +/- 0.8	
Selenium (µg/L)	50		8.20 U	5 U		8.2		341 I	50.0 U	200 U	200 U	200 U	
Sulfate (µg/L)	250000	III	674000	822000		811000	938000	1180000	1130000	1160000	1080000	1080000	1340000
Thallium (µg/L)	2	IV	0.580 U	0.580 U		0.580 U	0.580 U	1.16 U, R-01	0.870 U	1.16 U, R-01	0.58 U	29 U	
Total Dissolved Solids (µg/L)	500000	III	17100000	19900000 V		20200000	19700000	23000000	26100000	26600000	30200000	28500000	32100000

Background samples were analyzed for Appendix III and IV constituents.

Detection sample was analyzed for Appendix III constituents.

Qualifiers

J-01 Result may be biased high due to positive results in the associated method blank.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

U Compound was analyzed for but not detected

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

V Analyte was detected in both the sample and the associated method blank

L Off-scale high. Actual value is known to be greater than the value given

Table C-2

Background and First Detection Period Sampling Results – MW-B, OUC Stanton Energy Center

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Constituent	MCL	Appendix	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection
			9/9/2015	10/12/2015	10/19/2015	3/22/2016	4/27/2016	7/20/2016	11/29/2016	1/18/2017	4/4/2017	7/20/2017	10/30/2017
Antimony (µg/L)	6	IV	1.10 U	1.10 U		1.10 U	1.10 U	0.241 I	0.250 U	0.25 U	0.25 U	0.25 U	
Arsenic (µg/L)	10	IV	8.00 U	5 U		8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8 U	8 U	
Barium (µg/L)	2000	IV	586	425		252	226	202	142	153	154	212	
Beryllium (µg/L)	4	IV	0.917I	1 U		1 U	0.594 I	0.551 I	0.317 I	0.303 I	0.337	0.388	
Boron (µg/L)	none	III	26.1 I	13.3 I		33.5 IV, J-01	28.0 IV, J-01	32.9 IV, J-01	74.9	77.2	86.5	76.2	71.5
Cadmium (µg/L)	5	IV	0.280 U	2 U		2 U	0.280 U	0.280 U	0.450 U	0.450 U	0.45 U	0.45 U	
Calcium (µg/L)	none	III	21100	21900		17300	13200	12400	3800	1230	1010	4340	17100
Chloride (µg/L)	250000	III	97100	97700		71700	71000	66200	33700	27400	23900	35800	72200
Chromium (µg/L)	100	IV	1.10 U	2 U		2 U	1.10 U	1.10 U	1.10 U	1.10 U	1.1 U	1.1 U	
Cobalt (µg/L)	none	IV	1.50 U	5 U		5 U	1.50 U	1.50 U	1.50 U	1.50 U	1.5 U	1.5 U	
Field pH (pH Units)	6.5-8.5	III	4.38	4.22	3.71	4.36	4.41	4.36	4.64	4.85	4.72	4.62	4.37
Fluoride (µg/L)	none	III & IV	230	190		160	1000 U	140	1000 U	100 U	100 U	100 U	140
Lead (µg/L)	15	III	2.50 U	2 U		1 U	2.50 U	2.50 U	2.80 U	2.80 U	3.8 U	3.8 U	
Lithium (µg/L)	none	IV	4.81 I	3.13 I		8.31 I	3.07 I	6.69 I	3.93 I	3.56 I	3.54	5.04	
Mercury (µg/L)	2	IV	0.023 U	0.023 U		0.023 U	0.023 U	0.023 U	0.0230 U	0.023 U	0.023 U	0.023 U	
Molybdenum (µg/L)	35	IV	5.0 U	10 U		10 U		5.00 U	5.00 U	5.00 U	7.3 U	7.3 U	
Radium-226 plus Radium-228 - combined (pCi/L)	5	IV			3.13 +/- 1.78	2.3 +/- 0.5	1.5 +/-0.6	2.6 +/- 0.6	2.4 +/- 0.5	0.8 U +/- 0.5	2.0 +/- 0.5	2.4 +/- 0.6	
Selenium (µg/L)	50		8.20 U	5 U		8.20 U		8.20 U	10.0 U	10.9 I	10 U	10 U	
Sulfate (µg/L)	250000	III	53700	54100		49800	56900	55300	54500	59000	49000	52700	60400
Thallium (µg/L)	2	IV	0.580 U	0.580 U		0.580 U	0.580 U	0.058 U	0.0580 U	0.058 U	0.058 U	0.058 U	
Total Dissolved Solids (µg/L)	500000	III	250000	242000 V		225000	205000	211000	162000	143000	137000	159000	239000

Background samples were analyzed for Appendix III and IV constituents.

Detection sample was analyzed for Appendix III constituents.

Qualifiers

J-01 Result may be biased high due to positive results in the associated method blank.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

U Compound was analyzed for but not detected

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

V Analyte was detected in both the sample and the associated method blank

L Off-scale high. Actual value is known to be greater than the value given

Table C-3

Background and First Detection Period Sampling Results – MW-C, OUC Stanton Energy Center

Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Constituent	MCL	Appendix	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection
			9/9/2015	10/12/2015	10/29/2015	12/2/2015	1/6/2016	1/13/2016	2/3/2016	2/18/2016	3/2/2016	3/22/2016	4/27/2016	7/20/2016	11/29/2016	1/18/2017	4/4/2017	7/20/2017	10/30/2017
Antimony (µg/L)	6	IV	1.10 U	1.13 I		0.110 U	5.0 U	0.110 U	0.110 U	1.10 U	1.10 U	1.10 U	1.10 U	0.217 I	0.250 U	0.250 U	0.25 U	0.25 U	
Arsenic (µg/L)	10	IV	8.00 U	5 U		8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8 U	8 U	
Barium (µg/L)	2000	IV	47.8	29		31.1	27.9	30.4	29.4	28.7	29.2	25	27	30.1	30.7	38.1	40.1	51.7	
Beryllium (µg/L)	4	IV	0.244 I	3		0.12 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	1 U	0.120 U	0.120 U	0.120 U	0.120 U	0.12 U	0.124	
Boron (µg/L)	none	III	12.4 I	13.3 I		10.7 IV, J-01	12.8 I	9.23 I	14.9 I	14.1 I	15.6 I	20.5 IV, J-01	15.6 IV, J-01	16.7 IV, J-01	32.4 I	20.0 U	20 U	20 U	20 U
Cadmium (µg/L)	5	IV	0.356 I	2 U		0.280 U	0.280 U	0.280 U	0.280 U	0.280 U	0.280 U	2 U	0.280 U	0.280 U	0.450 U	0.450 U	0.45 U	0.45 U	
Calcium (µg/L)	none	III	6390	7760		6160	6060	5610	4950	6000	6140	6590	7140	5740	6860	5850	6770	5090	6770
Chloride (µg/L)	250000	III	7120	6820		8090	8310	8510	8900	8390	8110	8450	8940	10100	11400	14200	12800	16200	16000
Chromium (µg/L)	100	IV	3.77 I	2 U		1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	2 U	1.10 U	1.10 U	1.10 U	1.10 U	1.1 U	1.1 U	
Cobalt (µg/L)	none	IV	1.5 U	5 U		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	5 U	1.50 U	1.50 U	1.50 U	1.50 U	1.5 U	1.5 U	
Field pH (pH Units)	6.5-8.5	III	5.47	5.28	4.6	5.29	5.04	5.12	5.88	5.41	5.69	5.41	5.14	5.14	5.05	5.39	5.21	5.04	5.16
Fluoride (µg/L)	none	III & IV	100 U	100 U		120	120	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Lead (µg/L)	15	III	3.15 I	2 U		2.5 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	1 U	2.50 U	2.50 U	2.80 U	2.80 U	3.8 U	3.8 U	
Lithium (µg/L)	none	IV	3.87 I	3.13		5.36 I	2.60 U	3.37 I	3.19 I	2.60 U	3.22 I	5.44 I	2.60 U	4.58 I	2.60 U	2.60 U	2.6 U	3.51	
Mercury (µg/L)	2	IV	0.023 U	0.023 U		0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	
Molybdenum (µg/L)	35	IV	5.0 U	10 U		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10 U		5.00 U	5.00 U	5.00 U	7.3 U	7.3 U	
Radium-226 plus Radium-228 - combined (pCi/L)	5	IV			4.68U +/- 3.48	0.9 U +/- 6	1.0 U +/-0.7	0.8 U +/- 0.5	0.8 U +/- 0.5	0.8 U +/-0.5	0.8 U +/- 0.5	0.8 U +/-0.5	0.8 U +/-0.6	0.8 U +/- 0.5	0.8 U +/- 0.5	1.2 +/- 0.6	0.8 U +/-0.5	1.3 +/- 0.6	
Selenium (µg/L)	50	IV	8.20 U	5 U		8.20 U	8.20 U	8.20 U	8.20 U	8.20 U	8.20 U	8.20 U		8.20 U	10.0 U	10.8 I	10 U	10 U	
Sulfate (µg/L)	250000	III	650	520		580	710	2210	910	2320	570	1860	520	580	440	540	1360	250 U	1200
Thallium (µg/L)	2	IV	0.58 U	0.58 U		0.058 U	8.30 U	0.058 U	0.058 U	0.580 U	0.580 U	0.580 U	0.580 U	0.058 U	0.058 U	0.0580 U	0.058 U	0.058 U	
Total Dissolved Solids (µg/L)	500000	III	59000	35000		35000	54000	48000	35000	44000	43000	53000	52000	51000	59000	50000	61000	54000	65000

Background samples were analyzed for Appendix III and IV constituents.

Detection sample was analyzed for Appendix III constituents.

Qualifiers

J-01 Result may be biased high due to positive results in the associated method blank.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

U Compound was analyzed for but not detected

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

V Analyte was detected in both the sample and the associated method blank

L Off-scale high. Actual value is known to be greater than the value given

Table C-4
Background and First Detection Period Sampling Results – MW-D, OUC Stanton Energy Center
Coal Combustion Residuals Annual Groundwater Monitoring and Corrective Action Report

Constituent	MCL	Appendix	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection
			9/9/2015	10/12/2015	10/29/2015	3/22/2016	4/27/2016	7/20/2016	11/29/2016	1/18/2017	4/4/2017	7/20/2017	10/30/2017
Antimony (µg/L)	6	IV	1.10 U	1.13 I		1.10 U	1.10 U	0.110 U	0.250 U	0.250 U	0.25 U	0.25 U	
Arsenic (µg/L)	10	IV	8.00 U	5 U		8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8 U	8 U	
Barium (µg/L)	2000	IV	12.4	12		9	11.5	12.5	14.2	16.2	11.5	29.8	
Beryllium (µg/L)	4	IV	0.120 U	1 U		1 U	0.126 I	0.12 U	0.141 I	0.142 I	0.12 U	0.132	
Boron (µg/L)	none	III	15.6 I	12.3 I		18.5 IV, J-01	16.6 IV, J-01	20.1 IV, J-01	34.1 I	20.0 U	20 U	20 U	31
Cadmium (µg/L)	5	IV	0.280 U	2 U		2 U	0.280 U	0.280 U	0.450 U	0.450 U	0.45 U	0.45 U	
Calcium (µg/L)	none	III	5500	5220		2740	2870	2290	2220	1810	2230	3560	3720
Chloride (µg/L)	250000	III	6740	6780		7490	7790	10900	13300	11800	9060	25700	29200
Chromium (µg/L)	100	IV	1.10 U	2 U		2 U	2.57 I	1.10 U	1.10 U	1.10 U	1.1 U	1.1 U	
Cobalt (µg/L)	none	IV	1.5 U	5 U		5 U	1.50 U	1.50 U	1.50 U	1.50 U	1.5 U	1.5 U	
Field pH (pH Units)	6.5-8.5	III	5.54	5.4	4.36	5.32	5.02	4.63	4.41	4.62	4.52	4.7	4.46
Fluoride (µg/L)	none	III & IV	120	100 U		100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Lead (µg/L)	15	III	2.76 I	2 U		1 U	2.50 U	2.50 U	2.80 U	2.80 U	3.8 U	3.8 U	
Lithium (µg/L)	none	IV	2.60 U	2.6 U		2.72 I	2.60 U	3.28 I	2.60 U	2.60 U	3.35	2.6 U	
Mercury (µg/L)	2	IV	0.023 U	0.023 U		0.023 U	0.023 U	0.0230 U	0.023 U	0.0230 U	0.023 U	0.023 U	
Molybdenum (µg/L)	35	IV	5 U	10 U		10 U		5.00 U	5.00 U	5.00 U	7.3 U	7.3 U	
Radium-226 plus Radium-228 - combined (pCi/L)	5	IV			1.28 +/- 1.10	0.7 U +/- 0.5	0.7 U +/- 0.4	0.8 U +/- 0.5	3.4 +/- 0.7	1.0 +/- 0.5	0.8 U +/- 0.5	0.9 U +/- 0.6	
Selenium (µg/L)	50	IV	8.2 U	5 U		8.20 U		8.20 U	10.0 U	10.0 U	10 U	10 U	
Sulfate (µg/L)	250000	III	250 U	330		250 U	250 U	250 U	250 U	250 U	250 U	250 U	300
Thallium (µg/L)	2	IV	0.580 U	0.580 U		0.580 U	0.580 U	0.0580 U	0.058 U	0.0580 U	0.058 U	0.058 U	
Total Dissolved Solids (µg/L)	500000	III	40000	110000 V		50000	44000	39000	53000	37000	36000	64000	63000

Background samples were analyzed for Appendix III and IV constituents.

Detection sample was analyzed for Appendix III constituents.

Qualifiers

J-01 Result may be biased high due to positive results in the associated method blank.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

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V Analyte was detected in both the sample and the associated method blank

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WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1509023

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 29 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

November 03, 2015

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1509023**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1509023-01	Equipment Blank	09/09/2015
1509023-01	Equipment Blank	09/09/2015
1509023-01	Equipment Blank	09/09/2015
1509023-02	SEC Monitoring Well C	09/09/2015
1509023-02	SEC Monitoring Well C	09/09/2015
1509023-02	SEC Monitoring Well C	09/09/2015
1509023-03	SEC Monitoring Well B	09/09/2015
1509023-03	SEC Monitoring Well B	09/09/2015
1509023-03	SEC Monitoring Well B	09/09/2015
1509023-04	SEC Monitoring Well A	09/09/2015
1509023-04	SEC Monitoring Well A	09/09/2015
1509023-04	SEC Monitoring Well A	09/09/2015
1509023-04	SEC Monitoring Well A	09/09/2015
1509023-04	SEC Monitoring Well A	09/09/2015
1509023-05	SEC MW A Field Duplicate	09/09/2015
1509023-05	SEC MW A Field Duplicate	09/09/2015
1509023-05	SEC MW A Field Duplicate	09/09/2015
1509023-05	SEC MW A Field Duplicate	09/09/2015
1509023-05	SEC MW A Field Duplicate	09/09/2015
1509023-06	SEC Monitoring Well D	09/09/2015
1509023-06	SEC Monitoring Well D	09/09/2015
1509023-06	SEC Monitoring Well D	09/09/2015

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



John N. Gray
Laboratory Manager

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
 Sample Designation Equipment Blank
 Matrix Water
 WQLAB Sample Number 1509023-01
 Date/Time Collected 09/09/2015 08:30
 Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Beryllium	0.120 <i>u</i>	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Boron	3.70 <i>u</i>	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Cadmium	0.280 <i>u</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Cobalt	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Lead	2.50 <i>u</i>	ug/L	EPA 200.7	1	2.50	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Lithium	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Molybdenum	5.00 <i>u</i>	ug/L	EPA 200.7	1	5.00	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Selenium	8.20 <i>u</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV
Barium	0.390 <i>u</i>	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:31	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1509023-02
Date/Time Collected 09/09/2015 11:26
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Beryllium	0.244 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Boron	12.4 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Cadmium	0.356 <i>I</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Chromium	3.77 <i>I</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Lead	3.15 <i>I</i>	ug/L	EPA 200.7	1	2.50	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Lithium	3.87 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV
Barium	47.8	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:34	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1509023-03
Date/Time Collected 09/09/2015 11:49
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Beryllium	0.917 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Boron	26.1 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Lithium	4.81 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV
Barium	586	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:37	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1509023-04
Date/Time Collected 09/09/2015 12:53
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Beryllium	2.15	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Boron	57.9	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Cadmium	0.280 <i>u</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Cobalt	16.7	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Lithium	36.3	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Selenium	8.20 <i>u</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV
Barium	584	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:40	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1509023-04RE1
Date/Time Collected 09/09/2015 12:53
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	80.0 U, R-σ	ug/L	EPA 200.7	10	80.0	100	09/10/15 12:14	10/27/15 15:02	5I10004	ACV
Lead (Reshot)	25.0 U, R-σ	ug/L	EPA 200.7	10	25.0	100	09/10/15 12:14	10/27/15 15:02	5I10004	ACV
Molybdenum (Reshot)	50.0 U, R-σ	ug/L	EPA 200.7	10	50.0	100	09/10/15 12:14	10/27/15 15:02	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW A Field Duplicate
Matrix Water
WQLAB Sample Number 1509023-05
Date/Time Collected 09/09/2015 13:06
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Beryllium	2.27	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Boron	55.6	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Cadmium	0.280 <i>u</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Cobalt	16.3	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Lithium	37.9	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Selenium	8.20 <i>u</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV
Barium	579	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:42	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW A Field Duplicate
Matrix Water
WQLAB Sample Number 1509023-05RE1
Date/Time Collected 09/09/2015 13:06
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	80.0 U, R-σ	ug/L	EPA 200.7	10	80.0	100	09/10/15 12:14	10/27/15 15:05	5I10004	ACV
Lead (Reshot)	25.0 U, R-σ	ug/L	EPA 200.7	10	25.0	100	09/10/15 12:14	10/27/15 15:05	5I10004	ACV
Molybdenum (Reshot)	50.0 U, R-σ	ug/L	EPA 200.7	10	50.0	100	09/10/15 12:14	10/27/15 15:05	5I10004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1509023-06
Date/Time Collected 09/09/2015 14:16
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Boron	15.6 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Lead	2.76 <i>I</i>	ug/L	EPA 200.7	1	2.50	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV
Barium	12.4	ug/L	EPA 200.7	1	0.390	10.0	09/10/15 12:14	09/11/15 12:49	5I10004	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1509023-01
Date/Time Collected 09/09/2015 08:30
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 09:19	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q-or</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:31	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 09:19	5J26005	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1509023-02
Date/Time Collected 09/09/2015 11:26
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 13:17	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q-or</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:34	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 13:17	5J26005	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1509023-03
Date/Time Collected 09/09/2015 11:49
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 13:20	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q_{or}</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:43	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 13:20	5J26005	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1509023-04
Date/Time Collected 09/09/2015 12:53
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 13:26	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q_{or}</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:46	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 13:26	5J26005	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW A Field Duplicate
Matrix Water
WQLAB Sample Number 1509023-05
Date/Time Collected 09/09/2015 13:06
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 13:29	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q-or</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:49	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 13:29	5J26005	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1509023-06
Date/Time Collected 09/09/2015 14:16
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/27/15 08:40	10/28/15 13:40	5J26005	JAY
Mercury	0.023 <i>U</i> , <i>Q-or</i>	ug/L	EPA 245.1	1	0.023	0.200	10/27/15 11:14	10/28/15 07:12	5J26009	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/27/15 08:40	10/28/15 13:40	5J26005	JAY

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1509023-01
Date/Time Collected 09/09/2015 08:30
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	09/10/15 19:04	09/10/15 19:04	B15I058	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	09/15/15 21:00	09/15/15 21:00	B15I059	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	09/10/15 19:04	09/10/15 19:04	B15I058	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	0.500 <i>u</i>	mg/L	EPA 200.7	1	0.500	0.500	09/14/15 09:50	09/15/15 09:56	B15I057	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1509023-02
Date/Time Collected 09/09/2015 11:26
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	7.12	mg/L	EPA 300.0	1	1.00	1.00	09/10/15 19:36	09/10/15 19:36	B15I058	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	09/15/15 18:22	09/15/15 18:22	B15I059	JLK
Sulfate	0.65	mg/L	EPA 300.0	1	0.25	0.25	09/10/15 19:36	09/10/15 19:36	B15I058	JLK
pH	5.47	SU	SM 4500-H B	1			09/10/15 10:50	09/10/15 10:50	B15I029	JES
Total Dissolved Solids	59.0	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	6.39	mg/L	EPA 200.7	1	0.500	0.500	09/14/15 09:50	09/15/15 10:00	B15I057	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1509023-03
Date/Time Collected 09/09/2015 11:49
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	97.1	mg/L	EPA 300.0	10	10.0	10.0	09/11/15 14:04	09/11/15 14:04	B15I058	JLK
Fluoride	0.23	mg/L	EPA 300.0	1	0.10	0.10	09/15/15 19:57	09/15/15 19:57	B15I059	JLK
Sulfate	53.7	mg/L	EPA 300.0	10	2.50	2.50	09/11/15 14:04	09/11/15 14:04	B15I058	JLK
pH	4.38	SU	SM 4500-H B	1			09/10/15 10:52	09/10/15 10:52	B15I029	JES
Total Dissolved Solids	250	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	21.1	mg/L	EPA 200.7	1	0.500	0.500	09/14/15 09:50	09/15/15 10:03	B15I057	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1509023-04
Date/Time Collected 09/09/2015 12:53
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	5.00 <i>u</i>	mg/L	EPA 300.0	50	5.00	5.00	09/15/15 21:31	09/15/15 21:31	B15I059	JLK
pH	4.24	SU	SM 4500-H B	1			09/10/15 10:54	09/10/15 10:54	B15I029	JES
Total Dissolved Solids	17100	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	2220	mg/L	EPA 200.7	100	50.0	50.0	09/14/15 09:50	09/15/15 10:05	B15I057	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1509023-04RE2
Date/Time Collected 09/09/2015 12:53
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	9730	mg/L	EPA 300.0	1000	1000	1000	09/11/15 16:10	09/11/15 16:10	B15I058	JLK
Sulfate (Reshot)	674	mg/L	EPA 300.0	1000	250	250	09/11/15 16:10	09/11/15 16:10	B15I058	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW A Field Duplicate
Matrix Water
WQLAB Sample Number 1509023-05
Date/Time Collected 09/09/2015 13:06
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	5.00 <i>u</i>	mg/L	EPA 300.0	50	5.00	5.00	09/15/15 22:03	09/15/15 22:03	B15I059	JLK
pH	4.26	SU	SM 4500-H B	1			09/10/15 10:56	09/10/15 10:56	B15I029	JES
Total Dissolved Solids	17900	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	2110	mg/L	EPA 200.7	100	50.0	50.0	09/14/15 09:50	09/15/15 10:30	B15I057	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW A Field Duplicate
Matrix Water
WQLAB Sample Number 1509023-05RE2
Date/Time Collected 09/09/2015 13:06
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	10100	mg/L	EPA 300.0	1000	1000	1000	09/11/15 16:42	09/11/15 16:42	B15I058	JLK
Sulfate (Reshot)	747	mg/L	EPA 300.0	1000	250	250	09/11/15 16:42	09/11/15 16:42	B15I058	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1509023-06
Date/Time Collected 09/09/2015 14:16
Date/Time Logged In 09/09/2015 16:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.74	mg/L	EPA 300.0	1	1.00	1.00	09/11/15 11:27	09/11/15 11:27	B15I058	JLK
Fluoride	0.12	mg/L	EPA 300.0	1	0.10	0.10	09/15/15 20:28	09/15/15 20:28	B15I059	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	09/11/15 11:27	09/11/15 11:27	B15I058	JLK
pH	5.54	SU	SM 4500-H B	1			09/10/15 10:58	09/10/15 10:58	B15I029	JES
Total Dissolved Solids	40.0	mg/L	SM 2540 C	1	5.00	5.00	09/14/15 16:00	09/14/15 16:00	B15I061	JFP
Calcium	5.50	mg/L	EPA 200.7	1	0.500	0.500	09/14/15 09:50	09/15/15 10:09	B15I057	JNG

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15I058

Blank (B15I058-BLK1)

Chloride	1.00 U	1.00	mg/L		1.00				
Sulfate	0.25 U	0.25	mg/L		0.25				

Prepared & Analyzed: 10-Sep-15

LCS (B15I058-BS1)

Sulfate	1.93		mg/L	2.00		96.7	90-110		
Chloride	5.14		mg/L	5.00		103	90-110		

Prepared & Analyzed: 10-Sep-15

Duplicate (B15I058-DUP1)

Chloride	7.10	1.00	mg/L		7.12			0.267	10
Sulfate	0.59	0.25	mg/L		0.65			9.68	10

Source: 1509023-02

Prepared & Analyzed: 10-Sep-15

Matrix Spike (B15I058-MS1)

Chloride	9.14	1.00	mg/L	2.00	7.12	101	90-110		
Sulfate	2.59	0.25	mg/L	2.00	0.65	97.1	90-110		

Source: 1509023-02

Prepared & Analyzed: 10-Sep-15

Batch: B15I059

Blank (B15I059-BLK1)

Fluoride	0.10 U	0.10	mg/L		0.10				
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Prepared & Analyzed: 15-Sep-15

LCS (B15I059-BS1)

Fluoride	0.66		mg/L	0.600		109	90-110		
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Prepared & Analyzed: 15-Sep-15

Duplicate (B15I059-DUP1)

Fluoride	0.10 U	0.10	mg/L		0.10				10
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Source: 1509023-02

Prepared & Analyzed: 15-Sep-15

Matrix Spike (B15I059-MS1)

Fluoride	1.09	0.10	mg/L	1.00	ND	109	90-110		
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Source: 1509023-02

Prepared & Analyzed: 15-Sep-15

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15I029

LCS (B15I029-BS1)

pH	4.68		SU	4.63		101	0-200		
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Prepared & Analyzed: 10-Sep-15

Duplicate (B15I029-DUP1)

pH	5.45		SU		5.54			1.64	10
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Source: 1509023-06

Prepared & Analyzed: 10-Sep-15

Batch: B15I061

Blank (B15I061-BLK1)

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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Prepared & Analyzed: 14-Sep-15

LCS (B15I061-BS1)

Total Dissolved Solids	286		mg/L	304		94.1	80-120		
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Prepared: 14-Sep-15 Analyzed: 21-Sep-15

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15I061 (Continued)

Duplicate (B15I061-DUP1)		Source: 1509023-06		Prepared & Analyzed: 14-Sep-15					
Total Dissolved Solids	40.0	5.00	mg/L		40.0			0.00	10

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15I057

Blank (B15I057-BLK1)		Prepared: 14-Sep-15 Analyzed: 15-Sep-15							
Calcium	0.500 U	0.500	mg/L		0.500				

LCS (B15I057-BS1)		Prepared: 14-Sep-15 Analyzed: 15-Sep-15							
Calcium	0.965	0.500	mg/L	1.00	0.500	96.5	85-115		

Duplicate (B15I057-DUP1)		Source: 1509023-05		Prepared: 14-Sep-15 Analyzed: 15-Sep-15					
Calcium	2090	50.0	mg/L		2110			1.05	10

Matrix Spike (B15I057-MS1)		Source: 1509023-05		Prepared: 14-Sep-15 Analyzed: 15-Sep-15					
Calcium	3080	50.0	mg/L	1000	2110	97.7	70-130		

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 5I10004

Blank (5I10004-BLK1)		Prepared: 10-Sep-15 Analyzed: 11-Sep-15							
Arsenic	8.00 U	10.0	ug/L		8.00				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	3.70 U	50.0	ug/L		3.70				
Cadmium	0.280 U	1.00	ug/L		0.280				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				

LCS (5I10004-BS1)		Prepared: 10-Sep-15 Analyzed: 11-Sep-15							
Arsenic	487	10.0	ug/L	500	8.00	97	85-115		
Beryllium	49.9	1.00	ug/L	50.0	0.120	100	85-115		
Boron	2470	50.0	ug/L	2500	3.70	99	85-115		
Cadmium	50.2	1.00	ug/L	50.0	0.280	100	85-115		
Chromium	493	10.0	ug/L	500	1.10	99	85-115		
Cobalt	486	10.0	ug/L	500	1.50	97	85-115		

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 5I10004 (Continued)

LCS (5I10004-BS1)

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Lead	501	10.0	ug/L	500	2.50	100	85-115		
Lithium	498	20.0	ug/L	500	2.60	100	85-115		
Molybdenum	481	10.0	ug/L	500	5.00	96	85-115		
Selenium	504	40.0	ug/L	500	8.20	101	85-115		

Matrix Spike (5I10004-MS1)

Source: B503818-04

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Arsenic	494	10.0	ug/L	500	12.1	96	70-130		
Beryllium	50.3	1.00	ug/L	50.0	ND	101	70-130		
Boron	2520	50.0	ug/L	2500	48.0	99	70-130		
Cadmium	49.7	1.00	ug/L	50.0	ND	99	70-130		
Chromium	499	10.0	ug/L	500	5.71	99	70-130		
Cobalt	488	10.0	ug/L	500	ND	98	70-130		
Lead	498	10.0	ug/L	500	ND	100	70-130		
Lithium	494	20.0	ug/L	500	ND	99	70-130		
Molybdenum	502	10.0	ug/L	500	21.1	96	70-130		
Selenium	501	40.0	ug/L	500	ND	100	70-130		

Matrix Spike Dup (5I10004-MSD1)

Source: B503818-04

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Arsenic	498	10.0	ug/L	500	12.1	97	70-130	0.8	25
Beryllium	50.8	1.00	ug/L	50.0	ND	102	70-130	1	25
Boron	2560	50.0	ug/L	2500	48.0	101	70-130	2	25
Cadmium	50.2	1.00	ug/L	50.0	ND	100	70-130	1	25
Chromium	504	10.0	ug/L	500	5.71	100	70-130	1	25
Cobalt	495	10.0	ug/L	500	ND	99	70-130	1	25
Lead	504	10.0	ug/L	500	ND	101	70-130	1	25
Lithium	495	20.0	ug/L	500	ND	99	70-130	0.2	25
Molybdenum	509	10.0	ug/L	500	21.1	98	70-130	1	25
Selenium	509	40.0	ug/L	500	ND	102	70-130	2	25

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 5I10004

Blank (5I10004-BLK1)

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Barium	0.390 U	10.0	ug/L		0.390				
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LCS (5I10004-BS1)

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Barium	489	10.0	ug/L	500	0.390	98	85-115		
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Matrix Spike (5I10004-MS1)

Source: B503818-04

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Barium	492	10.0	ug/L	500	2.41	98	70-130		
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Matrix Spike Dup (5I10004-MSD1)

Source: B503818-04

Prepared: 10-Sep-15 Analyzed: 11-Sep-15

Barium	498	10.0	ug/L	500	2.41	99	70-130	1	25
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J26005									
Blank (5J26005-BLK1)				Prepared: 26-Oct-15 Analyzed: 28-Oct-15					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
LCS (5J26005-BS1)									
				Prepared: 26-Oct-15 Analyzed: 28-Oct-15					
Antimony	51.4	20.0	ug/L	50.0	1.10	103	85-115		
Thallium	50.3	1.00	ug/L	50.0	0.580	101	85-115		
Matrix Spike (5J26005-MS1)									
				Source: A506908-04 Prepared: 26-Oct-15 Analyzed: 28-Oct-15					
Antimony	49.7	20.0	ug/L	50.0	ND	99	70-130		
Thallium	49.6	1.00	ug/L	50.0	ND	99	70-130		
Matrix Spike Dup (5J26005-MSD1)									
				Source: A506908-04 Prepared: 26-Oct-15 Analyzed: 28-Oct-15					
Antimony	50.5	20.0	ug/L	50.0	ND	101	70-130	2	30
Thallium	50.2	1.00	ug/L	50.0	ND	100	70-130	1	30
Post Spike (5J26005-PS1)									
				Source: A506908-04 Prepared & Analyzed: 28-Oct-15					
Antimony	4.91		ug/L	4.90	0.071	99	75-125		
Thallium	4.84		ug/L	4.90	-0.010	99	75-125		
Batch: 5J26009									
Blank (5J26009-BLK1)				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	0.023 U	0.200	ug/L		0.023				
LCS (5J26009-BS1)									
				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	4.98	0.200	ug/L	5.00	0.023	100	85-115		
Matrix Spike (5J26009-MS1)									
				Source: 1509023-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.33	0.200	ug/L	5.00	ND	107	70-130		
Matrix Spike Dup (5J26009-MSD1)									
				Source: 1509023-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.43	0.200	ug/L	5.00	ND	109	70-130	2	10
Post Spike (5J26009-PS1)									
				Source: 1509023-06 Prepared & Analyzed: 28-Oct-15					
Mercury	5.35		ug/L	5.61	-0.004	95	75-125		

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

Q-01	Analysis performed outside of method - specified holding time.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager



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WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1510036

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 31 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

November 30, 2015

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1510036**
Client Project Description: **Combustion Waste Landfill Monitoring**

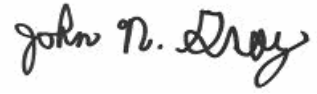
Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-06	Equipment Blank	10/12/2015
1510036-06	Equipment Blank	10/12/2015
1510036-06	Equipment Blank	10/12/2015

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink that reads "John N. Gray". The signature is written in a cursive, flowing style.

John N. Gray
Laboratory Manager

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01RE1
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	13.3 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 15:58	5J14004	ACV
Lithium (Reshot)	3.13 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 15:58	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02RE1
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	11.8 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:01	5J14004	ACV
Lithium (Reshot)	3.35 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:01	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03RE1
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	29.1 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:04	5J14004	ACV
Lithium (Reshot)	8.48 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:04	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	92.0 I	ug/L	EPA 200.7	20	74.0	1000	10/14/15 09:51	10/15/15 15:00	5J14004	ACV
Lithium	52.0 U	ug/L	EPA 200.7	20	52.0	400	10/14/15 09:51	10/15/15 15:00	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05RE1
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	12.3 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:07	5J14004	ACV
Lithium (Reshot)	2.60 U	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:07	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06RE1
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	3.70 <i>u</i>	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:10	5J14004	ACV
Lithium (Reshot)	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:10	5J14004	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.13 I	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 12:50	5J28007	JMA
Thallium	0.580 U	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 12:50	5J28007	JMA
Mercury	0.0230 U	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:02	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:23	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:23	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:05	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:25	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:25	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:08	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 14:03	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 14:03	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:11	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:33	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:33	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:20	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:38	5J28007	JMA
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:38	5J28007	JMA
Mercury	0.0230 <i>u</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:23	5J26009	IR

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.82	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 18:33	10/12/15 18:33	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 18:33	10/12/15 18:33	B15K011	JLK
Sulfate	0.52	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 18:33	10/12/15 18:33	B15K012	JLK
pH	5.28	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	35.0 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.029	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Beryllium	0.003	mg/L	EPA 200.7	1	0.001	0.001	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Cadmium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Calcium	7.76	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:49	10/27/15 17:49	B15K019	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:27	10/28/15 17:27	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:06	10/26/15 22:06	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.86	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 19:02	10/12/15 19:02	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 19:02	10/12/15 19:02	B15K011	JLK
Sulfate	0.55	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 19:02	10/12/15 19:02	B15K012	JLK
pH	5.29	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	33.0 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.031	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Calcium	7.70	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:51	10/27/15 17:51	B15K019	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:35	10/28/15 17:35	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:06	10/26/15 22:06	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	97.7	mg/L	EPA 300.0	10	10.0	10.0	10/13/15 14:47	10/13/15 14:47	B15K012	JLK
Fluoride	0.19	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 18:03	10/12/15 18:03	B15K011	JLK
Sulfate	54.1	mg/L	EPA 300.0	10	2.50	2.50	10/13/15 14:47	10/13/15 14:47	B15K012	JLK
pH	4.22	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	242 v	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.425	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Beryllium	0.001 u	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Cadmium	0.002 u	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Calcium	21.9	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:55	10/27/15 17:55	B15K019	JNG
Chromium	0.002 u	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Cobalt	0.005 u	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Molybdenum	0.010 u	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Arsenic	0.005 u	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:42	10/28/15 17:42	B15K002	JNG
Lead	0.002 u	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:22	10/26/15 22:22	B15J119	JNG
Selenium	0.005 u	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 17:34	10/12/15 17:34	B15K011	JLK
pH	4.15	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	19900 <i>v</i>	mg/L	SM 2540 C	10	50.0	50.0	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.364	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Beryllium	0.002	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Calcium	2530	mg/L	EPA 200.7	100	50.0	50.0	11/09/15 08:13	11/09/15 15:20	B15K041	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Cobalt	0.009	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:58	10/28/15 17:58	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:39	10/26/15 22:39	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04RE1
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Sulfate (Reshot)	822	mg/L	EPA 300.0	100	25.0	25.0	10/13/15 15:17	10/13/15 15:17	B15K012	JLK

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04RE2
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	10600	mg/L	EPA 300.0	1000	1000	1000	10/13/15 15:46	10/13/15 15:46	B15K012	JLK

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.78	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 19:32	10/12/15 19:32	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 19:32	10/12/15 19:32	B15K011	JLK
Sulfate	0.33	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 19:32	10/12/15 19:32	B15K012	JLK
pH	5.40	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	110 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.012	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Calcium	5.22	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 18:00	10/27/15 18:00	B15K019	JNG
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 18:08	10/28/15 18:08	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:47	10/26/15 22:47	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 21:00	10/12/15 21:00	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 21:00	10/12/15 21:00	B15K011	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 21:00	10/12/15 21:00	B15K012	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Calcium	0.500 <i>u</i>	mg/L	EPA 200.7	1	0.500	0.500	11/09/15 08:13	11/09/15 15:12	B15K041	JNG
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 18:13	10/28/15 18:13	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:56	10/26/15 22:56	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15K011									
Blank (B15K011-BLK1)									
Fluoride	0.10 U	0.10	mg/L		Prepared & Analyzed: 12-Oct-15 0.10				
LCS (B15K011-BS1)									
Fluoride	0.58		mg/L	0.600	Prepared & Analyzed: 12-Oct-15 0.600	97.2	90-110		
Duplicate (B15K011-DUP1)									
		Source: 1510036-05			Prepared & Analyzed: 12-Oct-15				
Fluoride	0.10 U	0.10	mg/L	0.10	0.10			0.00	10
Matrix Spike (B15K011-MS1)									
		Source: 1510036-05			Prepared & Analyzed: 12-Oct-15				
Fluoride	1.06	0.10	mg/L	1.00	ND	106	90-110		
Batch: B15K012									
Blank (B15K012-BLK1)									
Chloride	1.00 U	1.00	mg/L		Prepared & Analyzed: 12-Oct-15 1.00				
Sulfate	0.25 U	0.25	mg/L		0.25				
LCS (B15K012-BS1)									
Sulfate	3.85		mg/L	4.00	Prepared & Analyzed: 12-Oct-15 4.00	96.2	0-200		
Chloride	4.99		mg/L	5.00		99.8	90-110		
Duplicate (B15K012-DUP1)									
		Source: 1510019-05			Prepared & Analyzed: 12-Oct-15				
Sulfate	1.53	0.25	mg/L	1.54				0.651	10
Chloride	30.2	1.00	mg/L	30.2				0.0828	10
Matrix Spike (B15K012-MS1)									
		Source: 1510019-05			Prepared & Analyzed: 12-Oct-15				
Sulfate	5.50	0.25	mg/L	4.00	1.54	99.0	90-110		
Chloride	34.0	1.00	mg/L	4.00	30.2	94.5	90-110		

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Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J035									
LCS (B15J035-BS1)									
pH	4.60		SU	4.63	Prepared & Analyzed: 13-Oct-15 4.63	99.4	97.5-102.5		
Duplicate (B15J035-DUP1)									
		Source: 1510036-04			Prepared & Analyzed: 13-Oct-15				
pH	4.16		SU	4.15				0.241	10
Batch: B15J074									
Blank (B15J074-BLK1)									
Total Dissolved Solids	5.00	5.00	mg/L		Prepared & Analyzed: 14-Oct-15 5.00				
Blank (B15J074-BLK2)									
					Prepared & Analyzed: 14-Oct-15				

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J074 (Continued)									
Blank (B15J074-BLK2)									
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
Prepared & Analyzed: 14-Oct-15									
LCS (B15J074-BS1)									
Total Dissolved Solids	248	5.00	mg/L	304	5.00	81.6	80-120		
Prepared & Analyzed: 14-Oct-15									
LCS (B15J074-BS2)									
Total Dissolved Solids	266	5.00	mg/L	304	5.00	87.5	80-120		
Prepared & Analyzed: 14-Oct-15									
Duplicate (B15J074-DUP1)									
Total Dissolved Solids	411	5.00	mg/L	402				2.21	10
Source: 1510008-29									
Prepared & Analyzed: 14-Oct-15									
Duplicate (B15J074-DUP2)									
Total Dissolved Solids	5.00 U	5.00	mg/L	5.00				0.00	10
Source: 1510008-01									
Prepared & Analyzed: 14-Oct-15									

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Metals (Total) by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J114									
Blank (B15J114-BLK3)									
Cobalt	0.005 U	0.005	mg/L		0.005				
Chromium	0.002 U	0.002	mg/L		0.002				
Cadmium	0.002 U	0.002	mg/L		0.002				
Beryllium	0.001 U	0.001	mg/L		0.001				
Barium	0.005 U	0.005	mg/L		0.005				
Molybdenum	0.010 U	0.010	mg/L		0.010				
Prepared: 22-Oct-15 Analyzed: 09-Nov-15									
LCS (B15J114-BS3)									
Barium	1.03	0.005	mg/L	1.00	0.005	103	85-115		
Molybdenum	0.968	0.010	mg/L	1.00	0.010	96.8	85-115		
Beryllium	0.945	0.001	mg/L	1.00	0.001	94.5	85-115		
Cobalt	0.951	0.005	mg/L	1.00	0.005	95.1	85-115		
Chromium	0.979	0.002	mg/L	1.00	0.002	97.9	85-115		
Cadmium	0.952	0.002	mg/L	1.00	0.002	95.2	85-115		
Prepared & Analyzed: 22-Oct-15									
Duplicate (B15J114-DUP3)									
Cadmium	0.002 U	0.002	mg/L	0.002				0.00	10
Cobalt	0.005 U	0.005	mg/L	0.005				0.00	10
Molybdenum	0.010 U	0.010	mg/L	0.010				0.00	10
Chromium	0.002 U	0.002	mg/L	0.002				0.00	10
Beryllium	0.001 U	0.001	mg/L	0.001				0.00	10
Barium	0.026	0.005	mg/L	0.024				4.82	10
Source: 1510008-31									
Prepared: 22-Oct-15 Analyzed: 09-Nov-15									
Matrix Spike (B15J114-MS3)									
Chromium	1.01	0.002	mg/L	1.00	ND	101	70-130		
Beryllium	0.975	0.001	mg/L	1.00	ND	97.5	70-130		
Cobalt	0.984	0.005	mg/L	1.00	ND	98.4	70-130		
Barium	1.09	0.005	mg/L	1.00	0.024	107	70-130		
Prepared & Analyzed: 22-Oct-15									

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J114 (Continued)									
Matrix Spike (B15J114-MS3)		Source: 1510008-31		Prepared & Analyzed: 22-Oct-15					
Cadmium	0.997	0.002	mg/L	1.00	ND	99.7	70-130		
Molybdenum	1.01	0.010	mg/L	1.00	ND	101	70-130		
Batch: B15K019									
Blank (B15K019-BLK5)		Prepared & Analyzed: 27-Oct-15							
Calcium	0.500 U	0.500	mg/L		0.500				
LCS (B15K019-BS5)		Prepared & Analyzed: 27-Oct-15							
Calcium	9.04	0.500	mg/L	10.0	0.500	90.4	85-115		
Duplicate (B15K019-DUP5)		Source: 1510008-31		Prepared & Analyzed: 27-Oct-15					
Calcium	0.685	0.500	mg/L		0.658			4.01	10
Matrix Spike (B15K019-MS5)		Source: 1510008-31		Prepared & Analyzed: 27-Oct-15					
Calcium	10.5	0.500	mg/L	10.0	0.658	98.6	70-130		

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J119									
Blank (B15J119-BLK1)		Prepared & Analyzed: 26-Oct-15							
Lead	0.002 U	0.002	mg/L		0.002				
LCS (B15J119-BS1)		Prepared & Analyzed: 26-Oct-15							
Lead	0.0103	0.002	mg/L	0.0100	0.002	103	90-110		
Duplicate (B15J119-DUP1)		Source: 1510036-03		Prepared & Analyzed: 26-Oct-15					
Lead	0.002 U	0.002	mg/L		0.002			0.00	10
Matrix Spike (B15J119-MS1)		Source: 1510036-03		Prepared & Analyzed: 26-Oct-15					
Lead	0.00986	0.002	mg/L	0.0100	ND	98.6	90-110		
Batch: B15K002									
Blank (B15K002-BLK1)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK2)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK3)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK4)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK5)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15K002 (Continued)									
LCS (B15K002-BS1)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	0.005	107	90-110		
LCS (B15K002-BS2)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	0.005	103	90-110		
LCS (B15K002-BS3)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	92.5	90-110		
LCS (B15K002-BS4)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	92.4	90-110		
LCS (B15K002-BS5)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	93.5	90-110		
Duplicate (B15K002-DUP1)				Source: 1510008-07 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP2)				Source: 1510008-20 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP3)				Source: 1510008-31 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP4)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP5)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Matrix Spike (B15K002-MS1)				Source: 1510008-07 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	ND	113	90-110		
Matrix Spike (B15K002-MS2)				Source: 1510008-20 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	ND	114	90-110		
Matrix Spike (B15K002-MS3)				Source: 1510008-31 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	95.9	90-110		
Matrix Spike (B15K002-MS4)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	101	90-110		
Matrix Spike (B15K002-MS5)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	95.7	90-110		
Batch: B15K031									
Blank (B15K031-BLK1)				Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.005 U	0.005	mg/L		0.005				
LCS (B15K031-BS1)				Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.0252	0.005	mg/L	0.0200	0.005	126	90-110		
Duplicate (B15K031-DUP1)				Source: 1510036-03 Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.005 U	0.005	mg/L		0.005			0.00	10

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15K031 (Continued)

Matrix Spike (B15K031-MS1)		Source: 1510036-03		Prepared: 30-Oct-15	Analyzed: 10-Nov-15				
Selenium	0.0219		mg/L	0.0200	ND	110	90-110		

Quality Control Orlando Utilities Commission FLDOH# E53566

Miscellaneous Subcontracted Analyses

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15J114

Blank (B15J114-BLK1)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
Blank (B15J114-BLK2)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
Blank (B15J114-BLK3)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
LCS (B15J114-BS1)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
LCS (B15J114-BS2)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
LCS (B15J114-BS3)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
Duplicate (B15J114-DUP1)		Source: 1510008-20		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Duplicate (B15J114-DUP2)		Source: 1510008-24		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Duplicate (B15J114-DUP3)		Source: 1510008-31		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS1)		Source: 1510008-20		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS2)		Source: 1510008-24		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS3)		Source: 1510008-31		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J28007									
Blank (5J28007-BLK1)				Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
LCS (5J28007-BS1)									
				Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	50.4	20.0	ug/L	50.0	1.10	101	85-115		
Thallium	50.0	1.00	ug/L	50.0	0.580	100	85-115		
Matrix Spike (5J28007-MS1)									
				Source: 1510036-01 Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	48.3	20.0	ug/L	50.0	1.13	94	70-130		
Thallium	49.9	1.00	ug/L	50.0	ND	100	70-130		
Matrix Spike Dup (5J28007-MSD1)									
				Source: 1510036-01 Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	49.0	20.0	ug/L	50.0	1.13	96	70-130	2	30
Thallium	49.8	1.00	ug/L	50.0	ND	100	70-130	0.3	30
Post Spike (5J28007-PS1)									
				Source: 1510036-01 Prepared & Analyzed: 29-Oct-15					
Antimony	4.77		ug/L	4.90	0.111	95	75-125		
Thallium	4.84		ug/L	4.90	-0.007	99	75-125		

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 6000/7000 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J26009									
Blank (5J26009-BLK1)				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	0.0230 U	0.200	ug/L		0.0230				
LCS (5J26009-BS1)									
				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	4.98	0.200	ug/L	5.00	0.0230	100	80-120		
Matrix Spike (5J26009-MS1)									
				Source: A506947-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.33	0.200	ug/L	5.00	ND	107	75-125		
Matrix Spike Dup (5J26009-MSD1)									
				Source: A506947-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.43	0.200	ug/L	5.00	ND	109	75-125	2	20
Post Spike (5J26009-PS1)									
				Source: A506947-06 Prepared & Analyzed: 28-Oct-15					
Mercury	5.35		ug/L	5.61	-0.00442	95	80-120		

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J14004									
Blank (5J14004-BLK1)				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	3.70 U	50.0	ug/L		3.70				
Lithium	2.60 U	20.0	ug/L		2.60				
LCS (5J14004-BS1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	2540	50.0	ug/L	2500	3.70	102	85-115		

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J14004 (Continued)									
LCS (5J14004-BS1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Lithium	528	20.0	ug/L	500	2.60	106	85-115		
Matrix Spike (5J14004-MS1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Source: B504360-01									
Boron	2550	50.0	ug/L	2500	28.4	101	70-130		
Lithium	528	20.0	ug/L	500	ND	106	70-130		
Matrix Spike Dup (5J14004-MSD1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Source: B504360-01									
Boron	2570	50.0	ug/L	2500	28.4	102	70-130	1	25
Lithium	527	20.0	ug/L	500	ND	105	70-130	0.2	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager



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WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1510036

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 31 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

November 30, 2015

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1510036**
Client Project Description: **Combustion Waste Landfill Monitoring**

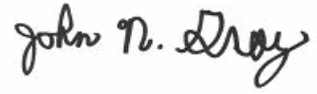
Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-01	SEC Monitoring Well C	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-02	SEC Monitoring Well C Field Duplicate	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-03	SEC Monitoring Well B	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-04	SEC Monitoring Well A	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-05	SEC Monitoring Well D	10/12/2015
1510036-06	Equipment Blank	10/12/2015
1510036-06	Equipment Blank	10/12/2015
1510036-06	Equipment Blank	10/12/2015

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink that reads "John N. Gray". The signature is written in a cursive, flowing style.

John N. Gray
Laboratory Manager

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01RE1
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	13.3 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 15:58	5J14004	ACV
Lithium (Reshot)	3.13 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 15:58	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02RE1
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	11.8 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:01	5J14004	ACV
Lithium (Reshot)	3.35 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:01	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03RE1
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	29.1 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:04	5J14004	ACV
Lithium (Reshot)	8.48 I	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:04	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	92.0 I	ug/L	EPA 200.7	20	74.0	1000	10/14/15 09:51	10/15/15 15:00	5J14004	ACV
Lithium	52.0 U	ug/L	EPA 200.7	20	52.0	400	10/14/15 09:51	10/15/15 15:00	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05RE1
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	12.3 I	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:07	5J14004	ACV
Lithium (Reshot)	2.60 U	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:07	5J14004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06RE1
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron (Reshot)	3.70 <i>u</i>	ug/L	EPA 200.7	1	3.70	50.0	10/14/15 09:51	10/15/15 16:10	5J14004	ACV
Lithium (Reshot)	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	10/14/15 09:51	10/15/15 16:10	5J14004	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.13 I	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 12:50	5J28007	JMA
Thallium	0.580 U	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 12:50	5J28007	JMA
Mercury	0.0230 U	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:02	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:23	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:23	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:05	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:25	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:25	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:08	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 14:03	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 14:03	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:11	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:33	5J28007	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:33	5J28007	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:20	5J26009	IR

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	10/28/15 10:09	10/29/15 13:38	5J28007	JMA
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	10/28/15 10:09	10/29/15 13:38	5J28007	JMA
Mercury	0.0230 <i>u</i>	ug/L	EPA 7470A	1	0.0230	0.200	10/27/15 11:14	10/28/15 08:23	5J26009	IR

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1510036-01
Date/Time Collected 10/12/2015 09:56
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.82	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 18:33	10/12/15 18:33	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 18:33	10/12/15 18:33	B15K011	JLK
Sulfate	0.52	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 18:33	10/12/15 18:33	B15K012	JLK
pH	5.28	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	35.0 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.029	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Beryllium	0.003	mg/L	EPA 200.7	1	0.001	0.001	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Cadmium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Calcium	7.76	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:49	10/27/15 17:49	B15K019	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/22/15 20:08	10/22/15 20:08	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:27	10/28/15 17:27	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:06	10/26/15 22:06	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C Field Duplicate
Matrix Water
WQLAB Sample Number 1510036-02
Date/Time Collected 10/12/2015 10:07
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.86	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 19:02	10/12/15 19:02	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 19:02	10/12/15 19:02	B15K011	JLK
Sulfate	0.55	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 19:02	10/12/15 19:02	B15K012	JLK
pH	5.29	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	33.0 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.031	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Calcium	7.70	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:51	10/27/15 17:51	B15K019	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/22/15 20:14	10/22/15 20:14	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:35	10/28/15 17:35	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:06	10/26/15 22:06	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1510036-03
Date/Time Collected 10/12/2015 10:27
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	97.7	mg/L	EPA 300.0	10	10.0	10.0	10/13/15 14:47	10/13/15 14:47	B15K012	JLK
Fluoride	0.19	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 18:03	10/12/15 18:03	B15K011	JLK
Sulfate	54.1	mg/L	EPA 300.0	10	2.50	2.50	10/13/15 14:47	10/13/15 14:47	B15K012	JLK
pH	4.22	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	242 $\checkmark$	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.425	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Beryllium	0.001 $\checkmark$	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Cadmium	0.002 $\checkmark$	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Calcium	21.9	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 17:55	10/27/15 17:55	B15K019	JNG
Chromium	0.002 $\checkmark$	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Cobalt	0.005 $\checkmark$	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Molybdenum	0.010 $\checkmark$	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:15	10/26/15 11:15	B15J114	JNG
Arsenic	0.005 $\checkmark$	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:42	10/28/15 17:42	B15K002	JNG
Lead	0.002 $\checkmark$	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:22	10/26/15 22:22	B15J119	JNG
Selenium	0.005 $\checkmark$	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 17:34	10/12/15 17:34	B15K011	JLK
pH	4.15	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	19900 <i>v</i>	mg/L	SM 2540 C	10	50.0	50.0	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.364	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Beryllium	0.002	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Calcium	2530	mg/L	EPA 200.7	100	50.0	50.0	11/09/15 08:13	11/09/15 15:20	B15K041	JNG
Chromium	0.002	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Cobalt	0.009	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:20	10/26/15 11:20	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 17:58	10/28/15 17:58	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:39	10/26/15 22:39	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566
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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04RE1
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Sulfate (Reshot)	822	mg/L	EPA 300.0	100	25.0	25.0	10/13/15 15:17	10/13/15 15:17	B15K012	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1510036-04RE2
Date/Time Collected 10/12/2015 11:28
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	10600	mg/L	EPA 300.0	1000	1000	1000	10/13/15 15:46	10/13/15 15:46	B15K012	JLK

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1510036-05
Date/Time Collected 10/12/2015 12:01
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	6.78	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 19:32	10/12/15 19:32	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 19:32	10/12/15 19:32	B15K011	JLK
Sulfate	0.33	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 19:32	10/12/15 19:32	B15K012	JLK
pH	5.40	SU	SM 4500-H B	1			10/13/15 08:00	10/13/15 08:30	B15J035	DWM
Total Dissolved Solids	110 <i>v</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.012	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Calcium	5.22	mg/L	EPA 200.7	1	0.500	0.500	10/27/15 18:00	10/27/15 18:00	B15K019	JNG
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 11:26	10/26/15 11:26	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 18:08	10/28/15 18:08	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:47	10/26/15 22:47	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

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Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1510036-06
Date/Time Collected 10/12/2015 08:10
Date/Time Logged In 10/12/2015 15:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	10/12/15 21:00	10/12/15 21:00	B15K012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/12/15 21:00	10/12/15 21:00	B15K011	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	10/12/15 21:00	10/12/15 21:00	B15K012	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	10/14/15 09:45	10/14/15 09:45	B15J074	JFP
Barium	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Calcium	0.500 <i>u</i>	mg/L	EPA 200.7	1	0.500	0.500	11/09/15 08:13	11/09/15 15:12	B15K041	JNG
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	10/26/15 12:06	10/26/15 12:06	B15J114	JNG
Arsenic	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	10/28/15 18:13	10/28/15 18:13	B15K002	JNG
Lead	0.002 <i>u</i>	mg/L	SM 3113 B	1	0.002	0.002	10/26/15 22:56	10/26/15 22:56	B15J119	JNG
Selenium	0.005 <i>u</i>	mg/L	SM 3113 B	1	0.005	0.005	11/10/15 07:58	11/10/15 08:08	B15K031	JNG

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15K011									
Blank (B15K011-BLK1)									
Fluoride	0.10 U	0.10	mg/L		0.10				
Prepared & Analyzed: 12-Oct-15									
LCS (B15K011-BS1)									
Fluoride	0.58		mg/L	0.600		97.2	90-110		
Prepared & Analyzed: 12-Oct-15									
Duplicate (B15K011-DUP1)									
Fluoride	0.10 U	0.10	mg/L		0.10			0.00	10
Source: 1510036-05									
Prepared & Analyzed: 12-Oct-15									
Matrix Spike (B15K011-MS1)									
Fluoride	1.06	0.10	mg/L	1.00	ND	106	90-110		
Source: 1510036-05									
Prepared & Analyzed: 12-Oct-15									
Batch: B15K012									
Blank (B15K012-BLK1)									
Chloride	1.00 U	1.00	mg/L		1.00				
Sulfate	0.25 U	0.25	mg/L		0.25				
Prepared & Analyzed: 12-Oct-15									
LCS (B15K012-BS1)									
Sulfate	3.85		mg/L	4.00		96.2	0-200		
Chloride	4.99		mg/L	5.00		99.8	90-110		
Prepared & Analyzed: 12-Oct-15									
Duplicate (B15K012-DUP1)									
Sulfate	1.53	0.25	mg/L		1.54			0.651	10
Chloride	30.2	1.00	mg/L		30.2			0.0828	10
Source: 1510019-05									
Prepared & Analyzed: 12-Oct-15									
Matrix Spike (B15K012-MS1)									
Sulfate	5.50	0.25	mg/L	4.00	1.54	99.0	90-110		
Chloride	34.0	1.00	mg/L	4.00	30.2	94.5	90-110		
Source: 1510019-05									
Prepared & Analyzed: 12-Oct-15									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J035									
LCS (B15J035-BS1)									
pH	4.60		SU	4.63		99.4	97.5-102.5		
Prepared & Analyzed: 13-Oct-15									
Duplicate (B15J035-DUP1)									
pH	4.16		SU		4.15			0.241	10
Source: 1510036-04									
Prepared & Analyzed: 13-Oct-15									
Batch: B15J074									
Blank (B15J074-BLK1)									
Total Dissolved Solids	5.00	5.00	mg/L		5.00				
Prepared & Analyzed: 14-Oct-15									
Blank (B15J074-BLK2)									
Prepared & Analyzed: 14-Oct-15									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J074 (Continued)									
Blank (B15J074-BLK2)									
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
Prepared & Analyzed: 14-Oct-15									
LCS (B15J074-BS1)									
Total Dissolved Solids	248	5.00	mg/L	304	5.00	81.6	80-120		
Prepared & Analyzed: 14-Oct-15									
LCS (B15J074-BS2)									
Total Dissolved Solids	266	5.00	mg/L	304	5.00	87.5	80-120		
Prepared & Analyzed: 14-Oct-15									
Duplicate (B15J074-DUP1)									
Source: 1510008-29									
Total Dissolved Solids	411	5.00	mg/L	402				2.21	10
Prepared & Analyzed: 14-Oct-15									
Duplicate (B15J074-DUP2)									
Source: 1510008-01									
Total Dissolved Solids	5.00 U	5.00	mg/L	5.00				0.00	10
Prepared & Analyzed: 14-Oct-15									

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J114									
Blank (B15J114-BLK3)									
Prepared: 22-Oct-15 Analyzed: 09-Nov-15									
Cobalt	0.005 U	0.005	mg/L		0.005				
Chromium	0.002 U	0.002	mg/L		0.002				
Cadmium	0.002 U	0.002	mg/L		0.002				
Beryllium	0.001 U	0.001	mg/L		0.001				
Barium	0.005 U	0.005	mg/L		0.005				
Molybdenum	0.010 U	0.010	mg/L		0.010				
LCS (B15J114-BS3)									
Prepared & Analyzed: 22-Oct-15									
Barium	1.03	0.005	mg/L	1.00	0.005	103	85-115		
Molybdenum	0.968	0.010	mg/L	1.00	0.010	96.8	85-115		
Beryllium	0.945	0.001	mg/L	1.00	0.001	94.5	85-115		
Cobalt	0.951	0.005	mg/L	1.00	0.005	95.1	85-115		
Chromium	0.979	0.002	mg/L	1.00	0.002	97.9	85-115		
Cadmium	0.952	0.002	mg/L	1.00	0.002	95.2	85-115		
Duplicate (B15J114-DUP3)									
Source: 1510008-31									
Prepared: 22-Oct-15 Analyzed: 09-Nov-15									
Cadmium	0.002 U	0.002	mg/L		0.002			0.00	10
Cobalt	0.005 U	0.005	mg/L		0.005			0.00	10
Molybdenum	0.010 U	0.010	mg/L		0.010			0.00	10
Chromium	0.002 U	0.002	mg/L		0.002			0.00	10
Beryllium	0.001 U	0.001	mg/L		0.001			0.00	10
Barium	0.026	0.005	mg/L		0.024			4.82	10
Matrix Spike (B15J114-MS3)									
Source: 1510008-31									
Prepared & Analyzed: 22-Oct-15									
Chromium	1.01	0.002	mg/L	1.00	ND	101	70-130		
Beryllium	0.975	0.001	mg/L	1.00	ND	97.5	70-130		
Cobalt	0.984	0.005	mg/L	1.00	ND	98.4	70-130		
Barium	1.09	0.005	mg/L	1.00	0.024	107	70-130		

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J114 (Continued)									
Matrix Spike (B15J114-MS3)		Source: 1510008-31		Prepared & Analyzed: 22-Oct-15					
Cadmium	0.997	0.002	mg/L	1.00	ND	99.7	70-130		
Molybdenum	1.01	0.010	mg/L	1.00	ND	101	70-130		
Batch: B15K019									
Blank (B15K019-BLK5)		Prepared & Analyzed: 27-Oct-15							
Calcium	0.500 U	0.500	mg/L		0.500				
LCS (B15K019-BS5)		Prepared & Analyzed: 27-Oct-15							
Calcium	9.04	0.500	mg/L	10.0	0.500	90.4	85-115		
Duplicate (B15K019-DUP5)		Source: 1510008-31		Prepared & Analyzed: 27-Oct-15					
Calcium	0.685	0.500	mg/L		0.658			4.01	10
Matrix Spike (B15K019-MS5)		Source: 1510008-31		Prepared & Analyzed: 27-Oct-15					
Calcium	10.5	0.500	mg/L	10.0	0.658	98.6	70-130		

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15J119									
Blank (B15J119-BLK1)		Prepared & Analyzed: 26-Oct-15							
Lead	0.002 U	0.002	mg/L		0.002				
LCS (B15J119-BS1)		Prepared & Analyzed: 26-Oct-15							
Lead	0.0103	0.002	mg/L	0.0100	0.002	103	90-110		
Duplicate (B15J119-DUP1)		Source: 1510036-03		Prepared & Analyzed: 26-Oct-15					
Lead	0.002 U	0.002	mg/L		0.002			0.00	10
Matrix Spike (B15J119-MS1)		Source: 1510036-03		Prepared & Analyzed: 26-Oct-15					
Lead	0.00986	0.002	mg/L	0.0100	ND	98.6	90-110		
Batch: B15K002									
Blank (B15K002-BLK1)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK2)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK3)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK4)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				
Blank (B15K002-BLK5)		Prepared & Analyzed: 28-Oct-15							
Arsenic	0.005 U	0.005	mg/L		0.005				

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15K002 (Continued)									
LCS (B15K002-BS1)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	0.005	107	90-110		
LCS (B15K002-BS2)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	0.005	103	90-110		
LCS (B15K002-BS3)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	92.5	90-110		
LCS (B15K002-BS4)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	92.4	90-110		
LCS (B15K002-BS5)				Prepared & Analyzed: 28-Oct-15					
Arsenic	0.009	0.005	mg/L	0.0100	0.005	93.5	90-110		
Duplicate (B15K002-DUP1)				Source: 1510008-07 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP2)				Source: 1510008-20 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP3)				Source: 1510008-31 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP4)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Duplicate (B15K002-DUP5)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.005 U	0.005	mg/L		0.005			0.00	10
Matrix Spike (B15K002-MS1)				Source: 1510008-07 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	ND	113	90-110		
Matrix Spike (B15K002-MS2)				Source: 1510008-20 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.011	0.005	mg/L	0.0100	ND	114	90-110		
Matrix Spike (B15K002-MS3)				Source: 1510008-31 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	95.9	90-110		
Matrix Spike (B15K002-MS4)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	101	90-110		
Matrix Spike (B15K002-MS5)				Source: 1510036-03 Prepared & Analyzed: 28-Oct-15					
Arsenic	0.010	0.005	mg/L	0.0100	ND	95.7	90-110		
Batch: B15K031									
Blank (B15K031-BLK1)				Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.005 U	0.005	mg/L		0.005				
LCS (B15K031-BS1)				Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.0252	0.005	mg/L	0.0200	0.005	126	90-110		
Duplicate (B15K031-DUP1)				Source: 1510036-03 Prepared: 30-Oct-15 Analyzed: 10-Nov-15					
Selenium	0.005 U	0.005	mg/L		0.005			0.00	10

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15K031 (Continued)

Matrix Spike (B15K031-MS1)		Source: 1510036-03		Prepared: 30-Oct-15	Analyzed: 10-Nov-15				
Selenium	0.0219		mg/L	0.0200	ND	110	90-110		

Quality Control Orlando Utilities Commission FLDOH# E53566

Miscellaneous Subcontracted Analyses

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B15J114

Blank (B15J114-BLK1)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
Blank (B15J114-BLK2)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
Blank (B15J114-BLK3)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15				
Boron	0.00		mg/L						
LCS (B15J114-BS1)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
LCS (B15J114-BS2)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
LCS (B15J114-BS3)				Prepared: 22-Oct-15	Analyzed: 17-Nov-15		85-115		
Boron	0.00		mg/L						
Duplicate (B15J114-DUP1)		Source: 1510008-20		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Duplicate (B15J114-DUP2)		Source: 1510008-24		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Duplicate (B15J114-DUP3)		Source: 1510008-31		Prepared: 22-Oct-15	Analyzed: 17-Nov-15			0.00	10
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS1)		Source: 1510008-20		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS2)		Source: 1510008-24		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						
Matrix Spike (B15J114-MS3)		Source: 1510008-31		Prepared: 22-Oct-15	Analyzed: 17-Nov-15		70-130		
Boron	0.00		mg/L						

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J28007									
Blank (5J28007-BLK1)				Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
LCS (5J28007-BS1)									
				Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	50.4	20.0	ug/L	50.0	1.10	101	85-115		
Thallium	50.0	1.00	ug/L	50.0	0.580	100	85-115		
Matrix Spike (5J28007-MS1)									
				Source: 1510036-01 Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	48.3	20.0	ug/L	50.0	1.13	94	70-130		
Thallium	49.9	1.00	ug/L	50.0	ND	100	70-130		
Matrix Spike Dup (5J28007-MSD1)									
				Source: 1510036-01 Prepared: 28-Oct-15 Analyzed: 29-Oct-15					
Antimony	49.0	20.0	ug/L	50.0	1.13	96	70-130	2	30
Thallium	49.8	1.00	ug/L	50.0	ND	100	70-130	0.3	30
Post Spike (5J28007-PS1)									
				Source: 1510036-01 Prepared & Analyzed: 29-Oct-15					
Antimony	4.77		ug/L	4.90	0.111	95	75-125		
Thallium	4.84		ug/L	4.90	-0.007	99	75-125		

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 6000/7000 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J26009									
Blank (5J26009-BLK1)				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	0.0230 U	0.200	ug/L		0.0230				
LCS (5J26009-BS1)									
				Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	4.98	0.200	ug/L	5.00	0.0230	100	80-120		
Matrix Spike (5J26009-MS1)									
				Source: A506947-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.33	0.200	ug/L	5.00	ND	107	75-125		
Matrix Spike Dup (5J26009-MSD1)									
				Source: A506947-06 Prepared: 27-Oct-15 Analyzed: 28-Oct-15					
Mercury	5.43	0.200	ug/L	5.00	ND	109	75-125	2	20
Post Spike (5J26009-PS1)									
				Source: A506947-06 Prepared & Analyzed: 28-Oct-15					
Mercury	5.35		ug/L	5.61	-0.00442	95	80-120		

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J14004									
Blank (5J14004-BLK1)				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	3.70 U	50.0	ug/L		3.70				
Lithium	2.60 U	20.0	ug/L		2.60				
LCS (5J14004-BS1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	2540	50.0	ug/L	2500	3.70	102	85-115		

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5J14004 (Continued)									
LCS (5J14004-BS1)									
Lithium	528	20.0	ug/L	500	2.60	106	85-115		
Matrix Spike (5J14004-MS1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	2550	50.0	ug/L	2500	28.4	101	70-130		
Lithium	528	20.0	ug/L	500	ND	106	70-130		
Matrix Spike Dup (5J14004-MSD1)									
				Prepared: 14-Oct-15 Analyzed: 15-Oct-15					
Boron	2570	50.0	ug/L	2500	28.4	102	70-130	1	25
Lithium	527	20.0	ug/L	500	ND	105	70-130	0.2	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager



PROJECT #:

PAGE of

of

Matrix Codes*	
GW = Ground Wtr	DW = Drinking Wtr
EFF = Effluent	SW = Surface Wtr
INF = Influent	WW = Waste Wtr
O = Other	(specify)

Pres. Codes

C. H₂SO₄ J. MCAA
D. NaOH K. H₃PO₄
E. HCL L. Ascorbic Acid
F. EDTA M. NH₄Cl

Lab Use Only		Yes	No	N/A
Sample INTACT upon arrival		☒	☐	☐
Rec'd on Wet Ice? Temp	—	☒	☐	☐
Upper preservatives indicated		☒	☐	☐
Rec'd within holding time?		☒	☐	☐
Envelope rec'd without headspt		☒	☐	☒

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC		Site Location: mw-C FD	
Well No.	Sample ID:	Date:	10-12-15

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 5.79	Sampling Device: APP							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (31.52 feet - 5.79 feet) X 0.16 gallons/foot = 4.12 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22	Final Pump or Tubing Depth in Well: (feet): 22		Purging Initiated at: 9:21	Purging ended at: 9:56	Total Volume Purged (gallons): 8.75						
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) milky	Odor (Describe)
0950	7.25	7.25	0.25	5.95	5.47	24.90	70	0.51	50.9	sl. sulfide	
0953	0.75	8.00	0.25	5.95	5.44	24.86	69	0.50	54.3		
0956	0.75	8.75	0.25	5.95	5.47	24.79	69	0.52	57.9		
1001	10.0	10.0	0.25	5.95	5.39	24.85	69	0.69	57.0	milky	sl. sulfid
1004	0.75	10.75	0.25	5.95	5.44	24.84	68	0.65	58.3		
1007	0.75	11.50	0.25	5.95	5.43	24.85	69	0.65	60.4		
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 diameter capacity (Gallons Per Foot): 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: SES / dwm auc				Sampler(s) Signature(s): Donna McInnis			Sampling initiated at: 0956, 10:07		Sampling ended at: 1000, 1010	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y (N)		Filter Size: _____ μm	
Field Decontamination:				Pump Y (N)	Tubing Y (N (replaced))			Duplicate: Y (N)		
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: N/A mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

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OUC GROUNDWATER SAMPLING LOG

Site Name: SEC		Site Location: mw-B
Well No.	Sample ID:	Date: 10-12-15

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/DWM - OUC				Sampler(s) Signature(s): <i>Danna McAue</i>			Sampling initiated at: 10:27		Sampling ended at: 10:31	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N Filter Size: ____ μm			
Field Decontamination:				Pump	Y ☒	Tubing	Y ☒	(replaced)		Duplicate: Y ☒
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
								(Sulfite: NA mg/L)		
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC		Site Location: MW-A
Well No.	Sample ID:	Date: 10-12-15

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/DWM - ouc				Sampler(s) Signature(s): Danna McAue			Sampling initiated at: 1128		Sampling ended at: 1132	
Pump or tubing depth in well (feet): 33				Tubing Material Code: PE			Field-filtered: Y ☒ N		Filter Size: _____ µm	
Field Decontamination: Pump Y ☒ N				Tubing Y ☒ N (replaced)			Duplicate: Y ☒ N			
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:							(Sulfite: NA mg/L)			
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other 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										

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 the last three consecutive readings (see FS 2212, Section 3)

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OUC GROUNDWATER SAMPLING LOG

Site Name: SEC		Site Location: MW-D
Well No.	Sample ID:	Date: 10-12-15

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

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



ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive

Orlando FL, 32824

Phone: 407.826.5314 FAX: 407.850.6945

Monday, November 2, 2015

Orlando Utilities Commission (OR021)

Attn: Donna McCue

3800 Gardenia Ave.

Orlando, FL 32839

RE: Laboratory Results for

Project Number: [none], Project Name/Desc: New SEC Monitor Wells - Quarterly

ENCO Workorder(s): A506181

Dear Donna McCue,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Monday, October 12, 2015.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

David Camacho For Ronald Wambles

Project Manager

Enclosure(s)

PROJECT NARRATIVE

Client: Orlando Utilities Commission (OR021)
Project: New SEC Monitor Wells - Quarterly
ENCO Project ID: A506181

Overview

All samples submitted were analyzed by Environmental Conservation Laboratories, Inc. in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling and processing will be discussed in the Remarks section below.

Remarks

Analysis: EPA 200.8, EPA 200.7, EPA 7470A

Affected Samples: 1510036-01[A506181-01], 1510036-02[A506181-02], 1510036-03[A506181-03],
1510036-04[A506181-04], 1510036-05[A506181-05], 1510036-06[A506181-06]

Nonconformance: This report is an amendment to the original report dated 10/21/15 for this work order.

Additional Information: At the client's request, this report has been revised to include additional metals analysis.

David Camacho
Project Manager

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 1510036-01		Lab ID: A506181-01		Sampled: 10/12/15 09:56		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 12:50			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:02			
Client ID: 1510036-01		Lab ID: A506181-01RE1		Sampled: 10/12/15 09:56		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 15:58			
Client ID: 1510036-02		Lab ID: A506181-02		Sampled: 10/12/15 10:07		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 13:23			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:05			
Client ID: 1510036-02		Lab ID: A506181-02RE1		Sampled: 10/12/15 10:07		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 16:01			
Client ID: 1510036-03		Lab ID: A506181-03		Sampled: 10/12/15 10:27		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 13:25			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:08			
Client ID: 1510036-03		Lab ID: A506181-03RE1		Sampled: 10/12/15 10:27		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 16:04			
Client ID: 1510036-04		Lab ID: A506181-04		Sampled: 10/12/15 11:28		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 15:00			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 14:03			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:11			
Client ID: 1510036-05		Lab ID: A506181-05		Sampled: 10/12/15 12:01		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 13:33			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:20			
Client ID: 1510036-05		Lab ID: A506181-05RE1		Sampled: 10/12/15 12:01		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 16:07			
Client ID: 1510036-06		Lab ID: A506181-06		Sampled: 10/12/15 08:10		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.8	04/09/16	10/28/15 10:09		10/29/15 13:38			
EPA 7470A	11/09/15	10/27/15 11:14		10/28/15 08:23			
Client ID: 1510036-06		Lab ID: A506181-06RE1		Sampled: 10/12/15 08:10		Received: 10/12/15 14:15	
Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)			
EPA 200.7	04/09/16	10/14/15 09:51		10/15/15 16:10			

SAMPLE DETECTION SUMMARY

Client ID: 1510036-01				Lab ID: A506181-01			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Antimony - Total	1.13	I	1.10	20.0	ug/L	EPA 200.8	
Client ID: 1510036-01				Lab ID: A506181-01RE1			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Boron - Total	13.3	I	3.70	50.0	ug/L	EPA 200.7	
Lithium - Total	3.13	I	2.60	20.0	ug/L	EPA 200.7	
Client ID: 1510036-02				Lab ID: A506181-02RE1			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Boron - Total	11.8	I	3.70	50.0	ug/L	EPA 200.7	
Lithium - Total	3.35	I	2.60	20.0	ug/L	EPA 200.7	
Client ID: 1510036-03				Lab ID: A506181-03RE1			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Boron - Total	29.1	I	3.70	50.0	ug/L	EPA 200.7	
Lithium - Total	8.48	I	2.60	20.0	ug/L	EPA 200.7	
Client ID: 1510036-04				Lab ID: A506181-04			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Boron - Total	92.0	I	74.0	1000	ug/L	EPA 200.7	
Client ID: 1510036-05				Lab ID: A506181-05RE1			
Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Boron - Total	12.3	I	3.70	50.0	ug/L	EPA 200.7	

ANALYTICAL RESULTS

Description: 1510036-01

Lab Sample ID: A506181-01

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 09:56

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.13	I	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 12:50	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 12:50	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:02	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	13.3	I	ug/L	1	3.70	50.0	5J14004	EPA 200.7	10/15/15 15:58	ACV	
Lithium [7439-93-2]^	3.13	I	ug/L	1	2.60	20.0	5J14004	EPA 200.7	10/15/15 15:58	ACV	

Description: 1510036-02

Lab Sample ID: A506181-02

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 10:07

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 13:23	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 13:23	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:05	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	11.8	I	ug/L	1	3.70	50.0	5J14004	EPA 200.7	10/15/15 16:01	ACV	
Lithium [7439-93-2]^	3.35	I	ug/L	1	2.60	20.0	5J14004	EPA 200.7	10/15/15 16:01	ACV	

ANALYTICAL RESULTS

Description: 1510036-03

Lab Sample ID: A506181-03

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 10:27

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 13:25	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 13:25	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:08	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	29.1	I	ug/L	1	3.70	50.0	5J14004	EPA 200.7	10/15/15 16:04	ACV	
Lithium [7439-93-2]^	8.48	I	ug/L	1	2.60	20.0	5J14004	EPA 200.7	10/15/15 16:04	ACV	

Description: 1510036-04

Lab Sample ID: A506181-04

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 11:28

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 14:03	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 14:03	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:11	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	92.0	I	ug/L	20	74.0	1000	5J14004	EPA 200.7	10/15/15 15:00	ACV	
Lithium [7439-93-2]^	52.0	U	ug/L	20	52.0	400	5J14004	EPA 200.7	10/15/15 15:00	ACV	

ANALYTICAL RESULTS

Description: 1510036-05

Lab Sample ID: A506181-05

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 12:01

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 13:33	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 13:33	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:20	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	12.3	I	ug/L	1	3.70	50.0	5J14004	EPA 200.7	10/15/15 16:07	ACV	
Lithium [7439-93-2]^	2.60	U	ug/L	1	2.60	20.0	5J14004	EPA 200.7	10/15/15 16:07	ACV	

Description: 1510036-06

Lab Sample ID: A506181-06

Received: 10/12/15 14:15

Matrix: Ground Water

Sampled: 10/12/15 08:10

Work Order: A506181

Project: New SEC Monitor Wells - Quarterly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	5J28007	EPA 200.8	10/29/15 13:38	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	5J28007	EPA 200.8	10/29/15 13:38	JMA	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	5J26009	EPA 7470A	10/28/15 08:23	IR	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Boron [7440-42-8]^	3.70	U	ug/L	1	3.70	50.0	5J14004	EPA 200.7	10/15/15 16:10	ACV	
Lithium [7439-93-2]^	2.60	U	ug/L	1	2.60	20.0	5J14004	EPA 200.7	10/15/15 16:10	ACV	

QUALITY CONTROL DATA

Metals by EPA 200 Series Methods - Quality Control

Batch 5J28007 - EPA 3005A

Blank (5J28007-BLK1)

Prepared: 10/28/2015 10:09 Analyzed: 10/29/2015 12:45

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	1.10	U	20.0	ug/L							
Thallium	0.580	U	1.00	ug/L							

LCS (5J28007-BS1)

Prepared: 10/28/2015 10:09 Analyzed: 10/29/2015 12:47

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	50.4		20.0	ug/L	50.0		101	85-115			
Thallium	50.0		1.00	ug/L	50.0		100	85-115			

Matrix Spike (5J28007-MS1)

Prepared: 10/28/2015 10:09 Analyzed: 10/29/2015 13:02

Source: A506181-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	48.3		20.0	ug/L	50.0	1.13	94	70-130			
Thallium	49.9		1.00	ug/L	50.0	0.580 U	100	70-130			

Matrix Spike Dup (5J28007-MSD1)

Prepared: 10/28/2015 10:09 Analyzed: 10/29/2015 13:07

Source: A506181-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	49.0		20.0	ug/L	50.0	1.13	96	70-130	2	30	
Thallium	49.8		1.00	ug/L	50.0	0.580 U	100	70-130	0.3	30	

Post Spike (5J28007-PS1)

Prepared: 10/29/2015 08:00 Analyzed: 10/29/2015 12:55

Source: A506181-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	4.77		2.00	ug/L	4.90	0.111	95	75-125			
Thallium	4.84		0.100	ug/L	4.90	-0.007	99	75-125			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 5J26009 - EPA 7470A

Blank (5J26009-BLK1)

Prepared: 10/27/2015 11:14 Analyzed: 10/28/2015 07:06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.0230	U	0.200	ug/L							

LCS (5J26009-BS1)

Prepared: 10/27/2015 11:14 Analyzed: 10/28/2015 07:09

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.98		0.200	ug/L	5.00		100	80-120			

Matrix Spike (5J26009-MS1)

Prepared: 10/27/2015 11:14 Analyzed: 10/28/2015 07:15

Source: A506947-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.33		0.200	ug/L	5.00	0.0230 U	107	75-125			

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 5J26009 - EPA 7470A - Continued

Matrix Spike Dup (5J26009-MSD1)

Prepared: 10/27/2015 11:14 Analyzed: 10/28/2015 07:18

Source: A506947-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.43		0.200	ug/L	5.00	0.0230 U	109	75-125	2	20	

Post Spike (5J26009-PS1)

Prepared: 10/28/2015 06:00 Analyzed: 10/28/2015 07:21

Source: A506947-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.35		0.200	ug/L	5.61	-0.00442	95	80-120			

Metals by EPA 200 Series Methods - Quality Control

Batch 5J14004 - EPA 3005A

Blank (5J14004-BLK1)

Prepared: 10/14/2015 09:51 Analyzed: 10/15/2015 14:28

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Boron	3.70	U	50.0	ug/L							
Lithium	2.60	U	20.0	ug/L							

LCS (5J14004-BS1)

Prepared: 10/14/2015 09:51 Analyzed: 10/15/2015 14:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Boron	2540		50.0	ug/L	2500		102	85-115			
Lithium	528		20.0	ug/L	500		106	85-115			

Matrix Spike (5J14004-MS1)

Prepared: 10/14/2015 09:51 Analyzed: 10/15/2015 14:33

Source: B504360-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Boron	2550		50.0	ug/L	2500	28.4	101	70-130			
Lithium	528		20.0	ug/L	500	2.60 U	106	70-130			

Matrix Spike Dup (5J14004-MSD1)

Prepared: 10/14/2015 09:51 Analyzed: 10/15/2015 14:35

Source: B504360-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Boron	2570		50.0	ug/L	2500	28.4	102	70-130	1	25	
Lithium	527		20.0	ug/L	500	2.60 U	105	70-130	0.2	25	

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
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.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.



ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name Orlando Utilities Commission (OR021)		Project Number [none]		Requested Analyses								Requested Turnaround Times Note: Rush requests subject to acceptance by the facility ____ Standard ____ Expedited Due ____/____/____	
Address 3800 Gardenia Ave.		Project Name/Desc New SEC Monitor Wells											
City/ST/Zip Orlando, FL 32839		PO # / Billing Info											
Tel 407-434-2547	Fax	Reporting Contact Donna McCue											
Sampler(s) Name, Affiliation (Print)		Billing Contact Angelisa Young											
Sampler(s) Signature		Site Location / Time Zone		B								Lab Workorder A506181	

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	N											Sample Comments
	ID: MW-C	10-12-15	0956	G	GW	1	X											
	ID: MW-CFD	10-12-15	1007	G	GW	1	X											
	ID: MW-B	10-12-15	1027	G	GW	1	X											
	ID: MW-A	10-12-15	1128	G	GW	1	X											
	ID: MW-D	10-12-15	1201	G	GW	1	X											
	ID: EQUIP BLANK	10-12-15	0810	G	W GW	1	X											
	ID:				GW	1	X											* 10-12-15

<-- Total # of Containers

Sample Kit Prepared By SK	Date/Time 10/12/15 1645	Relinquished By 	Date/Time 10/12/15 1645	Received By BAant	Date/Time 10/12/15 1415
Comments/Special Reporting Requirements		Relinquished By Donna McCue	Date/Time 10-12-15 2:15	Received By S. Casey	Date/Time 10/12/15 1415
		Relinquished By	Date/Time	Received By	Date/Time
Cooler #s & Temps on Receipt med. DS 0.6°C		Condition Upon Receipt ☒ Acceptable ☐ Unacceptable			

Matrix: GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.

November 17, 2015

Mr. Mark Corbett
Orlando Utilities Commission
5100 South Alafaya Trail
Orlando, FL 32831

RE: Project: Stanton wells for Rads
Pace Project No.: 35214139

Dear Mr. Corbett:

Enclosed are the analytical results for sample(s) received by the laboratory on October 29, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

The samples were collected by laboratory staff under the guidelines outlined in Florida DEP SOP 001/-01.

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

Sincerely,



Joe Vondrick
joe.vondrick@pacelabs.com
Project Manager

Enclosures

cc: Mr. Dustin Catrett, Orlando Utilities Commission
Mr. John Gray, Orlando Utilities Commission



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Stanton wells for Rads
Pace Project No.: 35214139

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
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 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
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: Stanton wells for Rads

Pace Project No.: 35214139

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35214139001	MW-C	Water	10/29/15 12:36	10/29/15 17:40
35214139002	MW-B	Water	10/29/15 13:21	10/29/15 17:40
35214139003	MW-A	Water	10/29/15 14:04	10/29/15 17:40
35214139004	MW-D	Water	10/29/15 15:12	10/29/15 17:40

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SAMPLE ANALYTE COUNT

Project: Stanton wells for Rads

Pace Project No.: 35214139

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35214139001	MW-C	EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
35214139002	MW-B	EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
35214139003	MW-A	EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
35214139004	MW-D	EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

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ANALYTICAL RESULTS

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-C Lab ID: 35214139001 Collected: 10/29/15 12:36 Received: 10/29/15 17:40 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data Analytical Method:									
Field pH	4.60	Std. Units			1		10/29/15 12:36		
Field Temperature	22.56	deg C			1		10/29/15 12:36		
Field Specific Conductance	85	umhos/cm			1		10/29/15 12:36		
Oxygen, Dissolved	1.03	mg/L			1		10/29/15 12:36	7782-44-7	
Turbidity	8.84	NTU			1		10/29/15 12:36		

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ANALYTICAL RESULTS

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-B Lab ID: 35214139002 Collected: 10/29/15 13:21 Received: 10/29/15 17:40 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data Analytical Method:									
Field pH	3.71	Std. Units			1		10/29/15 13:21		
Field Temperature	22.74	deg C			1		10/29/15 13:21		
Field Specific Conductance	463	umhos/cm			1		10/29/15 13:21		
Oxygen, Dissolved	0.89	mg/L			1		10/29/15 13:21	7782-44-7	
Turbidity	3.12	NTU			1		10/29/15 13:21		

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ANALYTICAL RESULTS

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-A		Lab ID: 35214139003		Collected: 10/29/15 14:04		Received: 10/29/15 17:40		Matrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data		Analytical Method:							
Field pH	4.01	Std. Units			1		10/29/15 14:04		
Field Temperature	23.30	deg C			1		10/29/15 14:04		
Field Specific Conductance	28622	umhos/cm			1		10/29/15 14:04		
Oxygen, Dissolved	0.51	mg/L			1		10/29/15 14:04	7782-44-7	
Turbidity	0.60	NTU			1		10/29/15 14:04		

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ANALYTICAL RESULTS

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-D Lab ID: 35214139004 Collected: 10/29/15 15:12 Received: 10/29/15 17:40 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data Analytical Method:									
Field pH	4.36	Std. Units			1		10/29/15 15:12		
Field Temperature	22.52	deg C			1		10/29/15 15:12		
Field Specific Conductance	104	umhos/cm			1		10/29/15 15:12		
Oxygen, Dissolved	0.46	mg/L			1		10/29/15 15:12	7782-44-7	
Turbidity	0.41	NTU			1		10/29/15 15:12		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-C		Lab ID: 35214139001	Collected: 10/29/15 12:36	Received: 10/29/15 17:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	3.59U ± 2.83	(3.59)	pCi/L	11/11/15 09:53	13982-63-3	
		C:NA	T:93%				
Radium-228	EPA 904.0	1.36 ± 0.644	(1.09)	pCi/L	11/10/15 18:58	15262-20-1	
		C:80%	T:82%				
Total Radium	Total Radium Calculation	4.68U ± 3.48	(4.68)	pCi/L	11/12/15 16:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-B		Lab ID: 35214139002	Collected: 10/29/15 13:21	Received: 10/29/15 17:40	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	3.01 ± 1.43 (0.453) C:NA T:90%	pCi/L	11/11/15 10:06	13982-63-3	
Radium-228	EPA 904.0	0.776U ± 0.345 (0.776) C:81% T:86%	pCi/L	11/10/15 18:59	15262-20-1	
Total Radium	Total Radium Calculation	3.13 ± 1.78 (1.23)	pCi/L	11/12/15 16:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-A		Lab ID: 35214139003	Collected: 10/29/15 14:04	Received: 10/29/15 17:40	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	12.1 ± 2.77 (0.994) C:NA T:94%	pCi/L	11/11/15 10:06	13982-63-3	
Radium-228	EPA 904.0	3.98 ± 0.939 (0.729) C:82% T:92%	pCi/L	11/10/15 18:59	15262-20-1	
Total Radium	Total Radium Calculation	16.1 ± 3.71 (1.72)	pCi/L	11/12/15 16:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

Sample: MW-D		Lab ID: 35214139004	Collected: 10/29/15 15:12	Received: 10/29/15 17:40	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	0.798 ± 0.735 (0.433) C:NA T:91%	pCi/L	11/11/15 10:21	13982-63-3	
Radium-228	EPA 904.0	0.720U ± 0.369 (0.720) C:81% T:93%	pCi/L	11/10/15 18:59	15262-20-1	
Total Radium	Total Radium Calculation	1.28 ± 1.10 (1.15)	pCi/L	11/12/15 16:25	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

QC Batch:	RADC/26724	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
Associated Lab Samples: 35214139001, 35214139002, 35214139003, 35214139004			

METHOD BLANK:	978443	Matrix:	Water
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Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.185 ± 0.320 (0.699) C:81% T:87%	pCi/L	11/10/15 18:57	

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 - RADIOCHEMISTRY

Project: Stanton wells for Rads

Pace Project No.: 35214139

QC Batch:	RADC/26720	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
Associated Lab Samples: 35214139001, 35214139002, 35214139003, 35214139004			

METHOD BLANK:	978439	Matrix:	Water
---------------	--------	---------	-------

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.615 ± 0.488 (0.634) C:NA T:97%	pCi/L	11/11/15 09:13	

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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QUALIFIERS

Project: Stanton wells for Rads

Pace Project No.: 35214139

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.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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.

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

SAMPLE QUALIFIERS

Sample: 35214139001

[1] MDCs elevated due to low volume.

ANALYTE QUALIFIERS

U Compound was analyzed for but not detected.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Stanton wells for Rads

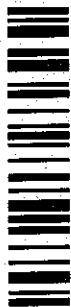
Pace Project No.: 35214139

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35214139001	MW-C		FLD/		
35214139002	MW-B		FLD/		
35214139003	MW-A		FLD/		
35214139004	MW-D		FLD/		
35214139001	MW-C	EPA 903.1	RADC/26720		
35214139002	MW-B	EPA 903.1	RADC/26720		
35214139003	MW-A	EPA 903.1	RADC/26720		
35214139004	MW-D	EPA 903.1	RADC/26720		
35214139001	MW-C	EPA 904.0	RADC/26724		
35214139002	MW-B	EPA 904.0	RADC/26724		
35214139003	MW-A	EPA 904.0	RADC/26724		
35214139004	MW-D	EPA 904.0	RADC/26724		
35214139001	MW-C	Total Radium Calculation	RADC/26867		
35214139002	MW-B	Total Radium Calculation	RADC/26867		
35214139003	MW-A	Total Radium Calculation	RADC/26867		
35214139004	MW-D	Total Radium Calculation	RADC/26867		

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WO#: 35214139



35214139

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section C	
Required Client Information:		Invoice Information:	
Company:	Orlando Utilities Commission	Report To:	Corbett, Mark
Address:	5100 South Alafaya Trail	Copy To:	
City:	Orlando, FL 32831	Company Name:	
State:	FL	Address:	
Zip:		Purchase Order #:	
Phone:		Project Name:	Stanton wells for rad
Fax:		Project #:	
Requested Due Date:		Requested Analysis Filtered (Y/N)	
Pace Analytic		Pace Profile #: 546	
Pace Project Manager: je.vondrick@paceanalytic.com		Regulatory Agency:	
State/Location:		State/Location:	
FL		FL	

Page: 1 Of 1

ITEM #	MATRIX	CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	Y/N	Gross Alpha/Beta	Radium 226/228	Residual Chlorine (Y/N)
				START	END																			
1	MWC		6	10/26/15	10:36						1											1		
2	MW-B		1		1331						1											1		
3	MW-A		1		1404						1											1		
4	MW-D		1		1512						1											1		
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Ice (Y/N)	Custody (Y/N)	Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
MW-B PRE 1710	10/26/15	1710	WV PACE	10/26/15	1710							
MW-A PRE 2000	10/26/15	2000	WV PACE	10/26/15	2000							
Carroll Flex 10/26/15	10/26/15	0000	Carroll Flex	10/26/15	0000							
SAMPLER NAME AND SIGNATURE: <i>Samuel Stockbridge</i> PRINT Name of SAMPLER: <i>Samuel Stockbridge</i> SIGNATURE of SAMPLER: <i>[Signature]</i>												
DATE Signed: <i>10/29/15</i>												

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: STANTON		SITE LOCATION: STANTON Energy Center, OZARKAS	
WELL NO: MW-C	SAMPLE ID:		DATE:

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>STANTON</u>		SITE LOCATION: <u>STANTON ENERGY CENTER, DEWIND</u>	
WELL NO: <u>mw-8</u>	SAMPLE ID:	DATE: <u>10/29/15</u>	

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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

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

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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>Santon</u>		SITE LOCATION: <u>Santon Energy Center, Orlando</u>	
WELL NO: <u>mw-A</u>	SAMPLE ID:		DATE: <u>10/29/15</u>

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1 1/4"	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 13.48	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) $= (52 \text{ feet} - 13.48 \text{ feet}) \times 0.16 \text{ gallons/foot} = 2.9632 \text{ gallons}$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1403	TOTAL VOLUME PURGED (gallons): 4.68
--	--	-------------------------------	---------------------------	--

[illegible]

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" = 0.008; 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: James Stuber-Baer	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1404	SAMPLING ENDED AT: 1405
--	---	-----------------------------	-------------------------

PUMP OR TUBING DEPTH IN WELL (feet):	15	TUBING MATERIAL CODE:	P6	FIELD-FILTERED: Y <u>N</u> Filtration Equipment Type:	FILTER SIZE: _____ μ m
---	----	--------------------------	----	--	----------------------------

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

[illegible]

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:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater) **Page 20 of 24**

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: <u>STANTON</u>		SITE LOCATION: <u>STANTON ENERGY CENTER, ORLANDO</u>	
WELL NO: <u>MW-1</u>	SAMPLE ID:	DATE: <u>10/29/15</u>	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>JAMES STOCKBRIDGE</i>	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 1502	SAMPLING ENDED AT: 1516						
PUMP OR TUBING DEPTH IN WELL (feet): 8	TUBING MATERIAL CODE: Pv	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	Pv	1 LK	HNO3	7	<2	Radium 226/bzr	PP	500
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 = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)									

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

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

Pace Analytical
www.pacelabs.com

Owner Received Date: 10/29/2015 Results Requested By: 11/13/2015

Fax (386)672-5568

Phone (724) 850-5600

Cooler Temperature on Receipt °C

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.



Ship To:
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2, 3, & 4
Greensburg, PA 15601
Phone (724)850-5600

INTER_LABORATORY WORK ORDER # 35214139

(To be completed by sending lab)

Sending Project No:	35214139
Receiving Project No:	
Check Box for Consolidated Invoice:	☐
Date Prepared:	10/30/15
REQUESTED COMPLETION DATE:	11/13/2015

Sending Region	IR35-Ormond Beach	Sending Project Mgr.	Joe Vondrick
Receiving Region	IR30-Pittsburgh	External Client	Orlando Utilities Commission
State of Sample Origin		QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? Dry Weight Cert. Needed _____

WORK REQUESTED						
Method Description	Container Type	Quantity (g)	Preservative	Quantity of Sample	Unit Price	Amount
Ra226 Ra228 & sum	BP1N		HNO3	4	\$125.00	\$500.00
TOTAL						\$500.00

Special Requirements: _____

Receiving Region Department	Accto. Code	Totals from above	Revenue Allocation:	
Pittsburgh Radiochemistry	38	\$500.00	Receiving Region (80%)	Client Services Dept. (20%)
			\$400.00	\$100.00
* Custom Revenue Allocation	TOTAL	\$500.00	\$400.00	\$100.00

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Chain of Custody Included: ☐ Yes ☐ No Return Samples to Sending Region: ☐ Yes ☐ No

Matrix: ☐ Soil ☐ Water ☐ Air ☐ Other (identify) _____

CONFIRMATION OF WORK COMPLETED

Date Completed: _____ Receiving Project Manager: _____

DISPOSITION OF FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

	Document Name:	Document Revised:
	Sample Condition Upon Receipt Form	August 11, 2014
	Document No.: F-FL-C-007 rev. 06	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: _____ Project #: _____

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

☐ Other _____

Tracking # N/A

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used T-213 Type of Ice: Wet Blue ☒ (None)

Cooler Temperature °C 13.4 (Visual) 0.0 (Correction Factor) 13.4 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

☐ Yes ☐ No

Date and Initials of person examining contents: 10/30/15 CCCC SJ

Receipt of samples satisfactory:

☐ Yes ☐ No

Rush TAT requested on COC:

If yes, then all conditions below were met:

If no, then mark box & describe issue (use comments area if necessary):

Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐
	No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____

Date: 10/30

Finished Product Information Only

F.P. Sample ID: _____

Size & Qty of Bottles Received

Production Code: _____

☐ x 5 Gal

Date/Time Opened: _____

☐ x 2.5 Gal

Number of Unopened Bottles Remaining: _____

☐ x 1 Gal

☐ x 1 Liter

☐ x 500 mL

☐ x 250 mL

☐ x Other: _____

Extra Sample in Shed: Yes ☐ No ☐



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1512009

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 16 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

February 01, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1512009**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1512009-01	SEC Monitoring Well C	12/02/2015
1512009-02	SEC MW C FD	12/02/2015
1512009-03	Equipment Blank	12/02/2015

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1512009-01RE1
Date/Time Collected 12/02/2015 11:26
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Barium (Reshot)	31.1	ug/L	EPA 200.7	1	0.390	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Boron (Reshot)	10.7 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Lithium (Reshot)	5.36 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	12/03/15 13:12	12/08/15 11:19	5L03005	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW C FD
Matrix Water
WQLAB Sample Number 1512009-02RE1
Date/Time Collected 12/02/2015 11:41
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Barium (Reshot)	29.7	ug/L	EPA 200.7	1	0.390	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Boron (Reshot)	10.8 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Lithium (Reshot)	4.92 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	12/03/15 13:12	12/08/15 11:22	5L03005	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1512009-03RE1
Date/Time Collected 12/02/2015 09:20
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Barium (Reshot)	0.390 <i>u</i>	ug/L	EPA 200.7	1	0.390	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Beryllium (Reshot)	0.120 <i>u</i>	ug/L	EPA 200.7	1	0.120	1.00	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Boron (Reshot)	3.70 <i>u</i>	ug/L	EPA 200.7	1	3.70	50.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Cadmium (Reshot)	0.280 <i>u</i>	ug/L	EPA 200.7	1	0.280	1.00	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Chromium (Reshot)	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Cobalt (Reshot)	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Lead (Reshot)	2.50 <i>u</i>	ug/L	EPA 200.7	1	2.50	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Lithium (Reshot)	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Molybdenum (Reshot)	5.00 <i>u</i>	ug/L	EPA 200.7	1	5.00	10.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV
Selenium (Reshot)	8.20 <i>u</i>	ug/L	EPA 200.7	1	8.20	40.0	12/03/15 13:12	12/08/15 11:24	5L03005	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1512009-01
Date/Time Collected 12/02/2015 11:26
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.110 <i>u</i>	ug/L	EPA 200.8	1	0.110	2.00	12/03/15 11:07	12/04/15 10:00	5L03008	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	12/08/15 10:29	12/09/15 08:53	5L02009	JAY
Thallium	0.058 <i>u</i>	ug/L	EPA 200.8	1	0.058	0.100	12/03/15 11:07	12/04/15 10:00	5L03008	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW C FD
Matrix Water
WQLAB Sample Number 1512009-02
Date/Time Collected 12/02/2015 11:41
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.110 <i>U</i>	ug/L	EPA 200.8	1	0.110	2.00	12/03/15 11:07	12/04/15 10:03	5L03008	JMA
Mercury	0.023 <i>U</i>	ug/L	EPA 245.1	1	0.023	0.200	12/08/15 10:29	12/09/15 09:02	5L02009	JAY
Thallium	0.058 <i>U</i>	ug/L	EPA 200.8	1	0.058	0.100	12/03/15 11:07	12/04/15 10:03	5L03008	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1512009-03
Date/Time Collected 12/02/2015 09:20
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.110 <i>u</i>	ug/L	EPA 200.8	1	0.110	2.00	12/03/15 11:07	12/04/15 10:09	5L03008	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	12/08/15 10:29	12/09/15 09:05	5L02009	JAY
Thallium	0.058 <i>u</i>	ug/L	EPA 200.8	1	0.058	0.100	12/03/15 11:07	12/04/15 10:09	5L03008	JMA

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1512009-01
Date/Time Collected 12/02/2015 11:26
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.09	mg/L	EPA 300.0	1	1.00	1.00	12/03/15 17:42	12/03/15 17:42	B15L030	JLK
Fluoride	0.12	mg/L	EPA 300.0	1	0.10	0.10	12/03/15 17:42	12/03/15 17:42	B15L030	JLK
Sulfate	0.6	mg/L	EPA 300.0	1	0.2	0.2	12/03/15 17:42	12/03/15 17:42	B15L030	JLK
pH	5.29	SU	SM 4500-H B	1			12/03/15 09:25	12/03/15 09:25	B15L015	DWM
Total Dissolved Solids	35.0	mg/L	SM 2540 C	1	5.00	5.00	12/03/15 16:05	12/03/15 16:05	B15L029	JFP
Calcium	6.16	mg/L	EPA 200.7	1	0.50	0.50	12/21/15 11:57	12/21/15 11:57	B15L070	JNG
Iron	0.488	mg/L	EPA 200.7	1	0.010	0.010	12/16/15 16:41	12/16/15 17:02	B15L069	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC MW C FD
Matrix Water
WQLAB Sample Number 1512009-02
Date/Time Collected 12/02/2015 11:41
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.04	mg/L	EPA 300.0	1	1.00	1.00	12/03/15 19:17	12/03/15 19:17	B15L030	JLK
Fluoride	0.12	mg/L	EPA 300.0	1	0.10	0.10	12/03/15 19:17	12/03/15 19:17	B15L030	JLK
Sulfate	0.6	mg/L	EPA 300.0	1	0.2	0.2	12/03/15 19:17	12/03/15 19:17	B15L030	JLK
pH	5.24	SU	SM 4500-H B	1			12/03/15 09:25	12/03/15 09:25	B15L015	DWM
Total Dissolved Solids	41.0	mg/L	SM 2540 C	1	5.00	5.00	12/03/15 16:05	12/03/15 16:05	B15L029	JFP
Calcium	6.11	mg/L	EPA 200.7	1	0.50	0.50	12/21/15 12:00	12/21/15 12:00	B15L070	JNG
Iron	0.506	mg/L	EPA 200.7	1	0.010	0.010	12/16/15 16:41	12/16/15 17:06	B15L069	JNG

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1512009-03
Date/Time Collected 12/02/2015 09:20
Date/Time Received 12/02/2015 15:05

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	12/03/15 19:48	12/03/15 19:48	B15L030	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	12/03/15 19:48	12/03/15 19:48	B15L030	JLK
Sulfate	0.2 <i>u</i>	mg/L	EPA 300.0	1	0.2	0.2	12/03/15 19:48	12/03/15 19:48	B15L030	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	12/03/15 16:05	12/03/15 16:05	B15L029	JFP
Calcium	0.50 <i>u</i>	mg/L	EPA 200.7	1	0.50	0.50	12/21/15 11:54	12/21/15 11:54	B15L070	JNG
Iron	0.037	mg/L	EPA 200.7	1	0.010	0.010	12/16/15 16:41	12/16/16 17:11	B15L069	JNG

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15L030									
Blank (B15L030-BLK1)				Prepared & Analyzed: 03-Dec-15					
Fluoride	0.10 U	0.10	mg/L		0.10				
Sulfate	0.2 U	0.2	mg/L		0.2				
Chloride	1.00 U	1.00	mg/L		1.00				
LCS (B15L030-BS1)				Prepared & Analyzed: 03-Dec-15					
Sulfate	5.0		mg/L	5.00		101	90-110		
Fluoride	0.59		mg/L	0.600		98.8	90-110		
Chloride	5.17		mg/L	5.00		103	90-110		
Duplicate (B15L030-DUP1)				Source: 1512009-01		Prepared & Analyzed: 03-Dec-15			
Fluoride	0.12	0.10	mg/L		0.12			1.68	10
Sulfate	0.6	0.2	mg/L		0.6			0.683	10
Chloride	8.10	1.00	mg/L		8.09			0.0988	10
Matrix Spike (B15L030-MS1)				Source: 1512009-01		Prepared & Analyzed: 03-Dec-15			
Sulfate	5.5	0.2	mg/L	5.00	0.6	97.7	90-110		
Chloride	13.1	1.00	mg/L	5.00	8.09	101	90-110		
Fluoride	0.67	0.10	mg/L	0.600	0.12	92.0	90-110		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15L015									
LCS (B15L015-BS1)				Prepared & Analyzed: 03-Dec-15					
pH	4.61		SU	4.63		99.6	0-200		
Duplicate (B15L015-DUP1)				Source: 1512011-08		Prepared & Analyzed: 03-Dec-15			
pH	7.53		SU		7.52			0.133	10
Batch: B15L029									
Blank (B15L029-BLK1)				Prepared & Analyzed: 03-Dec-15					
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
LCS (B15L029-BS1)				Prepared & Analyzed: 03-Dec-15					
Total Dissolved Solids	278	10.0	mg/L	304	10.0	91.4	80-120		
Duplicate (B15L029-DUP1)				Source: 1512006-01		Prepared & Analyzed: 03-Dec-15			
Total Dissolved Solids	521	5.00	mg/L		494			5.32	10

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B15L069									
Blank (B15L069-BLK1)									
Iron	0.010 U	0.010	mg/L		0.010				
Prepared: 14-Dec-15 Analyzed: 16-Dec-15									
LCS (B15L069-BS1)									
Iron	0.986	0.010	mg/L	1.00	0.010	98.6	85-115		
Prepared: 14-Dec-15 Analyzed: 16-Dec-15									
Matrix Spike (B15L069-MS1)									
Chromium	0.988	0.002	mg/L	1.00	0.002	98.8	70-130		
Iron	1.66	0.010	mg/L	1.00	0.488	117	70-130		
Prepared: 14-Dec-15 Analyzed: 16-Dec-15									
Source: 1512009-01									
Batch: B15L070									
Blank (B15L070-BLK1)									
Calcium	0.50 U	0.50	mg/L		0.50				
Prepared & Analyzed: 21-Dec-15									
Blank (B15L070-BLK2)									
Calcium	0.50 U	0.50	mg/L		0.50				
Prepared & Analyzed: 21-Dec-15									
LCS (B15L070-BS1)									
Calcium	1.07	0.50	mg/L	1.00	0.50	107	85-115		
Prepared & Analyzed: 21-Dec-15									
LCS (B15L070-BS2)									
Calcium	10.1	0.50	mg/L	10.0	0.50	101	85-115		
Prepared & Analyzed: 21-Dec-15									
Duplicate (B15L070-DUP1)									
Calcium	29.8	0.50	mg/L		30.9			3.59	10
Prepared & Analyzed: 21-Dec-15									
Duplicate (B15L070-DUP2)									
Calcium	37.2	0.50	mg/L		37.5			0.750	10
Prepared & Analyzed: 21-Dec-15									
Matrix Spike (B15L070-MS1)									
Calcium	41.0	0.50	mg/L	10.0	30.9	101	70-130		
Prepared & Analyzed: 21-Dec-15									
Matrix Spike (B15L070-MS2)									
Calcium	46.6	0.50	mg/L	10.0	37.5	91.2	70-130		
Prepared & Analyzed: 21-Dec-15									

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5L02009									
Blank (5L02009-BLK1)									
Mercury	0.023 U	0.200	ug/L		0.023				
Prepared: 08-Dec-15 Analyzed: 09-Dec-15									
Blank (5L02009-BLK2)									
Mercury	0.230 U	2.00	ug/L		0.230				
Prepared: 08-Dec-15 Analyzed: 09-Dec-15									
LCS (5L02009-BS1)									
Mercury	5.04	0.200	ug/L	5.00	0.023	101	85-115		
Prepared: 08-Dec-15 Analyzed: 09-Dec-15									
Matrix Spike (5L02009-MS1)									
Mercury	5.32	0.200	ug/L	5.00	ND	106	70-130		
Prepared: 08-Dec-15 Analyzed: 09-Dec-15									
Matrix Spike Dup (5L02009-MSD1)									
Mercury	5.36	0.200	ug/L	5.00	ND	107	70-130	0.8	10
Prepared: 08-Dec-15 Analyzed: 09-Dec-15									

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5L02009 (Continued)									
Post Spike (5L02009-PS1)		Source: A507582-05		Prepared: 08-Dec-15 Analyzed: 09-Dec-15					
Mercury	5.26		ug/L	5.61	-0.008	94	75-125		
Batch: 5L03008									
Blank (5L03008-BLK3)				Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
Blank (5L03008-BLK4)				Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Antimony	0.110 U	2.00	ug/L		0.110				
Thallium	0.058 U	0.100	ug/L		0.058				
LCS (5L03008-BS2)				Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Antimony	50.4	20.0	ug/L	50.0	1.10	101	85-115		
Thallium	51.7	1.00	ug/L	50.0	0.580	103	85-115		
Matrix Spike (5L03008-MS2)		Source: A507582-01		Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Antimony	49.8	20.0	ug/L	50.0	ND	100	70-130		
Thallium	51.1	1.00	ug/L	50.0	ND	102	70-130		
Matrix Spike Dup (5L03008-MSD2)		Source: A507582-01		Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Antimony	52.3	20.0	ug/L	50.0	ND	105	70-130	5	30
Thallium	51.5	1.00	ug/L	50.0	ND	103	70-130	0.9	30

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 5L03005									
Blank (5L03005-BLK1)				Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	9.80 I	50.0	ug/L		3.70				
Cadmium	0.280 U	1.00	ug/L		0.280				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				
LCS (5L03005-BS1)				Prepared: 03-Dec-15 Analyzed: 04-Dec-15					
Arsenic	496	10.0	ug/L	500	8.00	99	85-115		
Barium	518	10.0	ug/L	500	0.390	104	85-115		
Beryllium	50.9	1.00	ug/L	50.0	0.120	102	85-115		
Boron	2500	50.0	ug/L	2500	3.70	100	85-115		
Cadmium	50.8	1.00	ug/L	50.0	0.280	102	85-115		

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 5L03005 (Continued)

LCS (5L03005-BS1)

Prepared: 03-Dec-15 Analyzed: 04-Dec-15

Chromium	507	10.0	ug/L	500	1.10	101	85-115
Cobalt	509	10.0	ug/L	500	1.50	102	85-115
Lead	514	10.0	ug/L	500	2.50	103	85-115
Lithium	518	20.0	ug/L	500	2.60	104	85-115
Molybdenum	499	10.0	ug/L	500	5.00	100	85-115
Selenium	503	40.0	ug/L	500	8.20	101	85-115

Matrix Spike (5L03005-MS1)

Source: B505105-01

Prepared: 03-Dec-15 Analyzed: 04-Dec-15

Arsenic	496	10.0	ug/L	500	ND	99	70-130
Barium	510	10.0	ug/L	500	3.39	101	70-130
Beryllium	50.9	1.00	ug/L	50.0	ND	102	70-130
Boron	2550	50.0	ug/L	2500	54.1	100	70-130
Cadmium	50.2	1.00	ug/L	50.0	ND	100	70-130
Chromium	503	10.0	ug/L	500	ND	101	70-130
Cobalt	503	10.0	ug/L	500	ND	101	70-130
Lead	505	10.0	ug/L	500	ND	101	70-130
Lithium	509	20.0	ug/L	500	ND	102	70-130
Molybdenum	518	10.0	ug/L	500	16.9	100	70-130
Selenium	500	40.0	ug/L	500	ND	100	70-130

Matrix Spike Dup (5L03005-MSD1)

Source: B505105-01

Prepared: 03-Dec-15 Analyzed: 04-Dec-15

Arsenic	496	10.0	ug/L	500	ND	99	70-130	0.04	25
Barium	512	10.0	ug/L	500	3.39	102	70-130	0.3	25
Beryllium	51.1	1.00	ug/L	50.0	ND	102	70-130	0.5	25
Boron	2550	50.0	ug/L	2500	54.1	100	70-130	0.2	25
Cadmium	50.0	1.00	ug/L	50.0	ND	100	70-130	0.3	25
Chromium	505	10.0	ug/L	500	ND	101	70-130	0.4	25
Cobalt	503	10.0	ug/L	500	ND	101	70-130	0.03	25
Lead	501	10.0	ug/L	500	ND	100	70-130	0.8	25
Lithium	512	20.0	ug/L	500	ND	102	70-130	0.5	25
Molybdenum	518	10.0	ug/L	500	16.9	100	70-130	0.1	25
Selenium	496	40.0	ug/L	500	ND	99	70-130	0.8	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

J-01	Result is estimated due to positive results in the associated method blank.
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager



WATER QUALITY LABORATORY
3800 GARDENIA AVENUE
ORLANDO, FL 32839
Phone: 407-434-2549; Fax: 407-434-2619

Company Name: **OUC Environmental**

Address: 3100 Alafaya Trail

City: **Orlando**State: **FL**

Zip: 32831

Attention: Mark Corbett

Phone#: 407-434-3002

Fax #: _____

8794

Email: mcorbett@ouc.com

Project Name: SEC Landfill Monitoring Wells

Sampler Signature:

Sampler Phone: 407-434-2549

[illegible]

CHAIN OF CUSTODY RECORD

PROJECT #: 1512009

PAGE 1 of 1

Container Type		das
AV = Amber Vial	AP = Amber Plastic	
CV = Clear Vial	AG = Amber Glass	
P = Plastic	PLC = Plastic	
AL = Amber Litter	Container	
CL = Clear Litter	Other	
Sizes(s): 100 ml, 250 ml, 500 ml		
Example: 1 L AG = 1 liter amber glass		

Matrix Codes*

GW = Ground Wtr	DW = Drinking Wtr
EFF = Effluent	SW = Surface Wtr
INF = Influent	WW = Waste Wtr
O = Other _____	(specify)

Pres. Codes

A. None	G. Na ₂ SO ₃	Other:
B. HNO ₃	I. Ice	
C. H ₂ SO ₄	J. MCAA	
D. NaOH	K. H ₃ PO ₄	
E. HCl	L. Ascorbic Acid	
F. EDTA	M. NH ₄ Cl	

REMARKS

Doc: COC-001

Client Name		ORLANDO UTILITIES COMM		Project Number			
Address		3800 GARDENIA AVE		Project Name/Desc		NEW SEC MONITOR WELLS	
City/ST/Zip		ORLANDO FL 32839		PO # / Billing Info			
Tel		407-434-2549		Reporting Contact		JGAY@OUC.COM	
Fax		407-434-2619		Billing Contact		JGAY@OUC.COM	
Sampler(s) Name, Affiliation (Print)		JES BOWEN		Site Location / Time Zone		14655A PINESTON YOUNG	
Sampler(s) Signature		JES BOWEN					
Requested Analyses							
sb, As, B, Be, Cd, Cr, Co Pb, Li, Hg, Se, TI, B							
called to add Mo 2-16-15 PM Spoke to David							
Requested Turnaround Times							
Note: Rush requests subject to acceptance by the facility							
____ Standard							
____ Expedited							
Due ____/____/____							
Lab Workorder							

[illegible]

Sample Kit Prepared By <i>LES (DUC)</i>	Date/Time <i>12-2-15</i>	Relinquished By <i>Dana Miller</i>	Date/Time <i>12-7-15 1415</i>	Received By <i>S. Casey</i>	Date/Time <i>12/2/15 1415</i>
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
Cooler #s & Temps on Receipt			Condition Upon Receipt		
			☐ Acceptable ☐ Unacceptable		

OUC GROUNDWATER SAMPLING LOG

Site Name:	mw-c		Site Location:	SEC	
Well No.	Sample ID: 1512009-01		Date:	12-2-15	

PURGING DATA

Well Diameter:	Tubing Diameter:	Well Screen Depth Interval:	Static Depth to Water:	Sampling Device:							
2"	¼"	20-30'	5.60	AAP							
Well Volume Purge: 1 Well Volume = (Total Well Depth – Static Depth to Water) X Well Capacity = (31.52 feet - 5.60 feet) X 0.16 gallons/foot = 4.15 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet):			Purging Initiated at:	Total Volume Purged (gallons):							
22	Final Pump or Tubing Depth in Well: (feet): 22		10:53	8.25							
			Purging ended at:								
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)	Odor (Describe)
11:19	6.50	6.50	0.25	5.75	5.62	25.01	63	0.21	29.8	MILKY	
11:23	1.00	7.50	0.25	5.75	5.62	25.02	63	0.20	29.3		
11:26	0.75	8.25	0.25	5.75	5.62	25.11	63	0.23	28.3		
Well Capacity (Gallons Per Foot): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88											
Tubing inside diameter capacity (Gallons Per Foot): 1/8"=0.0006; 3/16"=0.0014; ¼"=0.0026; 5/16"=0.004; 3/8"=0.006; ½"=0.010; 5/8"=0.016											
Purging Equipment Codes: B = Bailar; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

Sampled By (Print) / Affiliation: JES / DWM OUC				Sampler(s) Signature(s): Dana McCue			Sampling initiated at: 1126		Sampling ended at: 1130	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N ☐ Filter Size: _____ µm		Filtration Equipment Type:	
Field Decontamination: Pump Y ☒ N ☐ Tubing Y ☒ N ☐ (replaced)						Duplicate: Y ☒ N ☐				
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: N/A mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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

1. The above do not constitute all of the information required by Chapter 32, 100, 1.110.
2. Stabilization criteria for range of variation of the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $< 20 \text{ NTU}$; optionally $+ 5 \text{ NTU}$ or $\pm 10\%$ (whichever is greater)

I:\WOLAB\LAB\Sampling\SEC Monitoring Wells\OUC Groundwater Sampling Log.doc

OUC GROUNDWATER SAMPLING LOG

Site Name:	mw-C FD		Site Location:	SEC	
Well No.	Sample ID: 1512009-02		Date:	12-2-15	

PURGING DATA

[illegible]

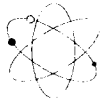
SAMPLING DATA

Sampled By (Print) / Affiliation: JES/DWM OUC				Sampler(s) Signature(s): <i>Damon McCue</i>			Sampling initiated at: 1141		Sampling ended at: 1145	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y N		Filter Size: ____ µm	
Field Decontamination: Pump Y N Tubing Y N (replaced)								Duplicate: Y N		
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
								(Sulfite: N/A mg/L)		
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $\leq 20\text{ NTU}$; optionally $\pm 5\text{ NTU}$ or $\pm 10\%$ (whichever is greater)



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1512032

Report Date: 12/14/15

Report to:

Orlando Utilities Commission

Water Quality Lab

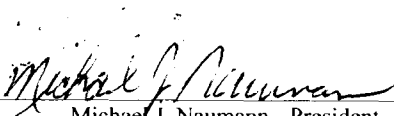
3800 Gardenia Ave.

Orlando, FL 32839

Attention: John Gray

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

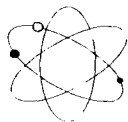
Signed


Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

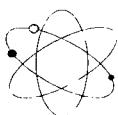
12-15-15



Florida Radiochemistry Services, Inc.

Sample Login

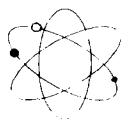
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
Client Contact:	John Gray	12/02/15 13:50	1512032
Client P.O.			
Project I.D.			
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1512032-01	MW-C	12/02/15 11:26	Ra226, Ra228 Combined Ra226 + Ra228
1512032-02	MW-C FD	12/02/15 11:41	Ra226, Ra228 Combined Ra226 + Ra228
1512032-03	EQ BLK	12/02/15 09:20	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1512032-01	1512032-02	1512032-03
Client I.D.	MW-C	MW-C FD	EQ BLK
Radium 226	0.5	0.7	0.2U
Error +/-	0.2	0.2	0.1
MDL	0.2	0.2	0.2
EPA Method	903.1	903.1	903.1
Prep Date	12/07/15	12/07/15	12/07/15
Prep Time	08:12	08:12	08:12
Analysis Date	12/14/15	12/14/15	12/14/15
Analysis Time	09:59	11:02	11:02
Analyst	MJN	MJN	MJN
Radium 228	0.9U	0.9U	0.9U
Error +/-	0.6	0.5	0.6
MDL	0.9	0.9	0.9
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	12/07/15	12/07/15	12/07/15
Prep Time	08:12	08:12	08:12
Analysis Date	12/14/15	12/14/15	12/14/15
Analysis Time	11:25	11:25	11:25
Analyst	SN	SN	SN
Combined Ra226 + Ra228	0.9U	0.9U	0.9U
Error +/-	0.6	0.5	0.6
MDL	0.9	0.9	0.9
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1512037-02	12/14/15	1.3	25.2	27.9	27.0	106	3.3
Radium 228	1512037-02	12/14/15	<0.9	7.3	7.7	8.0	105	3.8

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Chain of Custody

		Florida Radiochemistry Services, Inc.		FL Certification E83033	
		5456 Hoffner Ave., Suite 201 Orlando, FL 32812			
		Ph.(407)382-7733			
		Fax(407)382-7744			
Email: flradiochemistry@cfl.rr.com					
Company Name:	ORLANDO UTILITIES COMM	Phone # 407-434-2549			
Address:	3300 GARDENIA AVE	Fax # 407-434-2619			
City / State / Zip	ORLANDO FL 32839				
Send Report to:	DMCCUE@OUC.COM				
Additional Report:	JGRAY@OUC.COM				
Invoice to:	ANGELISA PRINCESTON YOUNG				
Project I.D.					
P.O. #					
Sample I. D.	Date / Time Sampled	Sample # of	Pres.	Analysis	Remarks
(Sample Location)		Type	Btls	Requested	
1 MW-C	12-2-15 11:26	GW	1	HNO ₃ 226 + 228	
2 MW-C FD	12-2-15 11:41	GW	1	HNO ₃ 226 + 228	
3 EQ BLK	12-2-15 09:20	W	1	HNO ₃ 226 + 228	
4					
5					
6					
7					
8					
9					
10					
Relinquished by:	Donna McInnis	Sampled By:		Client	
Date/Time	12-2-15 13:50				
Received by:	Donna McInnis				
Date/Time	12-2-15 13:50				
Relinquished by:					
Date/Time					
Received by:					
Date/Time					



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1601016

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 20 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

February 04, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1601016**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1601016-01	SEC Monitoring Well C	01/06/2016
1601016-02	SEC Monitoring Well C FD	01/06/2016
1601016-03	Equipment Blank	01/06/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601016-01RE1
Date/Time Collected 01/06/2016 14:15
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	40.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Barium (Reshot)	27.9	ug/L	EPA 200.7	1	0.390	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Boron (Reshot)	12.8 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Calcium (Reshot)	6060	ug/L	EPA 200.7	1	39.0	500	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV
Thallium (Reshot)	8.30 <i>U</i>	ug/L	EPA 200.7	1	8.30	20.0	01/08/16 09:16	01/12/16 10:56	6A08002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C FD
Matrix Water
WQLAB Sample Number 1601016-02RE1
Date/Time Collected 01/06/2016 14:30
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	40.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Barium (Reshot)	28.7	ug/L	EPA 200.7	1	0.390	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Boron (Reshot)	11.4 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Calcium (Reshot)	5970	ug/L	EPA 200.7	1	39.0	500	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV
Thallium (Reshot)	8.30 <i>U</i>	ug/L	EPA 200.7	1	8.30	20.0	01/08/16 09:16	01/12/16 11:02	6A08002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601016-03
Date/Time Collected 01/06/2016 08:00
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	40.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Barium	0.390 <i>U</i>	ug/L	EPA 200.7	1	0.390	10.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Boron	11.2 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Calcium	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV
Thallium	8.30 <i>U</i>	ug/L	EPA 200.7	1	8.30	20.0	01/08/16 09:16	01/11/16 12:07	6A08002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601016-03RE1
Date/Time Collected 01/06/2016 08:00
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	01/08/16 09:16	01/12/16 10:59	6A08002	ACV
Cobalt (Reshot)	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	01/08/16 09:16	01/12/16 10:59	6A08002	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601016-01
Date/Time Collected 01/06/2016 14:15
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/07/16 13:28	01/08/16 07:30	6A07011	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C FD
Matrix Water
WQLAB Sample Number 1601016-02
Date/Time Collected 01/06/2016 14:30
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/07/16 13:28	01/08/16 07:43	6A07011	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601016-03
Date/Time Collected 01/06/2016 08:00
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/07/16 13:28	01/08/16 07:33	6A07011	JAY

Laboratory Report Florida Radiochemistry FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601016-01
Date/Time Collected 01/06/2016 14:15
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium-226	0.2 +/- 0.1	pCi/L	EPA 903.1	1	0.1		01/12/16 08:15	01/18/15 13:04	'[none]'	E8303
Radium-228	1.0U +/- 0.7	pCi/L	EPA Ra-05	1	1		01/12/16 08:15	01/15/16 11:16	'[none]'	E8303

Laboratory Report Florida Radiochemistry FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C FD
Matrix Water
WQLAB Sample Number 1601016-02
Date/Time Collected 01/06/2016 14:30
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium-226	0.2 +/- 0.1	pCi/L	EPA 903.1	1	0.1		01/12/16 08:15	01/18/15 13:04	'[none]'	E8303
Radium-228	1.0U +/- 0.7	pCi/L	EPA Ra-05	1	1		01/12/16 08:15	01/15/16 11:16	'[none]'	E8303

Laboratory Report Florida Radiochemistry FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601016-03
Date/Time Collected 01/06/2016 08:00
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium-226	0.1U +/- 0.1	pCi/L	EPA 903.1	1	0.1		01/12/16 08:15	01/18/15 13:04	'[none]'	E8303
Radium-228	1.0U +/- 0.6	pCi/L	EPA Ra-05	1	1		01/12/16 08:15	01/15/16 11:16	'[none]'	E8303

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601016-01
Date/Time Collected 01/06/2016 14:15
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.31	mg/L	EPA 300.0	1	1.00	1.00	01/07/16 11:52	01/07/16 11:52	B16A036	JLK
Fluoride	0.12	mg/L	EPA 300.0	1	0.10	0.10	01/07/16 11:52	01/07/16 11:52	B16A034	JLK
Sulfate	0.7	mg/L	EPA 300.0	1	0.2	0.2	01/07/16 11:52	01/07/16 11:52	B16A037	JLK
pH	5.04	SU	SM 4500-H B	1			01/07/16 11:30	01/07/16 11:30	B16A021	JFP
Total Dissolved Solids	54.0	mg/L	SM 2540 C	1	5.00	5.00	01/07/16 14:47	01/07/16 15:20	B16A027	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C FD
Matrix Water
WQLAB Sample Number 1601016-02
Date/Time Collected 01/06/2016 14:30
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.46	mg/L	EPA 300.0	1	1.00	1.00	01/07/16 13:26	01/07/16 13:26	B16A036	JLK
Fluoride	0.11	mg/L	EPA 300.0	1	0.10	0.10	01/07/16 13:26	01/07/16 13:26	B16A034	JLK
Sulfate	0.7	mg/L	EPA 300.0	1	0.2	0.2	01/07/16 13:26	01/07/16 13:26	B16A037	JLK
pH	4.97	SU	SM 4500-H B	1			01/07/16 11:30	01/07/16 11:30	B16A021	JFP
Total Dissolved Solids	57.0	mg/L	SM 2540 C	1	5.00	5.00	01/07/16 14:47	01/07/16 15:20	B16A027	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601016-03
Date/Time Collected 01/06/2016 08:00
Date/Time Received 01/06/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	01/07/16 11:20	01/07/16 11:20	B16A036	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/07/16 11:20	01/07/16 11:20	B16A034	JLK
Sulfate	0.2 <i>u</i>	mg/L	EPA 300.0	1	0.2	0.2	01/07/16 11:20	01/07/16 11:20	B16A037	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	01/07/16 14:47	01/07/16 15:20	B16A027	JFP

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16A034									
Blank (B16A034-BLK1)									
Fluoride	0.10 U	0.10	mg/L		0.10				
Prepared & Analyzed: 07-Jan-16									
LCS (B16A034-BS1)									
Fluoride	0.65		mg/L	0.600		109	90-110		
Prepared & Analyzed: 07-Jan-16									
Duplicate (B16A034-DUP1)									
Fluoride	0.11	0.10	mg/L	0.12				1.74	10
Prepared & Analyzed: 07-Jan-16									
Matrix Spike (B16A034-MS1)									
Fluoride	1.2	0.10	mg/L	1.00	0.12	107	90-110		
Prepared & Analyzed: 07-Jan-16									
Batch: B16A036									
Blank (B16A036-BLK1)									
Chloride	1.00 U	1.00	mg/L	1.00					
Prepared & Analyzed: 07-Jan-16									
LCS (B16A036-BS1)									
Chloride	4.96		mg/L	5.00		99.1	90-110		
Prepared & Analyzed: 07-Jan-16									
Duplicate (B16A036-DUP1)									
Chloride	8.29	1.00	mg/L	8.31				0.265	10
Prepared & Analyzed: 07-Jan-16									
Matrix Spike (B16A036-MS1)									
Chloride	12.5	1.00	mg/L	4.00	8.31	104	90-110		
Prepared & Analyzed: 07-Jan-16									
Batch: B16A037									
Blank (B16A037-BLK1)									
Sulfate	0.2 U	0.2	mg/L	0.2					
Prepared & Analyzed: 07-Jan-16									
LCS (B16A037-BS1)									
Sulfate	5.0		mg/L	5.00		99.1	90-110		
Prepared & Analyzed: 07-Jan-16									
Duplicate (B16A037-DUP1)									
Sulfate	0.7	0.2	mg/L	0.7				2.49	10
Prepared & Analyzed: 07-Jan-16									
Matrix Spike (B16A037-MS1)									
Sulfate	4.5	0.2	mg/L	4.00	0.7	95.3	90-110		
Prepared & Analyzed: 07-Jan-16									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16A021									
LCS (B16A021-BS1)									
pH	4.60		SU	4.63		99.4	0-200		
Prepared & Analyzed: 21-Dec-15									
LCS (B16A021-BS2)									
pH	4.62		SU	4.63		99.8	0-200		
Prepared & Analyzed: 07-Jan-16									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16A021 (Continued)									
Duplicate (B16A021-DUP1)									
Source: 1512053-26				Prepared & Analyzed: 21-Dec-15					
pH	7.63		SU		7.63			0.00	10
Duplicate (B16A021-DUP2)									
Source: 1601015-01				Prepared & Analyzed: 07-Jan-16					
pH	7.23		SU		7.20			0.416	10
Batch: B16A027									
Blank (B16A027-BLK1)									
				Prepared & Analyzed: 07-Jan-16					
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
LCS (B16A027-BS1)									
				Prepared & Analyzed: 07-Jan-16					
Total Dissolved Solids	402	5.00	mg/L		410	98.0	80-120		
Duplicate (B16A027-DUP1)									
Source: 1601009-01				Prepared & Analyzed: 07-Jan-16					
Total Dissolved Solids	625	5.00	mg/L		618			1.13	10

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6A07011									
Blank (6A07011-BLK1)									
				Prepared: 07-Jan-16 Analyzed: 08-Jan-16					
Mercury	0.023 U	0.200	ug/L		0.023				
LCS (6A07011-BS1)									
				Prepared: 07-Jan-16 Analyzed: 08-Jan-16					
Mercury	5.01	0.200	ug/L	5.00	0.023	100	85-115		
Matrix Spike (6A07011-MS1)									
Source: A508573-01				Prepared: 07-Jan-16 Analyzed: 08-Jan-16					
Mercury	4.76	0.200	ug/L	5.00	ND	95	70-130		
Matrix Spike Dup (6A07011-MSD1)									
Source: A508573-01				Prepared: 07-Jan-16 Analyzed: 08-Jan-16					
Mercury	4.87	0.200	ug/L	5.00	ND	97	70-130	2	10
Post Spike (6A07011-PS1)									
Source: A508573-01				Prepared & Analyzed: 08-Jan-16					
Mercury	5.13		ug/L	5.61	0.0006	92	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6A08002									
Blank (6A08002-BLK1)									
				Prepared: 08-Jan-16 Analyzed: 11-Jan-16					
Antimony	5.00 U	40.0	ug/L		5.00				
Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6A08002 (Continued)

Blank (6A08002-BLK1)

Prepared: 08-Jan-16 Analyzed: 11-Jan-16

Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	3.70 U	50.0	ug/L		3.70				
Cadmium	0.280 U	1.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				
Thallium	8.30 U	20.0	ug/L		8.30				

LCS (6A08002-BS1)

Prepared: 08-Jan-16 Analyzed: 11-Jan-16

Antimony	464	40.0	ug/L	500	5.00	93	85-115
Arsenic	456	10.0	ug/L	500	8.00	91	85-115
Barium	479	10.0	ug/L	500	0.390	96	85-115
Beryllium	47.3	1.00	ug/L	50.0	0.120	95	85-115
Boron	2330	50.0	ug/L	2500	3.70	93	85-115
Cadmium	47.2	1.00	ug/L	50.0	0.280	94	85-115
Calcium	4660	500	ug/L	5000	39.0	93	85-115
Chromium	469	10.0	ug/L	500	1.10	94	85-115
Cobalt	468	10.0	ug/L	500	1.50	94	85-115
Lead	472	10.0	ug/L	500	2.50	94	85-115
Lithium	480	20.0	ug/L	500	2.60	96	85-115
Molybdenum	453	10.0	ug/L	500	5.00	91	85-115
Selenium	469	40.0	ug/L	500	8.20	94	85-115
Thallium	460	20.0	ug/L	500	8.30	92	85-115

Matrix Spike (6A08002-MS1)

Source: BZ00162-05

Prepared: 08-Jan-16 Analyzed: 11-Jan-16

Antimony	468	40.0	ug/L	500	ND	94	70-130
Arsenic	466	10.0	ug/L	500	ND	93	70-130
Barium	506	10.0	ug/L	500	32.1	95	70-130
Beryllium	47.6	1.00	ug/L	50.0	ND	95	70-130
Boron	2370	50.0	ug/L	2500	52.0	93	70-130
Cadmium	45.9	1.00	ug/L	50.0	ND	92	70-130
Calcium	68100	500	ug/L	5000	62500	113	70-130
Chromium	465	10.0	ug/L	500	ND	93	70-130
Cobalt	459	10.0	ug/L	500	ND	92	70-130
Lead	459	10.0	ug/L	500	ND	92	70-130
Lithium	481	20.0	ug/L	500	ND	96	70-130
Molybdenum	461	10.0	ug/L	500	5.37	91	70-130
Selenium	468	40.0	ug/L	500	ND	94	70-130
Thallium	439	20.0	ug/L	500	ND	88	70-130

Matrix Spike Dup (6A08002-MSD1)

Source: BZ00162-05

Prepared: 08-Jan-16 Analyzed: 11-Jan-16

Antimony	459	40.0	ug/L	500	ND	92	70-130	2	25
Arsenic	458	10.0	ug/L	500	ND	92	70-130	2	25
Barium	498	10.0	ug/L	500	32.1	93	70-130	2	25
Beryllium	46.8	1.00	ug/L	50.0	ND	94	70-130	2	25
Boron	2340	50.0	ug/L	2500	52.0	91	70-130	1	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6A08002 (Continued)									
Matrix Spike Dup (6A08002-MSD1)									
Source: BZ00162-05									
Prepared: 08-Jan-16 Analyzed: 11-Jan-16									
Cadmium	45.3	1.00	ug/L	50.0	ND	91	70-130	1	25
Calcium	66700	500	ug/L	5000	62500	84	70-130	2	25
Chromium	459	10.0	ug/L	500	ND	92	70-130	1	25
Cobalt	452	10.0	ug/L	500	ND	90	70-130	1	25
Lead	453	10.0	ug/L	500	ND	91	70-130	1	25
Lithium	473	20.0	ug/L	500	ND	95	70-130	1	25
Molybdenum	453	10.0	ug/L	500	5.37	90	70-130	2	25
Selenium	464	40.0	ug/L	500	ND	93	70-130	0.8	25
Thallium	436	20.0	ug/L	500	ND	87	70-130	0.6	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- U Compound was analyzed for but not detected
- I The reported value is between the laboratory method detection limit and the practical quantitation limit
- V Analyte was detected in both the sample and the associated method blank
- L Off-scale high. Actual value is known to be greater than the value given

Acronyms:

- Dil Dilution Factor
- LCS Laboratory Control Sample
- LCSD Laboratory Control Sample Duplicate
- MDL Method detection limit.
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- NC Laboratory lacks NELAC certification for this analyte.
- NS Not Screened
- PQL Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
- RPD Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager



PROJECT #:

1510008 1601016

PAGE of

Container Type Codes	
AG = Amber Glass	Lot: _____
	Lot: _____
CV = Clear Vial	Lot: _____
	Lot: _____
P = Plastic	Lot: <u>44051400</u>
	Lot: _____
AL = Amber Liter	Lot: _____
Other: Size	Lot: _____

[illegible]

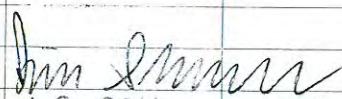
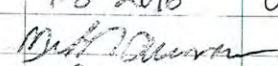
Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.



Florida Radiochemistry Services, Inc.
5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
Ph.(407)382-7733
Fax(407)382-7744
Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name: **Orlando Utilities Commission** Phone # **407-434-2549**
Address: **3800 Gardenia Ave.** Fax # **407-434-2610**
City / State / Zip: **Orlando FL 32839**
Send Report to: **John Gray** jgray@ouc.com
Additional Report: **Donna McCue** dmccue@ouc.com
Invoice to: **Angelisa Pinkston-Young** apinkstonyoung@ouc.com
Project I.D.: **SEC Quarterly Monitoring Wells**
P.O. #

Sample I. D. (Sample Location)		Time Sampled		Sample Type	# of Btts	Pres.	Analysis Requested	Remarks
1	SEC MW-C	1-8-2016	1415	GW	1	HNO3	Ra 226+228	All samples require Radium 226 and Radium 228.
2	SEC MW-C, FD	1-8-2016	1430	GW	1	HNO3	Ra 226+228	
3	Equipment Blank	1-8-2016	0800	GW	1	HNO3	Ra 226+228	
4								
5								
6								
7								
8								
9								
10								
Relinquished by:				Sampled By:		Client:		
Date/Time		1-8-2016 0826		James Shoemaker		OUC		
Received by:								
Date/Time		1-8-2016 8:46						

OUC GROUNDWATER SAMPLING LOG

Site Name: <u>SEC MW C</u>	Site Location:
Well No. <u>C</u>	Sample ID: _____ Date: <u>1-6-2016</u>

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: <u>6.20</u>	Sampling Device: <u>PP</u>
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (_____ feet - <u>6.20</u> feet) X <u>0.16</u> gallons/foot = <u>4.128</u> gallons <u>33</u>				
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons				
Initial Tubing Depth in Well (Feet): <u>22</u>		Final Pump or Tubing Depth in Well: (feet): _____		Purging Initiated at: <u>1319</u>
		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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
1409	12.50	12.50	0.25	6.34	5.74	24.52	64	0.96	20.8	clear	Sulfide
1412	0.75	13.25	0.05	6.34	5.72	24.49	63	0.88	21.8	↓	↓
1415	0.75	14.00	0.25	6.34	5.72	24.51	64	0.83	21.3	↓	↓
FD { 1424	16.25	16.25	0.25	6.34	5.66	24.42	62	0.70	17.3	cloudy	Sulfide
1427	0.75	17.00	0.25	6.34	5.70	24.41	62	0.65	20.2	↓	↓
1430	0.75	17.75	0.25	6.34	5.69	24.39	62	0.56	18.1	↓	↓

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 diameter capacity (Gallons Per Foot): 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: <u>OC J. Shoemaker, J. Koschewa</u>				Sampler(s) Signature(s): <u>[Signature]</u>			Sampling initiated at: <u>1415 and 1433</u>		Sampling ended at: <u>final 1433</u>	
Pump or tubing depth in well (feet): <u>22</u>				Tubing Material Code: <u>PE</u>		Field-filtered: <u>Y</u> ☒ <u>N</u> Filter Size: _____ µm		Filtration Equipment Type: _____		
Field Decontamination: Pump <u>Y</u> ☒ <u>N</u> Tubing <u>Y</u> ☒ <u>N</u> (replaced)						Duplicate: <u>Y</u> ☒ <u>N</u>				

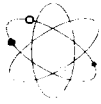
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH			

Remarks: _____

(Sulfite: _____ mg/L)

Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other

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 the 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)



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407)382-7744

Certification I. D. # E83033

Work Order #: 1601028

Report Date: 01/21/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: John Gray

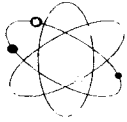
I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

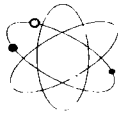
Date 1-21-16



Florida Radiochemistry Services, Inc.

Sample Login

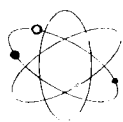
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		11/08/16 08:26	1601028
Client Contact:	John Gray		
Client P.O.			
Project I.D.	SEC Quarterly Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1601028-01	SEC MW-C	01/06/16 14:15	Ra226, Ra228 Combined Ra226 + Ra228
1601028-02	SEC MW-C, FD	01/06/16 14:30	Ra226, Ra228 Combined Ra226 + Ra228
1601028-03	Equipment Blank	01/06/16 08:00	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1601028-01	1601028-02	1601028-03
Client I.D.	SEC MW-C	SEC MW-C, FD	Equipment Blank
Radium 226	0.2	0.2	0.1U
Error +/-	0.1	0.1	0.1
MDL	0.1	0.1	0.1
EPA Method	903.1	903.1	903.1
Prep Date	01/12/16	01/12/16	01/12/16
Prep Time	08:15	08:15	08:15
Analysis Date	01/18/16	01/18/16	01/18/16
Analysis Time	13:04	13:04	13:04
Analyst	MJN	MJN	MJN
Radium 228	1.0U	1.0U	1.0U
Error +/-	0.7	0.7	0.6
MDL	1.0	1.0	1.0
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	01/12/16	01/12/16	01/12/16
Prep Time	08:15	08:15	08:15
Analysis Date	01/15/16	01/15/16	01/15/16
Analysis Time	11:16	11:16	11:16
Analyst	SN	SN	SN
Combined Ra226 + Ra228	1.0U	1.0U	1.0U
Error +/-	0.7	0.7	0.6
MDL	1.0	1.0	1.0
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1601037-01	01/18/16	1.2	25.2	24.5	25.4	92	3.6
Radium 228	1601037-01	01/15/16	3.6	7.3	11.9	10.4	114	13.5

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125



Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilites Commission

Phone # **407-434-2549**

Address:

3800 Gardenia Ave.

Fax # **407-434-2619**

City / State / Zip

Orlando FL 32839

Send Report to:

John Gray jgray@ouc.com

Additional Report:

Donna McCue dmccue@ouc.com

Invoice to:

Angelisa Pinkston-Young apinkstonyoung@ouc.com

Project I.D.

SEC Quarterly Monitoring Wells

P.O. #

Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks
1 SEC MW-C	1/6/2016 1415	GW	1	HNO3	Ra 226+228	
2 SEC MW-C, FD	1/6/2016 1430	GW	1	HNO3	Ra 226+228	
3 Equipment Blank	1/6/2016 0800	GW	1	HNO3	Ra 226+228	
4						
5						
6						
7						
8						
9						
10						

All samples require
 Radium 226 and
 Radium 228.

Relinquished by:

Date/Time

Received by:

Date/Time

John McCue
 1-8-2016 0826
Donna McCue
 1-8-2016 8:46

Sampled By:

Client

James Shoemaker OUC



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1601042

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 19 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

John N. Gray
Laboratory Manager

Certification: FLDOH Certification Number E53566

February 02, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1601042**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1601042-01	SEC Monitoring Well C	01/13/2016
1601042-02	SEC Monitoring Well C, FD	01/13/2016
1601042-03	Equipment Blank	01/13/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601042-01
Date/Time Collected 01/13/2016 12:25
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Barium	30.4	ug/L	EPA 200.7	1	0.390	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Boron	9.23 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Calcium	5610	ug/L	EPA 200.7	1	39.0	500	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Lithium	3.37 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	01/14/16 11:03	01/15/16 12:55	6A14002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, FD
Matrix Water
WQLAB Sample Number 1601042-02
Date/Time Collected 01/13/2016 12:38
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Barium	30.4	ug/L	EPA 200.7	1	0.390	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Beryllium	0.132 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Boron	8.86 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Calcium	6220	ug/L	EPA 200.7	1	39.0	500	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Lithium	2.73 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	01/14/16 11:03	01/15/16 13:01	6A14002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601042-03
Date/Time Collected 01/13/2016 09:45
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Barium	0.390 <i>u</i>	ug/L	EPA 200.7	1	0.390	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Beryllium	0.120 <i>u</i>	ug/L	EPA 200.7	1	0.120	1.00	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Boron	3.70 <i>u</i>	ug/L	EPA 200.7	1	3.70	50.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Cadmium	0.280 <i>u</i>	ug/L	EPA 200.7	1	0.280	1.00	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Calcium	39.0 <i>u</i>	ug/L	EPA 200.7	1	39.0	500	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Cobalt	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Lead	2.50 <i>u</i>	ug/L	EPA 200.7	1	2.50	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Lithium	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Molybdenum	5.00 <i>u</i>	ug/L	EPA 200.7	1	5.00	10.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV
Selenium	8.20 <i>u</i>	ug/L	EPA 200.7	1	8.20	40.0	01/14/16 11:03	01/15/16 12:58	6A14002	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601042-01
Date/Time Collected 01/13/2016 12:25
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	10	1.10	20.0	01/18/16 09:18	01/18/16 13:02	6A15032	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/19/16 10:55	01/20/16 07:48	6A14005	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	10	0.580	1.00	01/18/16 09:18	01/18/16 13:02	6A15032	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, FD
Matrix Water
WQLAB Sample Number 1601042-02
Date/Time Collected 01/13/2016 12:38
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	10	1.10	20.0	01/18/16 09:18	01/18/16 13:05	6A15032	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/19/16 10:55	01/20/16 07:54	6A14005	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	10	0.580	1.00	01/18/16 09:18	01/18/16 13:05	6A15032	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601042-03
Date/Time Collected 01/13/2016 09:45
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.110 <i>u</i>	ug/L	EPA 200.8	1	0.110	2.00	01/18/16 09:18	01/18/16 12:06	6A15032	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	01/19/16 10:55	01/20/16 07:51	6A14005	IR
Thallium	0.058 <i>u</i>	ug/L	EPA 200.8	1	0.058	0.100	01/18/16 09:18	01/18/16 12:06	6A15032	JAY

Laboratory Report Florida Radiochemistry FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601042-01
Date/Time Collected 01/13/2016 12:25
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium 226	0.6 +/- 0.2	pCi/L	EPA 903.1	1	0.2		01/15/16 08:13	01/22/16 10:34	'[none]'	E8303
Radium 228	0.8U +/- 0.5	pCi/L	Ra-05	1	0.8		01/15/16 08:13	01/21/16 13:39	'[none]'	E8303

Laboratory Report Florida Radiochemistry FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, FD
Matrix Water
WQLAB Sample Number 1601042-02
Date/Time Collected 01/13/2016 12:38
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium 226	0.5 +/- 0.2	pCi/L	EPA 903.1	1	0.1		01/15/16 08:13	01/22/16 10:34	'[none]'	E8303
Radium 228	0.8U +/- 0.5	pCi/L	Ra-05	1	0.8		01/15/16 08:13	01/21/16 13:39	'[none]'	E8303

Laboratory Report Florida Radiochemistry FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601042-03
Date/Time Collected 01/13/2016 09:45
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Radium 226	0.2U +/- 0.1	pCi/L	EPA 903.1	1	0.2		01/15/16 08:13	01/22/16 10:34	'[none]'	E8303
Radium 228	0.9U +/- 0.6	pCi/L	Ra-05	1	0.9		01/15/16 08:13	01/21/16 13:39	'[none]'	E8303

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1601042-01
Date/Time Collected 01/13/2016 12:25
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.51	mg/L	EPA 300.0	1	1.00	1.00	01/20/16 17:43	01/20/16 17:43	B16A082	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/20/16 17:43	01/20/16 17:43	B16A082	JLK
Sulfate	2.2	mg/L	EPA 300.0	1	0.2	0.2	01/20/16 17:43	01/20/16 17:43	B16A082	JLK
pH	5.12	SU	SM 4500-H B	1			01/14/16 10:51	01/14/16 10:51	B16A057	JES
Total Dissolved Solids	48.0	mg/L	SM 2540 C	1	5.00	5.00	01/15/16 13:40	01/15/16 13:40	B16A078	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, FD
Matrix Water
WQLAB Sample Number 1601042-02
Date/Time Collected 01/13/2016 12:38
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.58	mg/L	EPA 300.0	1	1.00	1.00	01/20/16 19:18	01/20/16 19:18	B16A082	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/20/16 19:18	01/20/16 19:18	B16A082	JLK
Sulfate	2.3	mg/L	EPA 300.0	1	0.2	0.2	01/20/16 19:18	01/20/16 19:18	B16A082	JLK
pH	5.15	SU	SM 4500-H B	1			01/14/16 10:54	01/14/16 10:54	B16A057	JES
Total Dissolved Solids	49.0	mg/L	SM 2540 C	1	5.00	5.00	01/15/16 13:40	01/15/16 13:40	B16A078	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1601042-03
Date/Time Collected 01/13/2016 09:45
Date/Time Received 01/13/2016 15:42

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	01/20/16 17:11	01/20/16 17:11	B16A082	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/20/16 17:11	01/20/16 17:11	B16A082	JLK
Sulfate	0.2 <i>u</i>	mg/L	EPA 300.0	1	0.2	0.2	01/20/16 17:11	01/20/16 17:11	B16A082	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	01/15/16 13:40	01/15/16 13:40	B16A078	JFP

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16A082									
Blank (B16A082-BLK1)				Prepared & Analyzed: 20-Jan-16					
Sulfate	0.2 U	0.2	mg/L		0.2				
Fluoride	0.10 U	0.10	mg/L		0.10				
Chloride	1.00 U	1.00	mg/L		1.00				
LCS (B16A082-BS1)				Prepared & Analyzed: 20-Jan-16					
Sulfate	5.0		mg/L	5.00		101	90-110		
Fluoride	0.61		mg/L	0.600		101	90-110		
Chloride	5.03		mg/L	5.00		101	90-110		
Duplicate (B16A082-DUP1)				Source: 1601042-01		Prepared & Analyzed: 20-Jan-16			
Fluoride	0.10 U	0.10	mg/L		0.10				10
Chloride	8.56	1.00	mg/L		8.51			0.492	10
Sulfate	2.2	0.2	mg/L		2.2			1.14	10
Matrix Spike (B16A082-MS1)				Source: 1601042-01		Prepared & Analyzed: 20-Jan-16			
Sulfate	6.3	0.2	mg/L	4.00	2.2	102	90-110		
Fluoride	1.1	0.10	mg/L	0.480	ND	228	90-110		
Chloride	12.4	1.00	mg/L	4.00	8.51	97.2	90-110		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16A057									
LCS (B16A057-BS1)				Prepared & Analyzed: 14-Jan-16					
pH	4.68		SU	4.63		101	90-110		
Batch: B16A078									
Blank (B16A078-BLK1)				Prepared & Analyzed: 15-Jan-16					
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
LCS (B16A078-BS1)				Prepared & Analyzed: 15-Jan-16					
Total Dissolved Solids	402		mg/L	410		98.0	80-120		
Duplicate (B16A078-DUP1)				Source: 1601040-01		Prepared & Analyzed: 15-Jan-16			
Total Dissolved Solids	415	5.00	mg/L		411			0.969	10

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit
Batch: 6A14005									
Blank (6A14005-BLK1)				Prepared: 19-Jan-16 Analyzed: 20-Jan-16					
Mercury	0.023 U	0.200	ug/L		0.023				
Blank (6A14005-BLK2)				Prepared: 19-Jan-16 Analyzed: 20-Jan-16					
Mercury	0.230 U	2.00	ug/L		0.230				
LCS (6A14005-BS1)				Prepared: 19-Jan-16 Analyzed: 20-Jan-16					
Mercury	4.96	0.200	ug/L	5.00	0.023	99	85-115		
Matrix Spike (6A14005-MS1)				Prepared: 19-Jan-16 Analyzed: 20-Jan-16					
Mercury	5.20	0.200	ug/L	5.00	ND	104	70-130		
Matrix Spike Dup (6A14005-MSD1)				Prepared: 19-Jan-16 Analyzed: 20-Jan-16					
Mercury	5.19	0.200	ug/L	5.00	ND	104	70-130	0.2	10
Post Spike (6A14005-PS1)				Prepared & Analyzed: 20-Jan-16					
Mercury	5.04		ug/L	5.61	0.004	90	75-125		
Batch: 6A15032									
Blank (6A15032-BLK1)				Prepared & Analyzed: 18-Jan-16					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
Blank (6A15032-BLK2)				Prepared & Analyzed: 18-Jan-16					
Antimony	0.110 U	2.00	ug/L		0.110				
Thallium	0.058 U	0.100	ug/L		0.058				
LCS (6A15032-BS1)				Prepared & Analyzed: 18-Jan-16					
Antimony	49.1	20.0	ug/L	50.0	1.10	98	85-115		
Thallium	50.7	1.00	ug/L	50.0	0.580	101	85-115		
Matrix Spike (6A15032-MS1)				Prepared & Analyzed: 18-Jan-16					
Antimony	50.1	20.0	ug/L	50.0	1.24	98	70-130		
Thallium	49.4	1.00	ug/L	50.0	0.730	97	70-130		
Matrix Spike Dup (6A15032-MSD1)				Prepared & Analyzed: 18-Jan-16					
Antimony	50.0	20.0	ug/L	50.0	1.24	98	70-130	0.2	30
Thallium	50.6	1.00	ug/L	50.0	0.730	100	70-130	2	30
Post Spike (6A15032-PS1)				Prepared & Analyzed: 18-Jan-16					
Antimony	4.97		ug/L	4.90	0.121	99	75-125		
Thallium	4.91		ug/L	4.90	0.072	99	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6A14002									
Blank (6A14002-BLK1)									
Arsenic	8.00 U	10.0	ug/L		8.00				
				Prepared: 14-Jan-16 Analyzed: 15-Jan-16					

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: 6A14002 (Continued)

Blank (6A14002-BLK1)

Prepared: 14-Jan-16 Analyzed: 15-Jan-16

Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	3.70 U	50.0	ug/L		3.70				
Cadmium	0.280 U	1.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				

LCS (6A14002-BS1)

Prepared: 14-Jan-16 Analyzed: 15-Jan-16

Arsenic	461	10.0	ug/L	500	8.00	92	85-115		
Barium	482	10.0	ug/L	500	0.390	96	85-115		
Beryllium	48.2	1.00	ug/L	50.0	0.120	96	85-115		
Boron	2390	50.0	ug/L	2500	3.70	96	85-115		
Cadmium	47.8	1.00	ug/L	50.0	0.280	96	85-115		
Calcium	4660	500	ug/L	5000	39.0	93	85-115		
Chromium	476	10.0	ug/L	500	1.10	95	85-115		
Cobalt	480	10.0	ug/L	500	1.50	96	85-115		
Lead	474	10.0	ug/L	500	2.50	95	85-115		
Lithium	478	20.0	ug/L	500	2.60	96	85-115		
Molybdenum	459	10.0	ug/L	500	5.00	92	85-115		
Selenium	478	40.0	ug/L	500	8.20	96	85-115		

Matrix Spike (6A14002-MS1)

Source: BZ00229-01

Prepared: 14-Jan-16 Analyzed: 15-Jan-16

Arsenic	478	10.0	ug/L	500	ND	96	70-130		
Barium	503	10.0	ug/L	500	12.0	98	70-130		
Beryllium	49.2	1.00	ug/L	50.0	ND	98	70-130		
Boron	2450	50.0	ug/L	2500	16.7	97	70-130		
Cadmium	48.2	1.00	ug/L	50.0	ND	96	70-130		
Calcium	14100	500	ug/L	5000	9340	95	70-130		
Chromium	483	10.0	ug/L	500	ND	97	70-130		
Cobalt	492	10.0	ug/L	500	ND	98	70-130		
Lead	481	10.0	ug/L	500	ND	96	70-130		
Lithium	490	20.0	ug/L	500	ND	98	70-130		
Molybdenum	476	10.0	ug/L	500	ND	95	70-130		
Selenium	471	40.0	ug/L	500	ND	94	70-130		

Matrix Spike Dup (6A14002-MSD1)

Source: BZ00229-01

Prepared: 14-Jan-16 Analyzed: 15-Jan-16

Arsenic	468	10.0	ug/L	500	ND	94	70-130	2	25
Barium	492	10.0	ug/L	500	12.0	96	70-130	2	25
Beryllium	48.1	1.00	ug/L	50.0	ND	96	70-130	2	25
Boron	2410	50.0	ug/L	2500	16.7	96	70-130	2	25
Cadmium	47.3	1.00	ug/L	50.0	ND	95	70-130	2	25
Calcium	13800	500	ug/L	5000	9340	89	70-130	2	25
Chromium	473	10.0	ug/L	500	ND	95	70-130	2	25
Cobalt	481	10.0	ug/L	500	ND	96	70-130	2	25
Lead	472	10.0	ug/L	500	ND	94	70-130	2	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6A14002 (Continued)									
Matrix Spike Dup (6A14002-MSD1)		Source: BZ00229-01		Prepared: 14-Jan-16 Analyzed: 15-Jan-16					
Lithium	481	20.0	ug/L	500	ND	96	70-130	2	25
Molybdenum	466	10.0	ug/L	500	ND	93	70-130	2	25
Selenium	459	40.0	ug/L	500	ND	92	70-130	2	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



John N. Gray
Laboratory Manager

A diagram of a complex atomic model. It features a central nucleus with a cross-like symbol. Surrounding the nucleus are several intersecting elliptical orbits. Four small circles, representing electrons, are positioned at different points on these orbits. The diagram is labeled with '1' at the bottom left and '2' at the bottom right.

Fi Certification F03033

Publication E03053

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Phone # _____

Fax # _____

Journal of Management Education 36(1) 1-12

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1.

Analysis

Requested

226 and D021

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[illegible]

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Journal of Management Education 35(10)

Journal of Interpersonal Violence 28(1)

Journal of Management Education 36(7) 809-824

1000

100

Sampled By:

Example by.

SCIENCE AND REASON

Figure 1

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Doc: COC-001



Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

OUC GROUNDWATER SAMPLING LOG

Site Name: <u>SEC</u>	Site Location: <u>SEC MW C</u>
Well No. <u>C</u>	Date: <u>1.13.2016</u>

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 6.24	Sampling Device: PP
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity $= (31.52 \text{ feet} - 6.24 \text{ feet}) \times 0.16 \text{ gallons/foot} = 4.05 \text{ gallons}$				
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume $= 0 \text{ gallons} + (0.0026 \text{ gallons / foot} \times 30 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$				
Initial Tubing Depth in Well (Feet): 22	Final Pump or Tubing Depth in Well (feet): 22	Purging Initiated at: 1131	Purging ended at: 1238	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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
1219	12.00	12.00	0.25	6.38	6.11	24.24	63	0.35	18.8	Sl. cloudy	Sl. sulfide
1222	0.75	12.75	↓	6.38	6.06	24.26	63	0.42	17.1	↓	↓
1225	0.75	13.50	↓	6.38	6.03	24.27	63	0.55	18.0	↓	↓
1232	15.25	15.25	0.25	6.38	5.96	24.11	63	0.44	16.3	Sl. cloudy	Sl. sulfide
1235	0.75	16.00	↓	6.38	5.93	24.18	63	0.39	14.7	↓	↓
1238	0.75	16.75	↓	6.38	5.91	24.18	63	0.34	14.6	↓	↓

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 diameter capacity (Gallons Per Foot): 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: <u>James Shoemaker OUC WDC</u>				Sampler(s) Signature(s): <u>[Signature]</u>			Sampling initiated at: <u>1225, 1238</u>		Sampling ended at: <u>Final 1244</u>	
Pump or tubing depth in well (feet): <u>22</u>				Tubing Material Code: <u>PE</u>		Field-filtered: <u>Y</u> N		Filter Size: <u> </u> µm		
Field Decontamination: Pump <u>Y</u> N Tubing <u>Y</u> N (replaced)						Duplicate: <u>Y</u> N				

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH			

Remarks: (Sulfite: mg/L)

Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other
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

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 the 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)



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1601060

Report Date: 01/25/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: John Gray

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

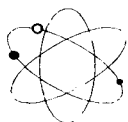
Signed:

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

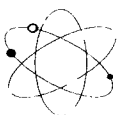
1-25-16



Florida Radiochemistry Services, Inc.

Sample Login

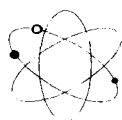
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		01/13/16 13:28	1601060
Client Contact:	John Gray		
Client P.O.			
Project I.D.	SEC Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1601060-01	SEC MW-C	01/13/16 12:25	Ra226, Ra228 Combined Ra226 + Ra228
1601060-02	SEC MW-C, FD	01/13/16 12:38	Ra226, Ra228 Combined Ra226 + Ra228
1601060-03	Equipment Blank	01/13/16 09:45	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1601060-01	1601060-02	1601060-03
Client I.D.	SEC MW-C	SEC MW-C, FD	Equipment Blank
Radium 226	0.6	0.5	0.2U
Error +/-	0.2	0.2	0.1
MDL	0.2	0.1	0.2
EPA Method	903.1	903.1	903.1
Prep Date	01/15/16	01/15/16	01/15/16
Prep Time	08:13	08:13	08:13
Analysis Date	01/22/16	01/22/16	01/22/16
Analysis Time	10:34	10:34	10:34
Analyst	MJN	MJN	MJN
Radium 228	0.8U	0.8U	0.9U
Error +/-	0.5	0.5	0.6
MDL	0.8	0.8	0.9
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	01/15/16	01/15/16	01/15/16
Prep Time	08:13	08:13	08:13
Analysis Date	01/21/16	01/21/16	01/21/16
Analysis Time	13:39	13:39	13:39
Analyst	SN	SN	SN
Combined Ra226 + Ra228	0.8U	0.8U	0.9U
Error +/-	0.5	0.5	0.6
MDL	0.8	0.8	0.9
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1601066-01	01/22/16	0.2	25.2	24.7	25.8	97	4.4
Radium 228	1601066-01	01/21/16	<0.8	7.3	7.9	7.9	108	0.0

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Chain of Custody

Florida Radiochemistry Services, Inc.
5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
Ph.(407)382-7733
Fax(407)382-7744
Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Address:

City / State / Zip

Send Report to:

Additional Report:

Invoice to:

Project I.D.

P.O. #

Sample I. D.

(Sample Location)

Orlando Utilities Commission
3800 Gardenia Ave
Orlando, FL 32839
James Schemm
Donna McCue
Angelisa Pinkston-Young

Phone #

Fax #

Date / Time Sampled

Sample # of
Type Btls

Pres.

Analysis
Requested

Remarks

1	SEC MW C	1-13-2016	1225	G	1	HNO ₃	Ra 226 and Ra 228	
2	SEC MW C, FN	1-13-2016	1238	G	1	HNO ₃		
3	Equipment Blank	1-13-2016	0945	G	1	HNO ₃		
4								
5								
6								
7								
8								
9								
10								

Relinquished by:

Date/Time

Received by:

Date/Time

Donna McCue
1-13-2016 1328
James Schemm
1-13-16 1328

Sampled By:

James Schemm

Relinquished by:

Date/Time

Received by:

Date/Time



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1602013

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 8 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

February 22, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1602013**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1602013-01	SEC Monitoring Well C	02/03/2016
1602013-02	SEC Monitoring Well C, FD	02/03/2016
1602013-03	Equipment Blank	02/03/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1602013-01
Date/Time Collected 02/03/2016 13:17
Date/Time Received 02/03/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.90	mg/L	EPA 300.0	1	1.00	1.00	02/04/16 10:10	02/04/16 10:10	B16B025	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/04/16 10:10	02/04/16 10:10	B16B025	JLK
Sulfate	0.91	mg/L	EPA 300.0	1	0.25	0.25	02/04/16 10:10	02/04/16 10:10	B16B025	JLK
pH	5.88	SU	SM 4500-H B	1			02/10/16 14:52	02/10/16 14:52	B16B052	JFP
Total Dissolved Solids	35.0	mg/L	SM 2540 C	1	5.00	5.00	02/04/16 16:00	02/04/16 16:00	B16B014	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, FD
Matrix Water
WQLAB Sample Number 1602013-02
Date/Time Collected 02/03/2016 13:29
Date/Time Received 02/03/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.75	mg/L	EPA 300.0	1	1.00	1.00	02/04/16 11:38	02/04/16 11:38	B16B025	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/04/16 11:38	02/04/16 11:38	B16B025	JLK
Sulfate	0.85	mg/L	EPA 300.0	1	0.25	0.25	02/04/16 11:38	02/04/16 11:38	B16B025	JLK
pH	5.87	SU	SM 4500-H B	1			02/10/16 14:52	02/10/16 14:52	B16B052	JFP
Total Dissolved Solids	37.0	mg/L	SM 2540 C	1	5.00	5.00	02/04/16 16:00	02/04/16 16:00	B16B014	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1602013-03
Date/Time Collected 02/03/2016 08:40
Date/Time Received 02/03/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	02/04/16 09:40	02/04/16 09:40	B16B025	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/04/16 09:40	02/04/16 09:40	B16B025	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	02/04/16 09:40	02/04/16 09:40	B16B025	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	02/04/16 16:00	02/04/16 16:00	B16B014	JFP

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16B025									
Blank (B16B025-BLK1)				Prepared & Analyzed: 04-Feb-16					
Fluoride	0.10 U	0.10	mg/L		0.10				
Chloride	1.00 U	1.00	mg/L		1.00				
Sulfate	0.25 U	0.25	mg/L		0.25				
LCS (B16B025-BS1)				Prepared & Analyzed: 04-Feb-16					
Chloride	5.07		mg/L	5.00		101	90-110		
Fluoride	0.60		mg/L	0.600		101	90-110		
Sulfate	4.94		mg/L	5.00		98.9	90-110		
Duplicate (B16B025-DUP1)				Source: 1602013-01		Prepared & Analyzed: 04-Feb-16			
Chloride	8.86	1.00	mg/L		8.90			0.405	10
Sulfate	0.92	0.25	mg/L		0.91			0.872	10
Fluoride	0.10 U	0.10	mg/L		0.10				200
Matrix Spike (B16B025-MS1)				Source: 1602013-01		Prepared & Analyzed: 04-Feb-16			
Fluoride	0.61	0.10	mg/L	0.600	ND	102	90-110		
Sulfate	4.96	0.25	mg/L	4.00	0.91	101	90-110		
Chloride	12.9	1.00	mg/L	4.00	8.90	99.7	90-110		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16B014									
Blank (B16B014-BLK1)				Prepared & Analyzed: 04-Feb-16					
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
LCS (B16B014-BS1)				Prepared & Analyzed: 04-Feb-16					
Total Dissolved Solids	378	10.0	mg/L	410		92.2	80-120		
Duplicate (B16B014-DUP1)				Source: 1602012-01		Prepared: 04-Feb-16 Analyzed: 10-Feb-16			
Total Dissolved Solids	428	5.00	mg/L		425			0.703	10
Batch: B16B052									
LCS (B16B052-BS1)				Prepared & Analyzed: 10-Feb-16					
pH	7.96		SU	8.00		99.5	97.5-102.5		
Duplicate (B16B052-DUP1)				Source: 1602037-01		Prepared & Analyzed: 10-Feb-16			
pH	7.99		SU		7.90			1.13	10

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

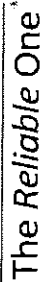
Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor



Phone: 407-434-2549; Fax: 407-434-2619

PAGE of

Lab/Miscellaneous Correspondence/ Lab Documents/Chain of Custody-Revised 6-08



The Reliable One

WATER QUALITY LABORATORY
3800 GARDENIA AVENUE
ORLANDO, FL 32839
Phone: 407-434-2549; Fax: 407-434-2619

CHAIN OF CUSTODY RECORD

PROJECT #: 1602 018 013

PAGE _____ of _____

Company Name: OUC Environmental					Address: PO Box 3193					City: Orlando					State: FL					Zip: 32802				
Attention: Mark Corbett					Phone#: 407-434-3002					Fax #: 407-244-8794					Email: mcorbett@ouc.com									
Project Name: Combustion Waste Landfill Rule																								
Sampler Signature: <i>James E. Shannon</i> DWC 12097																								
Sampler Phone: 407-434-2549																								
Lab ID Number					Sample Name					Collect Date					Collect Time					Matrix Code*				
018-01					SEC MW C					2/3/2016					13:17					W				
018-02					SEC MW C, FD					2/3/2016					13:29					W				
018-03					Equipment Blank					2/3/2016					8:40					W				
Parameters																								
TDS, F, Cl, SO4																								
pH (SU)																								
DO (mg/L)																								
Spec. Cond. (uS/cm)																								
Temp. (°C)																								
Turbidity (NTU) (field)																								
LAB ANALYSIS																								
Matrix Codes*																								
Container Type codes																								
AV = Amber Vial AP = Amber Plastic																								
CV = Clear Vial AG = Amber Glass																								
P = Plastic PLC = Plastic																								
AL = Amber Lier Container																								
CL = Clear Lier Other																								
Size(s): 100 ml, 250 ml, 500 ml																								
Example: 1 L AG = 1 liter amber glass																								
Matrix Codes*																								
GW = Ground Wtr DW = Drinking Wtr																								
EFF = Effluent SW = Surface Wtr																								
INF = Influent WW = Waste Wtr																								
O = Other (Specify)																								
Pres. Codes																								
A. None G. Na2S2O3 Other:																								
B. HNO3 I. Ice																								
C. H2SO4 J. MCAA																								
D. NaOH K. H3PO4																								
E. HCL L. Ascorbic Acid																								
F. EDA M. NH4Cl																								
REMARKS																								
Lab Use Only																								
Sample IN/ACT upon arrival																								
Rec'd on Wat Ice? Temp																								
Proper preservation indicators																								
Rec'd within holding time?																								
Viable rec'd without headspace																								
Proper Containers Used?																								
Yes No N/A																								

[illegible][illegible]

Sample Kit Prepared By <i>SR</i>	Date/Time <i>06/01/16 1625</i>	Relinquished By <i>[Signature]</i>	Date/Time <i>06/01/16 1625</i>	Received By <i>[Signature]</i>	Date/Time
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By <i>[Signature]</i>	Date/Time <i>2-3-2016 1450</i>	Received By <i>S. Cadbury</i>	Date/Time <i>07/31/16 1450</i>
		Cooler #'s & Temps on Receipt	Condition Upon Receipt ☒ Acceptable ☐ Unacceptable		

Matrix: GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) **Preservation:** H-HCl H-HCl N-NH₄NO₃ S-H₂SO₄ NO-NaOH O-Other

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

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

Project Site: Monthly Monitoring/ SEC

Date: 2-2-2016 to 2-3-2016

Meter # YSI 556 MRS-06H1774AB

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

Temperature (Quarterly) For Date of Last Temperature Verification see In log book

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
------------------	-----------------	----------	------	------	--------------	------------	------	---------	------	------------------------------	--------------

CAL	ICV	CCV		2-2-16	1511			9.24	19.40	100.4	9.202	(P) F
CAL	ICV	CCV		2-3-16	1717			8.81	~21.35	99.5	~8.85	(P) F
CAL	ICV	CCV										P F
CAL	ICV	CCV										P F
CAL	ICV	CCV										P F
CAL	ICV	CCV										P F

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard $\mu\text{mhos/cm}$	Exp. Date	Lot #	Bottle #	Cell Constant	Reading $\mu\text{mhos/cm}$	Pass or Fail
----------------------	-----------------	----------	------	------	------------------------------	-----------	-------	----------	---------------	-----------------------------	--------------

CAL	ICV	CCV		2-2-16	1505	1000	1/2017	2507786	Q2-62	1000	(P) F
CAL	ICV	CCV		2-3-16	1715	500	1/2016	4503320	Q2-42	10	(P) F
CAL	ICV	CCV						2407063	Q2-27	505	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	-----------------	----------	------	------	-------------	-----------	-------	----------	-------	------------	--------------

CAL	ICV	CCV		2-2-16	1455	7.00	1/2017	1484710	Q2-48		(P) F
CAL	ICV	CCV				10.00	3/2016	1414388	Q2-1	~7.00	P F
CAL	ICV	CCV				4.00	6/2016	143678	Q2-12	~4.00	P F
CAL	ICV	CCV		2-3-16	1703	10.00	As Above	144070	Q2-47	4.62	(P) F
CAL	ICV	CCV				4.00				10.06	(P) F
CAL	ICV	CCV								4.09	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

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

Perform only in Calibrate Mode:
Perform only in Run Mode:
Perform only in Run Mode:

CAL - Calibrate -
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

OUC GROUNDWATER SAMPLING LOG

Site Name: Monitoring Well C		Site Location: SEC	
Well No. C	Sample ID:	Date: 2-3-2016	

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 5.02	Sampling Device: PP							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (31.52 feet - 5.02 feet) X 0.16 gallons/foot = 4.24 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22	Final Pump or Tubing Depth in Well: (feet): 22	Purging Initiated at: 12:04	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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
1311	16.75	16.75	0.25	5.18	6.10	24.22	60	0.23	11.4	sl. cloudy	sl. sulfide
1314	0.75	17.50	↓	5.18	6.07	24.26	60	0.24	10.9	↓	↓
1317	0.75	18.25	↓	5.18	6.04	24.24	60	0.28	10.3	↓	↓
1323	19.75	19.75	0.25	5.18	5.98	24.25	61	0.29	9.81	sl. cloudy	sl. sulfide
1326	0.75	20.50	↓	5.18	5.94	24.26	60	0.26	9.17	↓	↓
1329	0.75	21.25	↓	5.18	5.96	24.28	61	0.27	10.6	↓	↓
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 diameter capacity (Gallons Per Foot): 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: Jim Shoemaker / Jeff Roy				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 1317, 1329		Sampling ended at: 1320, 1332	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N ☐		Filter Size: _____ µm	
Field Decontamination: Pump Y ☒ N ☐				Tubing Y ☒ N ☐ (replaced)			Filtration Equipment Type:		Duplicate: Y ☒ N ☐	
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:							(Sulfite: _____ mg/L)			
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T = Teflon; O = Other Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)



The Reliable One

WATER QUALITY LABORATORY
3800 GARDENIA AVENUE
ORLANDO, FL 32839
Phone: 407-434-2549; Fax: 407-434-2619

CHAIN OF CUSTODY RECORD

PROJECT #:

1602026

PAGE

of

To Be Associated with W0 1602013

LAB ANALYSIS

Company Name: OUC Environmental

Address: PO Box 3193

City: Orlando

State: FL Zip: 32802

Attention: Mark Corbett

Phone#: 407-434-3002

Fax #: 407-244-8794

Email: mcorbett@ouc.com

Project Name:

Sampler Signature:

Sampler Phone: 407-434-2549

Parameters

Sub-contract:
Ra 226 + Ra 228
Field Spec. Cond. (uS/cm)
Field pH (SU)

Lab ID Number	Sample Name	Collect Date	Collect Time	Matrix Code*	Total # of Containers
026-01	SEC MW C	2/8/2016	1126	W	2
026-02	SEC MW C, FD	2/8/2016	1140	W	2
026-03	Equipment Blank	2/8/2016	0910	W	2

of containers in small box; size/type in larger box example:

1 16ozP

Matrix Codes*

GW = Ground Wtr DW = Drinking Wtr

EFF = Effluent SW = Surface Wtr

INF = Influent WW = Waste Wtr

O = Other (specify)

Pres. Codes

A. None G. Na2S2O3 Other:

B. HNO3 I. Ice

C. H2SO4 J. MCAA

D. NaOH K. H3PO4

E. HCL L. Ascorbic Acid

F. EDA M. NH4Cl

REMARKS

Lab Use Only

Sample IN/ACT upon arrival? Yes No N/A

Rec'd on Wet Ice? Temp: _____

Proper preservatives indicated? _____

Rec'd within holding time? _____

Visible rec'd without headsp? _____

Proper Containers Used? _____

No sample to OUC Lab



Florida Radiochemistry Services, Inc.

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Ph (407) 382-7733

Fax (407) 382-7744

Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilities Commission

Phone # 407-382-2832

Address:

3906 Cardenia Ave.

Fax # 407-382-1010

City / State / Zip

Orlando, FL 32839

Send Report to:

dmccue@ouc.com

Additional Report:

Invoice to:

Frankston-Young apinl@ouc.com

Project I.D.

Early Monitoring Wells

P.O. #

Sample I. D.

2/6/2016 Sampled

Sample Type

GW

Analysis Requested

Remarks

(Sample Location)

1 SEC MW C

2/6/2016

1126

GW

2

INNO3

Ra 226+228

2 SEC MW, FD

2/6/2016

1140

GW

2

INNO3

Ra 226+228

3 Equipment Blank

2/6/2016

0910

GW

2

INNO3

Ra 226+228

4

5

6

7

8

9

10

Relinquished by:

Donna Stumm

Sampled By:

Client

Date/Time

2-5-2016 1306

Received by:

Wendy Stumm

Date/Time

2-5-16 13:00

OUC GROUNDWATER SAMPLING LOG

Site Name: CRL Monitoring Wells		Site Location: SEC MW C
Well No. C	Sample ID:	Date: 2/8/2016

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 4.92	Sampling Device: PP							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (31.50 feet - 4.92 feet) X 0.16 gallons/foot = 4.25 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22		Final Pump or Tubing Depth in Well: (feet): 22		Purging Initiated at: 10:47	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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
11:18	7.75	7.75	0.25	5.07	5.88	23.82	62	0.11	14.0	Nearly clear	None
11:22	1.00	8.75	↓	5.07	5.88	23.86	62	0.11	13.9	↓	↓
11:26	1.00	9.75	↓	5.08	5.88	23.85	63	0.10	13.9	↓	↓
11:34	11.75	11.75	0.25	5.07	5.86	23.80	63	0.10	13.4	Nearly clear	None
11:37	0.75	12.50	↓	5.07	5.87	23.80	62	0.09	12.1	↓	↓
11:40	0.75	13.25	↓	5.07	5.88	23.82	63	0.08	11.0	↓	↓
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 diameter capacity (Gallons Per Foot): 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: Jim Shoemaker / OOC-WQL				Sampler(s) Signature(s): <i>[Signature]</i>			Sampling initiated at: 1126, 1140		Sampling ended at: 1131, 1144	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N		Filter Size: _____ µm	
Field Decontamination:							Pump Y ☒ N		Tubing Y ☒ N (replaced)	
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Duplicate: Y ☒ N	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

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

Project Site: Lettered Wells - redo / SEC

Date: 2-8-2016

Meter # YS1 SSC MPS 06H1774AB

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

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
------------------	--------------------	----------	------	------	-----------------	---------------	------	---------	------	------------------------------------	-----------------

CAL	ICV	CCV		2-8-16	0935		8.85	20.56	99.2	~8.97	(P) F
CAL	ICV	CCV		2-8-16	1515		8.92	20.42	99.1	~8.91	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
-------------------------	--------------------	----------	------	------	----------------------	-----------	-------	----------	------------------	---------------------	-----------------

CAL	ICV	CCV		2-8-2016	0939	1413	3/2016	2409C09	Q2-28	1429	(P) F
CAL	ICV	CCV		2-8-2016	1513	100	8/2016	4502698	Q2-37	101	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	--------------------	----------	------	------	----------------	-----------	-------	----------	-------	---------------	-----------------

CAL	ICV	CCV		2-8-2016	0932	4.00	6/2016	143678	Q2-12	3.92	(P) F
CAL	ICV	CCV				7.00	1/2017	148470	Q2-48	6.89	(P) F
CAL	ICV	CCV				10.00	3/2016	141488	Q2-1	9.81	(P) F
CAL	ICV	CCV				4.00	As above			3.84	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

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

Notes:

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

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



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1602052

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 16 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

March 24, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1602052**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1602052-01	Monitoring Well C	02/18/2016
1602052-02	Monitoring Well C	02/18/2016
1602052-03	Equipment Blank	02/18/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-01
Date/Time Collected 02/18/2016 11:23
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Barium	29.4	ug/L	EPA 200.7	1	0.390	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Boron	14.2 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Calcium	6020	ug/L	EPA 200.7	1	39.0	500	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Lithium	3.41 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	02/22/16 09:04	02/23/16 11:21	6B22002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-02
Date/Time Collected 02/18/2016 11:39
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Barium	28.7	ug/L	EPA 200.7	1	0.390	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Boron	14.1 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Calcium	6000	ug/L	EPA 200.7	1	39.0	500	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	02/22/16 09:04	02/23/16 11:22	6B22002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1602052-03
Date/Time Collected 02/18/2016 08:35
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Barium	0.390 <i>U</i>	ug/L	EPA 200.7	1	0.390	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Boron	5.27 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Calcium	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	02/22/16 09:04	02/23/16 11:24	6B22002	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-01
Date/Time Collected 02/18/2016 11:23
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	02/19/16 07:41	02/22/16 10:36	6B19005	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	02/23/16 11:23	02/24/16 07:36	6B19004	JAY
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	02/19/16 07:41	02/22/16 10:36	6B19005	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-02
Date/Time Collected 02/18/2016 11:39
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	02/19/16 07:41	02/22/16 10:44	6B19005	JMA
Mercury	0.023 <i>U</i>	ug/L	EPA 245.1	1	0.023	0.200	02/23/16 11:23	02/24/16 07:39	6B19004	JAY
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	02/19/16 07:41	02/22/16 10:44	6B19005	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1602052-03
Date/Time Collected 02/18/2016 08:35
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	02/19/16 07:41	02/22/16 10:48	6B19005	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	02/23/16 11:23	02/24/16 07:42	6B19004	JAY
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	02/19/16 07:41	02/22/16 10:48	6B19005	JMA

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-01
Date/Time Collected 02/18/2016 11:23
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.39	mg/L	EPA 300.0	1	1.00	1.00	02/27/16 05:00	02/27/16 05:00	B16C042	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/27/16 05:00	02/27/16 05:00	B16C042	JLK
Sulfate	2.3	mg/L	EPA 300.0	1	0.2	0.2	02/27/16 05:00	02/27/16 05:00	B16C042	JLK
pH	5.41	SU	SM 4500-H B	1			02/19/16 09:30	02/19/16 13:30	B16B066	JFP
Total Dissolved Solids	44.0	mg/L	SM 2540 C	1	5.00	5.00	02/22/16 16:15	02/22/16 16:15	B16B070	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Monitoring Well C
Matrix Water
WQLAB Sample Number 1602052-02
Date/Time Collected 02/18/2016 11:39
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.41	mg/L	EPA 300.0	1	1.00	1.00	02/27/16 05:32	02/27/16 05:32	B16C042	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/27/16 05:32	02/27/16 05:32	B16C042	JLK
Sulfate	2.2	mg/L	EPA 300.0	1	0.2	0.2	02/27/16 05:32	02/27/16 05:32	B16C042	JLK
pH	5.42	SU	SM 4500-H B	1			02/19/16 09:30	02/19/16 13:30	B16B066	JFP
Total Dissolved Solids	46.0	mg/L	SM 2540 C	1	5.00	5.00	02/22/16 16:15	02/22/16 16:15	B16B070	JFP

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1602052-03
Date/Time Collected 02/18/2016 08:35
Date/Time Received 02/18/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	02/27/16 04:27	02/27/16 04:27	B16C042	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	02/27/16 04:27	02/27/16 04:27	B16C042	JLK
Sulfate	0.2 <i>u</i>	mg/L	EPA 300.0	1	0.2	0.2	02/27/16 04:27	02/27/16 04:27	B16C042	JLK
pH	5.69	SU	SM 4500-H B	1			02/19/16 08:08	02/19/16 13:30	B16B066	JFP
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	02/22/16 16:15	02/22/16 16:15	B16B070	JFP

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16C042

Blank (B16C042-BLK1)

Sulfate	0.2 U	0.2	mg/L		0.2				
Fluoride	0.10 U	0.10	mg/L		0.10				
Chloride	1.00 U	1.00	mg/L		1.00				

Prepared & Analyzed: 26-Feb-16

LCS (B16C042-BS1)

Sulfate	5.0		mg/L	5.00		99.9	90-110		
Fluoride	0.61		mg/L	0.600		101	90-110		
Chloride	4.99		mg/L	5.00		99.9	90-110		

Prepared & Analyzed: 26-Feb-16

Duplicate (B16C042-DUP1)

Sulfate	10.5	0.2	mg/L	10.6				0.976	10
Fluoride	0.81	0.10	mg/L	0.81				0.493	10
Chloride	13.0	1.00	mg/L	13.0				0.370	10

Source: 1602061-11

Prepared & Analyzed: 27-Feb-16

Matrix Spike (B16C042-MS1)

Sulfate	12.9	0.2	mg/L	2.00	10.6	114	80-120		
Fluoride	1.3	0.10	mg/L	0.500	0.81	105	80-120		
Chloride	15.2	1.00	mg/L	2.00	13.0	108	80-120		

Source: 1602061-11

Prepared & Analyzed: 27-Feb-16

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16B066

LCS (B16B066-BS1)

pH	7.96		SU	8.00		99.5	97.5-102.5		
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Prepared & Analyzed: 19-Feb-16

Duplicate (B16B066-DUP1)

pH	5.45		SU	5.41				0.737	10
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Source: 1602052-01

Prepared & Analyzed: 19-Feb-16

Batch: B16B070

Blank (B16B070-BLK1)

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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Prepared & Analyzed: 22-Feb-16

LCS (B16B070-BS1)

Total Dissolved Solids	408		mg/L	410		99.5	80-120		
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Prepared & Analyzed: 22-Feb-16

Duplicate (B16B070-DUP1)

Total Dissolved Solids	42.0	5.00	mg/L	44.0				4.65	10
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Source: 1602052-01

Prepared & Analyzed: 22-Feb-16

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit
Batch: 6B19004										
Blank (6B19004-BLK1)					Prepared: 23-Feb-16 Analyzed: 24-Feb-16					
Mercury	0.023	U	0.200	ug/L		0.023				
LCS (6B19004-BS1)					Prepared: 23-Feb-16 Analyzed: 24-Feb-16					
Mercury	5.02		0.200	ug/L	5.00	0.023	100	85-115		
Matrix Spike (6B19004-MS1)					Prepared: 23-Feb-16 Analyzed: 24-Feb-16					
Mercury	5.16		0.200	ug/L	5.00	ND	103	70-130		
Matrix Spike Dup (6B19004-MSD1)					Prepared: 23-Feb-16 Analyzed: 24-Feb-16					
Mercury	5.29		0.200	ug/L	5.00	ND	106	70-130	2	10
Post Spike (6B19004-PS1)					Prepared & Analyzed: 24-Feb-16					
Mercury	5.00			ug/L	5.61	0.014	89	75-125		
Batch: 6B19005										
Blank (6B19005-BLK1)					Prepared: 19-Feb-16 Analyzed: 22-Feb-16					
Antimony	1.10	U	20.0	ug/L		1.10				
Thallium	0.580	U	1.00	ug/L		0.580				
Blank (6B19005-BLK2)					Prepared: 19-Feb-16 Analyzed: 22-Feb-16					
Antimony	0.110	U	2.00	ug/L		0.110				
Thallium	0.058	U	0.100	ug/L		0.058				
LCS (6B19005-BS1)					Prepared: 19-Feb-16 Analyzed: 22-Feb-16					
Antimony	48.4		20.0	ug/L	50.0	1.10	97	85-115		
Thallium	51.2		1.00	ug/L	50.0	0.580	102	85-115		
Matrix Spike (6B19005-MS1)					Prepared: 19-Feb-16 Analyzed: 22-Feb-16					
Antimony	49.6		20.0	ug/L	50.0	ND	99	70-130		
Thallium	49.9		1.00	ug/L	50.0	ND	100	70-130		
Matrix Spike Dup (6B19005-MSD1)					Prepared: 19-Feb-16 Analyzed: 22-Feb-16					
Antimony	52.1		20.0	ug/L	50.0	ND	104	70-130	5	30
Thallium	51.0		1.00	ug/L	50.0	ND	102	70-130	2	30
Post Spike (6B19005-PS1)					Prepared & Analyzed: 22-Feb-16					
Antimony	4.81			ug/L	4.90	0.097	96	75-125		
Thallium	4.78			ug/L	4.90	0.007	97	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6B22002									
Blank (6B22002-BLK1)									
Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
				Prepared: 22-Feb-16 Analyzed: 23-Feb-16					

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6B22002 (Continued)

Blank (6B22002-BLK1)

Prepared: 22-Feb-16 Analyzed: 23-Feb-16

Cadmium	0.280 U	1.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				

Blank (6B22002-BLK2)

Prepared: 22-Feb-16 Analyzed: 24-Feb-16

Boron	3.70 U	50.0	ug/L		3.70				
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LCS (6B22002-BS1)

Prepared: 22-Feb-16 Analyzed: 23-Feb-16

Arsenic	471	10.0	ug/L	500	8.00	94	85-115		
Barium	485	10.0	ug/L	500	0.390	97	85-115		
Beryllium	48.5	1.00	ug/L	50.0	0.120	97	85-115		
Boron	2390	50.0	ug/L	2500	3.70	96	85-115		
Cadmium	48.4	1.00	ug/L	50.0	0.280	97	85-115		
Calcium	4670	500	ug/L	5000	39.0	93	85-115		
Chromium	480	10.0	ug/L	500	1.10	96	85-115		
Cobalt	483	10.0	ug/L	500	1.50	97	85-115		
Lead	488	10.0	ug/L	500	2.50	98	85-115		
Lithium	477	20.0	ug/L	500	2.60	95	85-115		
Molybdenum	474	10.0	ug/L	500	5.00	95	85-115		
Selenium	486	40.0	ug/L	500	8.20	97	85-115		

Matrix Spike (6B22002-MS1)

Source: BZ00721-01

Prepared: 22-Feb-16 Analyzed: 23-Feb-16

Arsenic	475	10.0	ug/L	500	ND	95	70-130		
Barium	514	10.0	ug/L	500	27.3	97	70-130		
Beryllium	48.9	1.00	ug/L	50.0	ND	98	70-130		
Boron	2460	50.0	ug/L	2500	40.3	97	70-130		
Cadmium	48.0	1.00	ug/L	50.0	ND	96	70-130		
Calcium	104000	500	ug/L	5000	99000	96	70-130		
Chromium	478	10.0	ug/L	500	ND	96	70-130		
Cobalt	481	10.0	ug/L	500	ND	96	70-130		
Lead	480	10.0	ug/L	500	ND	96	70-130		
Lithium	486	20.0	ug/L	500	6.50	96	70-130		
Molybdenum	485	10.0	ug/L	500	6.80	96	70-130		
Selenium	488	40.0	ug/L	500	ND	98	70-130		

Matrix Spike Dup (6B22002-MSD1)

Source: BZ00721-01

Prepared: 22-Feb-16 Analyzed: 23-Feb-16

Arsenic	475	10.0	ug/L	500	ND	95	70-130	0.09	25
Barium	512	10.0	ug/L	500	27.3	97	70-130	0.3	25
Beryllium	49.2	1.00	ug/L	50.0	ND	98	70-130	0.6	25
Boron	2450	50.0	ug/L	2500	40.3	96	70-130	0.6	25
Cadmium	48.0	1.00	ug/L	50.0	ND	96	70-130	0.1	25
Calcium	103000	500	ug/L	5000	99000	84	70-130	0.6	25
Chromium	481	10.0	ug/L	500	ND	96	70-130	0.6	25
Cobalt	480	10.0	ug/L	500	ND	96	70-130	0.4	25
Lead	481	10.0	ug/L	500	ND	96	70-130	0.1	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6B22002 (Continued)									
Matrix Spike Dup (6B22002-MSD1)		Source: BZ00721-01		Prepared: 22-Feb-16 Analyzed: 23-Feb-16					
Lithium	486	20.0	ug/L	500	6.50	96	70-130	0.06	25
Molybdenum	481	10.0	ug/L	500	6.80	95	70-130	0.8	25
Selenium	483	40.0	ug/L	500	ND	97	70-130	1	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor



WATER QUALITY LABORATORY
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ORLANDO, FL 32839
Phone: 407-434-2549; Fax: 407-434-2619

CHAIN OF CUSTODY RECORD

PROJECT #: 1602052

PAGE 1 of 1

Container Type	
AG = Amber Glass	Lot: _____
	Lot: _____
CV = Clear Vial	Lot: _____
	Lot: _____
P = Plastic	Lot: _____
	Lot: _____
AL = Amber Liter	Lot: _____
Other: Size	Lot: _____

Matrix Codes*	
GW = Ground Wtr	DW = Drinking Wtr
EFF = Effluent	SW = Surface Wtr
INF = Influent	WW = Waste Wtr
O = Other (specify):	

Pres. Codes		
A. None	B. HNO_3	C. H_2SO_4
D. NaOH	E. HCl	F. EDA
G. $\text{Na}_2\text{S}_2\text{O}_3$	H. H_3PO_4	I. Ascorbic A
Code: _____	Lot: _____	
Code: _____	Lot: _____	
Code: _____	Lot: _____	

[illegible]



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 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph. (407) 382-7733
 Fax (407) 382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name: Orlando Utilities Comm.

Address: 3800 Gardenia Ave

City / State / Zip: ORL FL 32839

Send Report to:

Additional Report:

Invoice to:

Project I.D.

P.O. #

Sample I. D.

Date / Time Sampled

Sample # of Pres.

Analysis

Remarks

(Sample Location)

Type Btls

Requested

1	Equipment Blank	2-18-2016	0835	G	2	HNO ₃	Re 226 & Re 228 (unlabeled)
---	-----------------	-----------	------	---	---	------------------	-----------------------------

2	SEC MW C		1123	G	2		
---	----------	--	------	---	---	--	--

3	SEC MW C, FA		1139	G	2		
---	--------------	--	------	---	---	--	--

Relinquished by:

Date/Time

2-18-2016 1248

Sampled By:

Client

Received by:

Date/Time

2-18-16 12148

Relinquished by:

Date/Time

Received by:

Date/Time

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.

OUC GROUNDWATER SAMPLING LOG

Site Name:	MW C	Site Location:	SEC
Well No.	"C"	Sample ID:	Date: 2-18-2016

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 5.35	Sampling Device: PP							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (31.5 feet - 5.35 feet) X 0.16 gallons/foot = 4.2 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet):	22	Final Pump or Tubing Depth in Well: (feet):	22	Purging Initiated at:	1037	Purging ended at:	1139	Total Volume Purged (gallons):	15.50		
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)	Odor (Describe)
1116	9.75	9.75	0.25	5.50	5.93	23.90	64	0.12	13.1	sl. turbidity	Sulfide
1120	1.00	10.75		5.50	5.94	23.87	64	0.12	13.6		
1123	0.75	11.50		5.50	5.94	23.88	64	0.11	13.3		
1132	13.75	13.75	0.25	5.50	5.91	23.76	63	0.26	11.1	sl. turbidity	Sulfide
1135	0.75	14.50		5.50	5.92	23.77	64	0.24	11.9		
1139	1.00	15.50		5.50	5.90	23.83	63	0.16	10.4		
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 diameter capacity (Gallons Per Foot): 1/8"=0.0006; 3/16"=0.0014; 1/4"=0.0026; 5/16"=0.004; 3/8"=0.006; 1/2"=0.010; 5/8"=0.016 Purging Equipment Codes: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; Q = Other (Specify)											

SAMPLING DATA

[illegible]

pH: ± 0.2 units **Temperature:** $\pm 0.2^\circ\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $\leq 20\text{ NTU}$; optionally $\pm 5\text{ NTU}$ or $\pm 10\%$ (whichever is greater)

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

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

Project/Site: CCR baseline / SEC

Date: 18 Feb. 2016

Meter # YSI 556 MPS 06H1774AB

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

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
Acceptance Criteria: +/- 0.3mg/l											
CAL	ICV	CCV	2-18-16	0930			9.00	20.62	100.2	~8.99	(P) F
CAL	ICV	CCV	2-19-16	0915			8.92	20.63	99.9	"	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
Acceptance Criteria: +/- 5%											
CAL	ICV	CCV	2-18-16	0928	1413	3/2016	2409C09	Q2-28		1426	(P) F
CAL	ICV	CCV	2-19-16	0910	50,000	4/2016	2405521	Q2-30		50570	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
Acceptance Criteria: +/- 0.2 SU											
CAL	ICV	CCV	2-18-16	0905	7.00	1/2017	148470	Q2-48		7.00	P F
CAL	ICV	CCV			4.00	6/2016	143678	Q2-12		4.00	P F
CAL	ICV	CCV			10.00	12/2017	156442	Q2-87		10.04	P F
CAL	ICV	CCV		0925	8.00	8/2016	150050	Q2-49		8.19	(P) F
CAL	ICV	CCV	2-19-16	0850	4.00	As Above				4.08	(P) F
CAL	ICV	CCV		0858	7.00	As Above				7.15	(P) F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

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

Notes: pH Gain: -5.27591 pH: 147.7240

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



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1602044

Report Date: 02/18/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

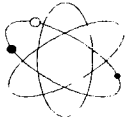
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

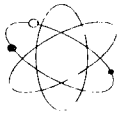
2-18-16



Florida Radiochemistry Services, Inc.

Sample Login

Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		02/08/16 13:00	1602044
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Quarterly Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1602044-01	SEC MW C	02/08/16 11:26	Ra226, Ra228 Combined Ra226 + Ra228
1602044-02	SEC MW, FD	02/08/16 11:40	Ra226, Ra228 Combined Ra226 + Ra228
1602044-03	Equipment Blank	10/05/15 09:10	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1602044-01	1602044-02	1602044-03
Client I.D.	SEC MW C	SEC MW, FD	Equipment Blank
Radium 226	0.2U	0.2U	0.2U
Error +/-	0.1	0.1	0.1
MDL	0.2	0.2	0.2
EPA Method	903.1	903.1	903.1
Prep Date	02/09/16	02/09/16	02/09/16
Prep Time	08:25	08:25	08:25
Analysis Date	02/16/16	02/16/16	02/16/16
Analysis Time	11:03	11:03	11:03
Analyst	MJN	MJN	MJN
Radium 228	0.8U	0.8U	0.8U
Error +/-	0.5	0.5	0.5
MDL	0.8	0.8	0.8
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	02/09/16	02/09/16	02/09/16
Prep Time	08:25	08:25	08:25
Analysis Date	02/16/16	02/16/16	02/16/16
Analysis Time	11:37	12:40	12:40
Analyst	SN	SN	SN
Combined Ra226 + Ra228	0.8U	0.8U	0.8U
Error +/-	0.5	0.5	0.5
MDL	0.8	0.8	0.8
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1602044-01	02/16/16	<0.2	25.2	21.8	23.1	87	5.8
Radium 228	1602044-01	02/16/16	<0.8	7.2	7.1	7.3	99	2.8

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilites Commission

Phone # **407-434-2549**

Address:

3800 Gardenia Ave.

Fax # **407-434-2619**

City / State / Zip

Orlando FL 32839

Send Report to:

Donna McCue dmccue@ouc.com

Additional Report:

Invoice to:

Angelisa Pinkston-Young apinkstonyoung@ouc.com

Project I.D.

SEC Quarterly Monitoring Wells

P.O. #

Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks
1 SEC MW C	2/8/2016 1126	GW	2	HNO3	Ra 226+228	
2 SEC MW , FD	2/8/2016 1140	GW	2	HNO3	Ra 226+228	
3 Equipment Blank	2/8/2016 0910	GW	2	HNO3	Ra 226+228	
4						
5						
6						
7						
8						
9						
10						

Relinquished by:

Date/Time

Received by:

Date/Time

Donna McCue
 2-8-2016 1306
Angelisa Pinkston-Young
 2-8-16 13:00

Sampled By:

Client



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1602143

Report Date: 03/01/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

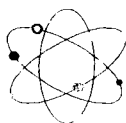
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

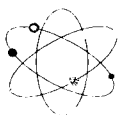
3-1-16



Florida Radiochemistry Services, Inc.

Sample Login

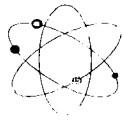
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		02/18/16 12:48	1602143
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Quarterly Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1602143-01	Equipment Blank	02/18/16 08:35	Ra226, Ra228 Combined Ra226 + Ra228
1602143-02	SEC MW C	02/18/16 11:23	Ra226, Ra228 Combined Ra226 + Ra228
1602143-03	SEC MW C, FD	02/18/16 11:39	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1602143-01	1602143-02	1602143-03
Client I.D.	Equipment Blank	SEC MW C	SEC MW C, FD
Radium 226	0.2U	0.3	0.4
Error +/-	0.1	0.2	0.2
MDL	0.2	0.1	0.2
EPA Method	903.1	903.1	903.1
Prep Date	02/19/16	02/19/16	02/19/16
Prep Time	08:07	08:07	08:07
Analysis Date	02/26/16	02/26/16	02/26/16
Analysis Time	11:30	11:30	11:30
Analyst	MJN	MJN	MJN
Radium 228	0.8U	0.8U	0.9U
Error +/-	0.5	0.5	0.6
MDL	0.8	0.8	0.9
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	02/19/16	02/19/16	02/19/16
Prep Time	08:07	08:07	08:07
Analysis Date	02/25/16	02/25/16	02/25/16
Analysis Time	13:46	13:46	13:46
Analyst	SN	SN	SN
Combined Ra226 + Ra228	0.8U	0.8U	0.9U
Error +/-	0.5	0.5	0.6
MDL	0.8	0.8	0.9
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1602131-01	02/26/16	3.0	25.2	28.1	29.0	99.6	3.2
Radium 228	1602131-01	02/25/16	<0.9	7.2	7.9	7.4	110	6.5

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Chain of Custody

		Florida Radiochemistry Services, Inc.		FL Certification E83033	
		5456 Hoffner Ave., Suite 201 Orlando, FL 32812			
		Ph. (407) 382-7733			
		Fax (407) 382-7744			
Email: flradiochemistry@cfl.rr.com					
Company Name:		Orlando Utilities Comm.		Phone # 407-	
Address:		3800 Gaitanaris Ave		Fax # 407-	
City / State / Zip		Orl. FL 32839			
Send Report to:					
Additional Report:					
Invoice to:					
Project I.D.					
P.O. #					
Sample I. D.		Date / Time Sampled		Sample # of	Pres.
(Sample Location)				Type	Btls
				Analysis Requested	
1	Equipment Blank	2-18-2016	0835	G	2 HNO ₃ Ra 226 & Ra 228 (6 month)
2	SEC MW C	↓	1123	G	2 ↓
3	SEC MW C, FA	↓	1139	G	2 ↓
4					
5					
6					
7					
8					
9					
10					
Relinquished by:		[Signature]		Sampled By: Client	
Date/Time		2-18-2016 PH 1248			
Received by:		[Signature]			
Date/Time		2-18-16 12:45			
Relinquished by:					
Date/Time					
Received by:					
Date/Time					



WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1603014

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 17 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

March 24, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1603014**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1603014-01	MW C	03/02/2016
1603014-02	MW C	03/02/2016
1603014-03	EQB	03/02/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-01
Date/Time Collected 03/02/2016 13:39
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Barium	29.2	ug/L	EPA 200.7	1	0.390	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Boron	15.6 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Calcium	6140	ug/L	EPA 200.7	1	39.0	500	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Lithium	3.22 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/03/16 15:50	03/04/16 11:37	6C03002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-02
Date/Time Collected 03/02/2016 13:55
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Barium	29.2	ug/L	EPA 200.7	1	0.390	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Boron	16.0 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Calcium	6120	ug/L	EPA 200.7	1	39.0	500	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/03/16 15:50	03/04/16 11:39	6C03002	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation EQB
Matrix Water
WQLAB Sample Number 1603014-03
Date/Time Collected 03/02/2016 09:00
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Barium	0.390 <i>U</i>	ug/L	EPA 200.7	1	0.390	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Boron	5.94 <i>I</i>	ug/L	EPA 200.7	1	3.70	50.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Calcium	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/03/16 15:50	03/04/16 11:40	6C03002	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-01
Date/Time Collected 03/02/2016 13:39
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/03/16 07:08	03/03/16 11:22	6C02004	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/03/16 10:44	03/04/16 09:13	6B29004	JMA
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/03/16 07:08	03/03/16 11:22	6C02004	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-02
Date/Time Collected 03/02/2016 13:55
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	03/03/16 07:08	03/03/16 11:26	6C02004	JAY
Mercury	0.023 <i>U</i>	ug/L	EPA 245.1	1	0.023	0.200	03/03/16 10:44	03/04/16 09:16	6B29004	JMA
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	03/03/16 07:08	03/03/16 11:26	6C02004	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation EQB
Matrix Water
WQLAB Sample Number 1603014-03
Date/Time Collected 03/02/2016 09:00
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/03/16 07:08	03/03/16 11:30	6C02004	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/03/16 10:44	03/04/16 09:19	6B29004	JMA
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/03/16 07:08	03/03/16 11:30	6C02004	JAY

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-01
Date/Time Collected 03/02/2016 13:39
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.11	mg/L	EPA 300.0	1	1.00	1.00	03/03/16 01:37	03/03/16 01:37	B16C105	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/03/16 01:37	03/03/16 01:37	B16C105	JLK
Sulfate	0.6	mg/L	EPA 300.0	1	0.2	0.2	03/03/16 01:37	03/03/16 01:37	B16C105	JLK
pH	5.69	SU	SM 4500-H B	1			03/02/16 17:10	03/02/16 17:10	B16C033	JLK
Total Dissolved Solids	43.0	mg/L	SM 2540 C	1	5.00	5.00	03/08/16 14:15	03/08/16 14:15	B16C061	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation MW C
Matrix Water
WQLAB Sample Number 1603014-02
Date/Time Collected 03/02/2016 13:55
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.37	mg/L	EPA 300.0	1	1.00	1.00	03/03/16 02:10	03/03/16 02:10	B16C105	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/03/16 02:10	03/03/16 02:10	B16C105	JLK
Sulfate	0.6	mg/L	EPA 300.0	1	0.2	0.2	03/03/16 02:10	03/03/16 02:10	B16C105	JLK
pH	5.64	SU	SM 4500-H B	1			03/02/16 17:10	03/02/16 17:10	B16C033	JLK
Total Dissolved Solids	37.0	mg/L	SM 2540 C	1	5.00	5.00	03/08/16 14:15	03/08/16 14:15	B16C061	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation EQB
Matrix Water
WQLAB Sample Number 1603014-03
Date/Time Collected 03/02/2016 09:00
Date/Time Received 03/02/2016 16:45

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	03/03/16 01:05	03/03/16 01:05	B16C105	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/03/16 01:05	03/03/16 01:05	B16C105	JLK
Sulfate	0.2 <i>u</i>	mg/L	EPA 300.0	1	0.2	0.2	03/03/16 01:05	03/03/16 01:05	B16C105	JLK
pH	5.48	SU	SM 4500-H B	1			03/02/16 17:10	03/02/16 17:10	B16C033	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	03/08/16 14:15	03/08/16 14:15	B16C061	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16C105

Blank (B16C105-BLK1)

Prepared & Analyzed: 03-Mar-16

Sulfate	0.2 U	0.2	mg/L		0.2				
Fluoride	0.10 U	0.10	mg/L		0.10				
Chloride	1.00 U	1.00	mg/L		1.00				

LCS (B16C105-BS1)

Prepared & Analyzed: 03-Mar-16

Sulfate	5.0		mg/L	5.00		99.1	90-110		
Fluoride	0.61		mg/L	0.600		102	90-110		
Chloride	4.99		mg/L	5.00		99.8	90-110		

Duplicate (B16C105-DUP1)

Source: 1603003-02

Prepared & Analyzed: 03-Mar-16

Sulfate	17.4	0.2	mg/L		17.4			0.00	10
Fluoride	0.23	0.10	mg/L		0.23			1.30	10
Chloride	13.1	1.00	mg/L		13.1			0.122	10

Matrix Spike (B16C105-MS1)

Source: 1603003-02

Prepared & Analyzed: 03-Mar-16

Sulfate	19.7	0.2	mg/L	2.00	17.4	119	80-120		
Fluoride	0.73	0.10	mg/L	0.500	0.23	99.6	80-120		
Chloride	15.1	1.00	mg/L	2.00	13.1	97.6	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16C033

LCS (B16C033-BS1)

Prepared & Analyzed: 02-Mar-16

pH	7.99		SU	8.00		99.9	97.5-102.5		
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Duplicate (B16C033-DUP1)

Source: 1603014-01

Prepared & Analyzed: 02-Mar-16

pH	5.69		SU		5.69			0.00	10
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Batch: B16C061

Blank (B16C061-BLK1)

Prepared: 03-Mar-16 Analyzed: 08-Mar-16

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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LCS (B16C061-BS1)

Prepared: 03-Mar-16 Analyzed: 08-Mar-16

Total Dissolved Solids	414	5.00	mg/L	410		101	80-120		
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Duplicate (B16C061-DUP1)

Source: 1603002-01

Prepared: 03-Mar-16 Analyzed: 08-Mar-16

Total Dissolved Solids	484	5.00	mg/L		487			0.618	10
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6B29004									
Blank (6B29004-BLK1)									
Mercury	0.023 U	0.200	ug/L	Prepared: 03-Mar-16 Analyzed: 04-Mar-16 0.023					
Blank (6B29004-BLK2)									
Mercury	0.230 U	2.00	ug/L	Prepared: 03-Mar-16 Analyzed: 04-Mar-16 0.230					
Blank (6B29004-BLK3)									
Mercury	0.230 U	2.00	ug/L	Prepared: 03-Mar-16 Analyzed: 04-Mar-16 0.230					
Blank (6B29004-BLK4)									
Mercury	0.230 U	2.00	ug/L	Prepared: 03-Mar-16 Analyzed: 04-Mar-16 0.230					
LCS (6B29004-BS1)									
Mercury	5.05	0.200	ug/L	5.00		101	85-115		
Matrix Spike (6B29004-MS1)									
Mercury	5.37	0.200	ug/L	5.00	0.044	107	70-130		
Matrix Spike Dup (6B29004-MSD1)									
Mercury	5.36	0.200	ug/L	5.00	0.044	106	70-130	0.2	10
Post Spike (6B29004-PS1)									
Mercury	5.21		ug/L	5.61	0.041	92	75-125		
Batch: 6C02004									
Blank (6C02004-BLK1)									
Antimony	1.10 U	20.0	ug/L	Prepared: 02-Mar-16 Analyzed: 03-Mar-16 1.10					
Thallium	0.580 U	1.00	ug/L	0.580					
LCS (6C02004-BS1)									
Antimony	49.6	20.0	ug/L	50.0		99	85-115		
Thallium	50.8	1.00	ug/L	50.0		102	85-115		
Matrix Spike (6C02004-MS1)									
Antimony	50.6	20.0	ug/L	50.0	1.27	99	70-130		
Thallium	50.2	1.00	ug/L	50.0	ND	100	70-130		
Matrix Spike Dup (6C02004-MSD1)									
Antimony	49.9	20.0	ug/L	50.0	1.27	97	70-130	1	30
Thallium	50.1	1.00	ug/L	50.0	ND	100	70-130	0.2	30
Post Spike (6C02004-PS1)									
Antimony	4.95		ug/L	4.90	ND	98	75-125		
Thallium	4.92		ug/L	4.90	ND	100	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6C03002

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6C03002 (Continued)

Blank (6C03002-BLK1)

Prepared: 03-Mar-16 Analyzed: 04-Mar-16

Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
Cadmium	0.280 U	1.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				

Blank (6C03002-BLK2)

Prepared: 03-Mar-16 Analyzed: 07-Mar-16

Boron	3.70 U	50.0	ug/L		3.70				
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LCS (6C03002-BS1)

Prepared: 03-Mar-16 Analyzed: 04-Mar-16

Arsenic	470	10.0	ug/L	500		94	85-115		
Barium	490	10.0	ug/L	500		98	85-115		
Beryllium	48.6	1.00	ug/L	50.0		97	85-115		
Boron	2350	50.0	ug/L	2500		94	85-115		
Cadmium	48.7	1.00	ug/L	50.0		97	85-115		
Calcium	4710	500	ug/L	5000		94	85-115		
Chromium	480	10.0	ug/L	500		96	85-115		
Cobalt	485	10.0	ug/L	500		97	85-115		
Lead	495	10.0	ug/L	500		99	85-115		
Lithium	497	20.0	ug/L	500		99	85-115		
Molybdenum	475	10.0	ug/L	500		95	85-115		
Selenium	481	40.0	ug/L	500		96	85-115		

Matrix Spike (6C03002-MS1)

Source: BZ00731-01

Prepared: 03-Mar-16 Analyzed: 04-Mar-16

Arsenic	487	10.0	ug/L	500	9.65	95	70-130		
Barium	505	10.0	ug/L	500	17.5	98	70-130		
Beryllium	48.6	1.00	ug/L	50.0	ND	97	70-130		
Boron	2470	50.0	ug/L	2500	127	94	70-130		
Cadmium	47.9	1.00	ug/L	50.0	ND	96	70-130		
Calcium	51900	500	ug/L	5000	48300	72	70-130		
Chromium	476	10.0	ug/L	500	ND	95	70-130		
Cobalt	484	10.0	ug/L	500	ND	97	70-130		
Lead	482	10.0	ug/L	500	ND	96	70-130		
Lithium	500	20.0	ug/L	500	5.04	99	70-130		
Molybdenum	484	10.0	ug/L	500	9.75	95	70-130		
Selenium	493	40.0	ug/L	500	8.26	97	70-130		

Matrix Spike Dup (6C03002-MSD1)

Source: BZ00731-01

Prepared: 03-Mar-16 Analyzed: 04-Mar-16

Arsenic	487	10.0	ug/L	500	9.65	95	70-130	0.002	25
Barium	510	10.0	ug/L	500	17.5	99	70-130	0.9	25
Beryllium	49.3	1.00	ug/L	50.0	ND	99	70-130	1	25
Boron	2500	50.0	ug/L	2500	127	95	70-130	1	25
Cadmium	48.2	1.00	ug/L	50.0	ND	96	70-130	0.6	25
Calcium	53000	500	ug/L	5000	48300	95	70-130	2	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C03002 (Continued)									
Matrix Spike Dup (6C03002-MSD1)		Source: BZ00731-01		Prepared: 03-Mar-16 Analyzed: 04-Mar-16					
Chromium	482	10.0	ug/L	500	ND	96	70-130	1	25
Cobalt	488	10.0	ug/L	500	ND	98	70-130	0.9	25
Lead	488	10.0	ug/L	500	ND	98	70-130	1	25
Lithium	504	20.0	ug/L	500	5.04	100	70-130	0.9	25
Molybdenum	490	10.0	ug/L	500	9.75	96	70-130	1	25
Selenium	495	40.0	ug/L	500	8.26	97	70-130	0.5	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor



The Reliable One

WATER QUALITY LABORATORY
3800 GARDENIA AVENUE
ORLANDO, FL 32839

Phone: 407-434-2549; Fax: 407-434-2619

CHAIN OF CUSTODY RECORD

PROJECT #: 1603 014

PAGE of

[illegible]

Client Name		Project Number		Requested Analyses								Requested Turnaround Times	
Orlando Utilities Commission (OR021)		[none]										Note : Rush requests subject to acceptance by the facility	
Address 3800 Gardenia Ave.		Project Name/Desc New SEC Lettered Monitor Wells - Monthly											
City/ST/Zip Orlando, FL 32839		PO # / Billing Info											
Tel		Reporting Contact											
Fax		Billing Contact		Due ____ / ____ / ____		Lab Workorder AZ00695							
407-434-2547		Donna McCue											
Sampler(s) Name, Affiliation (Print)		Site Location / Time Zone											
Sampler(s) Signature		Angelisa Young											

[illegible]

Sample Kit Prepared By <i>SK</i>	Date/Time <i>06/02/16 1112</i>	Relinquished By <i>[Signature]</i>	Date/Time <i>06/02/16 1112</i>	Received By <i>[Signature]</i>	Date/Time <i>03/02/16 031536</i>
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By <i>[Signature]</i>	Date/Time <i>03-2016 1536</i>	Received By <i>[Signature]</i>	Date/Time <i>03/02/16 031536</i>
Cooler #s & Temps on Receipt		Condition Upon Receipt ____ Acceptable ____ Unacceptable			

Matrix : GW-Groundwater SO-Soil DW-Drinking Water

SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.

		Florida Radiochemistry Services, Inc. 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812 Ph.(407)382-7733 Fax(407)382-7744 Email: flradiochemistry@cfl.rr.com		FL Certification E83033	
Company Name:		Orlando Utilities Commission 3800 Gardenia Ave. Orlando FL 32839		Phone # 407-434-2549 Fax # 407-434-2619	
Address:					
City / State / Zip					
Send Report to:		Donna McCue dmmcue@ouc.com			
Additional Report:		J Shoemaker jshoemaker@ouc.com			
Invoice to:		Angelisa Pinkston-Young apinkstonyoung@ouc.com			
Project I.D.		SEC Quarterly Monitoring Wells			
P.O. #					
Sample I. D.	Date / Time Sampled	Sample Type	# of Bits	Pres.	Analysis Requested
(Sample Location)					
1 SEC MW-C	3/2/2016	GW	2	HNO3	Gross Alpha <i>JP</i>
2 SEC MW-C, FD	3/2/2016	GW	2	HNO3	Gross Alpha <i>3416</i>
3 Equipment Blank	3/2/2016	GW	2	HNO3	Gross Alpha
4					
5					
6					
7					
8					
9					
10					
Relinquished by:		Jim Shoemaker		Sampled By:	
Date/Time		3-4-2016 0835		Client	
Received by:		M. McCue		OUC-WAL	
Date/Time		3-4-16 8:35			

All samples require Radium 226 and Radium 228 combined

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC MW C	Site Location: SEC
Well No. C	Sample ID: Date: 3-2-2016

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: J. Shoemaker, J. Roy / OUC-WQL				Sampler(s) Signature(s): <i>[Signature]</i>			Sampling initiated at: 1339, 1355		Sampling ended at: 1348, 1403	
Pump or tubing depth in well (feet):				Tubing Material Code: PE			Field-filtered: Y N		Filter Size: _____ µm	
Field Decontamination: Pump Y (N)				Tubing Y (N (replaced))			Filtration Equipment Type:		Duplicate: Y N	
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $< 20 \text{ NTU}$; optionally $\pm 5 \text{ NTU}$ or $\pm 10\%$ (whichever is greater)

I:\WOLAB\LAB\Sampling\SEC Monitoring Wells\OUC Groundwater Sampling Log.doc

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

Project Site:

AA + Monthly + MWC / SEC

Date: 3-2-2016

Meter # YSI SSC MDS

06H1774AB

Temperature (Quarterly)

For Date of Last Temperature Verification see

in log book

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
------------------	--------------------	----------	------	------	-----------------	---------------	------	---------	------	------------------------------------	-----------------

Acceptance Criteria: +/-0.3mg/L

CAL ICV CCV			3-2-2016	0920			9.05	20.44	100.5		(P) F
CAL ICV CCV			3-3-2016	1317			9.05	20.45	101.7		(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
-------------------------	--------------------	----------	------	------	----------------------	-----------	-------	----------	------------------	---------------------	-----------------

Acceptance Criteria: +/- 5%

CAL ICV CCV			3-3-2016	1320	1413	3/2016	2409C09	02-28		1424	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	--------------------	----------	------	------	----------------	-----------	-------	----------	-------	---------------	-----------------

Acceptance Criteria: +/-0.2 SU

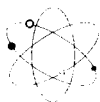
CAL ICV CCV			3-2-2016	0910	7.00	1/2017	148470	02-48		7.02	(P) F
CAL ICV CCV			"	0915	10.00	12/2017	156492	02-87		10.04	(P) F
CAL ICV CCV			3-3-2016	1310	4.00	8/2017	155560	02-86		4.06	(P) F
CAL ICV CCV			"	1314	7.00	AS	Alco 600			7.02	(P) F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F
CAL ICV CCV											P F

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

Notes:

Perform only in Calibrate Mode:
Perform only in Run Mode:
Perform only in Run Mode:

CAL - Calibrate -
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # F83033

Work Order #: 1603055

Report Date: 03/18/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

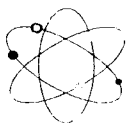
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

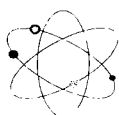
3-18-16



Florida Radiochemistry Services, Inc.

Sample Login

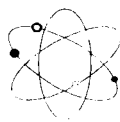
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		03/04/16 08:35	1603055
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Quarterly Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1603055-01	SEC MW C	03/02/16 13:39	Ra226, Ra228 Combined Ra226 + Ra228
1603055-02	SEC MW C, FD	03/02/16 13:55	Ra226, Ra228 Combined Ra226 + Ra228
1603055-03	Equipment Blank	03/02/16 09:00	Ra226, Ra228 Combined Ra226 + Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1603055-01	1603055-02	1603055-03
Client I.D.	SEC MW C	SEC MW C, FD	Equipment Blank
Radium 226	0.3	0.2	0.1U
Error +/-	0.1	0.1	0.1
MDL	0.1	0.2	0.1
EPA Method	903.1	903.1	903.1
Prep Date	03/07/16	03/07/16	03/07/16
Prep Time	07:57	07:57	07:57
Analysis Date	03/15/16	03/15/16	03/15/16
Analysis Time	10:02	11:05	11:05
Analyst	MJN	MJN	MJN
Radium 228	0.8U	0.8U	0.8U
Error +/-	0.5	0.5	0.5
MDL	0.8	0.8	0.8
EPA Method	Ra-05	Ra-05	Ra-05
Prep Date	03/07/16	03/07/16	03/07/16
Prep Time	07:57	07:57	07:57
Analysis Date	03/15/16	03/15/16	03/15/16
Analysis Time	11:28	11:28	11:28
Analyst	SN	SN	SN
Combined Ra226 + Ra228	0.8U	0.8U	0.8U
Error +/-	0.5	0.5	0.5
MDL	0.8	0.8	0.8
Units	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1603055-01	03/15/16	0.3	25.2	25.7	27.4	101	6.4
Radium 228	1603055-01	03/15/16	<0.8	7.2	7.3	6.9	101	5.6

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125



Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilities Commission

Phone # **407-434-2549**

Address:

3800 Gardenia Ave.

Fax # **407-434-2619**

City / State / Zip

Orlando FL 32839

Send Report to:

Donna McCue dmcue@ouc.com

Additional Report:

J Shoemaker jshoemaker@ouc.com

Invoice to:

Angelisa Pinkston-Young apinkstonyoung@ouc.com

Project I.D.

SEC Quarterly Monitoring Wells

P.O. #

Sample I. D. (Sample Location)	Date / Time Sampled		Sample Type	# of Btls	Pres.	Analysis Requested	Remarks
1 SEC MW-C	3/2/2016	13:39	GW	2	HNO3	Gross Alpha	
2 SEC MW-C, FD	3/2/2016	13:55	GW	2	HNO3	Gross Alpha	
3 Equipment Blank	3/2/2016	9:00	GW	2	HNO3	Gross Alpha	
4							
5							
6							
7							
8							
9							
10							

All samples require
 Radium 226 and
 Radium 228 combined

Relinquished by:

Date/Time

Received by:

Date/Time

Jim Shoemaker
 3-4-2016 08:35
McMann
 3-4-16 3:35

Sampled By:

Jim Shoemaker

Client

ouc - WQL



ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive

Orlando FL, 32824

Phone: 407.826.5314 FAX: 407.850.6945

Tuesday, March 15, 2016

Orlando Utilities Commission (OR021)

Attn: Donna McCue

3800 Gardenia Ave.

Orlando, FL 32839

RE: Laboratory Results for

Project Number: [none], Project Name/Desc: New SEC Lettered Monitor Wells - Monthly

ENCO Workorder(s): AZ00684

Dear Donna McCue,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, February 3, 2016.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Carlene S Pasipanki For David Camacho

Project Manager

Enclosure(s)

PROJECT NARRATIVE

Client: Orlando Utilities Commission (OR021)
Project: New SEC Lettered Monitor Wells - Monthly
ENCO Project ID: AZ00684

Overview

All samples submitted were analyzed by Environmental Conservation Laboratories, Inc. in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling and processing will be discussed in the Remarks section below.

Remarks

Analysis: EPA 200.8, EPA 200.7, EPA 245.1

Affected Samples: 1602013-01[AZ00684-01], 1602013-02[AZ00684-02], 1602013-03[AZ00684-03]

Nonconformance: This report is an amendment to the original report dated 2/9/16 for this work order.

Additional Information: At client request samples IDs were changed from the IDs provided on the chain of custody.

Carlene S Pasipanki
Project Manager

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 1602013-01 Lab ID: AZ00684-01 Sampled: 02/03/16 13:17 Received: 02/03/16 14:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 200.7	08/01/16	02/05/16 09:14	02/08/16 10:59
EPA 200.8	08/01/16	02/04/16 05:24	02/05/16 10:26
EPA 245.1	03/02/16	02/04/16 12:06	02/05/16 07:06

Client ID: 1602013-02 Lab ID: AZ00684-02 Sampled: 02/03/16 13:29 Received: 02/03/16 14:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 200.7	08/01/16	02/05/16 09:14	02/08/16 11:01
EPA 200.8	08/01/16	02/04/16 05:24	02/05/16 10:33
EPA 245.1	03/02/16	02/04/16 12:06	02/05/16 07:09

Client ID: 1602013-03 Lab ID: AZ00684-03 Sampled: 02/03/16 08:40 Received: 02/03/16 14:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 200.7	08/01/16	02/05/16 09:14	02/08/16 11:02
EPA 200.8	08/01/16	02/04/16 05:24	02/05/16 10:39
EPA 245.1	03/02/16	02/04/16 12:06	02/05/16 07:12

SAMPLE DETECTION SUMMARY

Client ID: 1602013-01

Lab ID: AZ00684-01

<u>Analyte</u>	<u>Results</u>	<u>Flag</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Notes</u>
Barium - Total	29.4		0.390	10.0	ug/L	EPA 200.7	
Boron - Total	14.9	I	3.70	50.0	ug/L	EPA 200.7	
Calcium - Total	4950		39.0	500	ug/L	EPA 200.7	
Lithium - Total	3.19	I	2.60	20.0	ug/L	EPA 200.7	

Client ID: 1602013-02

Lab ID: AZ00684-02

<u>Analyte</u>	<u>Results</u>	<u>Flag</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Notes</u>
Barium - Total	29.7		0.390	10.0	ug/L	EPA 200.7	
Boron - Total	13.0	I	3.70	50.0	ug/L	EPA 200.7	
Calcium - Total	4820		39.0	500	ug/L	EPA 200.7	
Lithium - Total	4.80	I	2.60	20.0	ug/L	EPA 200.7	

ANALYTICAL RESULTS

Description: 1602013-01

Lab Sample ID: AZ00684-01

Received: 02/03/16 14:50

Matrix: Ground Water

Sampled: 02/03/16 13:17

Work Order: AZ00684

Project: New SEC Lettered Monitor Wells -
Monthly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	0.110	U	ug/L	1	0.110	2.00	6B04004	EPA 200.8	02/05/16 10:26	JMA	
Mercury [7439-97-6]^	0.023	U	ug/L	1	0.023	0.200	6B02008	EPA 245.1	02/05/16 07:06	JMA	
Thallium [7440-28-0]^	0.058	U	ug/L	1	0.058	0.100	6B04004	EPA 200.8	02/05/16 10:26	JMA	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	8.00	U	ug/L	1	8.00	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Barium [7440-39-3]^	29.4		ug/L	1	0.390	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Beryllium [7440-41-7]^	0.120	U	ug/L	1	0.120	1.00	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Boron [7440-42-8]^	14.9	I	ug/L	1	3.70	50.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Cadmium [7440-43-9]^	0.280	U	ug/L	1	0.280	1.00	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Calcium [7440-70-2]^	4950		ug/L	1	39.0	500	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Chromium [7440-47-3]^	1.10	U	ug/L	1	1.10	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Cobalt [7440-48-4]^	1.50	U	ug/L	1	1.50	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Lead [7439-92-1]^	2.50	U	ug/L	1	2.50	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Lithium [7439-93-2]^	3.19	I	ug/L	1	2.60	20.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Molybdenum [7439-98-7]^	5.00	U	ug/L	1	5.00	10.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	
Selenium [7782-49-2]^	8.20	U	ug/L	1	8.20	40.0	6B05002	EPA 200.7	02/08/16 10:59	ACV	

Description: 1602013-02

Lab Sample ID: AZ00684-02

Received: 02/03/16 14:50

Matrix: Ground Water

Sampled: 02/03/16 13:29

Work Order: AZ00684

Project: New SEC Lettered Monitor Wells -
Monthly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	0.110	U	ug/L	1	0.110	2.00	6B04004	EPA 200.8	02/05/16 10:33	JMA	
Mercury [7439-97-6]^	0.023	U	ug/L	1	0.023	0.200	6B02008	EPA 245.1	02/05/16 07:09	JMA	
Thallium [7440-28-0]^	0.058	U	ug/L	1	0.058	0.100	6B04004	EPA 200.8	02/05/16 10:33	JMA	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	8.00	U	ug/L	1	8.00	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Barium [7440-39-3]^	29.7		ug/L	1	0.390	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Beryllium [7440-41-7]^	0.120	U	ug/L	1	0.120	1.00	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Boron [7440-42-8]^	13.0	I	ug/L	1	3.70	50.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Cadmium [7440-43-9]^	0.280	U	ug/L	1	0.280	1.00	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Calcium [7440-70-2]^	4820		ug/L	1	39.0	500	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Chromium [7440-47-3]^	1.10	U	ug/L	1	1.10	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Cobalt [7440-48-4]^	1.50	U	ug/L	1	1.50	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Lead [7439-92-1]^	2.50	U	ug/L	1	2.50	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Lithium [7439-93-2]^	4.80	I	ug/L	1	2.60	20.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Molybdenum [7439-98-7]^	5.00	U	ug/L	1	5.00	10.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	
Selenium [7782-49-2]^	8.20	U	ug/L	1	8.20	40.0	6B05002	EPA 200.7	02/08/16 11:01	ACV	

ANALYTICAL RESULTS

Description: 1602013-03

Lab Sample ID: AZ00684-03

Received: 02/03/16 14:50

Matrix: Ground Water

Sampled: 02/03/16 08:40

Work Order: AZ00684

Project: New SEC Lettered Monitor Wells -
Monthly

Sampled By:

Metals by EPA 200 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	0.110	U	ug/L	1	0.110	2.00	6B04004	EPA 200.8	02/05/16 10:39	JMA	
Mercury [7439-97-6]^	0.023	U	ug/L	1	0.023	0.200	6B02008	EPA 245.1	02/05/16 07:12	JMA	
Thallium [7440-28-0]^	0.058	U	ug/L	1	0.058	0.100	6B04004	EPA 200.8	02/05/16 10:39	JMA	

Metals by EPA 200 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	8.00	U	ug/L	1	8.00	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Barium [7440-39-3]^	0.390	U	ug/L	1	0.390	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Beryllium [7440-41-7]^	0.120	U	ug/L	1	0.120	1.00	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Boron [7440-42-8]^	3.70	U	ug/L	1	3.70	50.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Cadmium [7440-43-9]^	0.280	U	ug/L	1	0.280	1.00	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Calcium [7440-70-2]^	39.0	U	ug/L	1	39.0	500	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Chromium [7440-47-3]^	1.10	U	ug/L	1	1.10	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Cobalt [7440-48-4]^	1.50	U	ug/L	1	1.50	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Lead [7439-92-1]^	2.50	U	ug/L	1	2.50	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Lithium [7439-93-2]^	2.60	U	ug/L	1	2.60	20.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Molybdenum [7439-98-7]^	5.00	U	ug/L	1	5.00	10.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	
Selenium [7782-49-2]^	8.20	U	ug/L	1	8.20	40.0	6B05002	EPA 200.7	02/08/16 11:02	ACV	

QUALITY CONTROL DATA

Metals by EPA 200 Series Methods - Quality Control

Batch 6B02008 - EPA 7470A

Blank (6B02008-BLK1)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:16

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.023	U	0.200	ug/L							

Blank (6B02008-BLK2)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:19

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.230	U	2.00	ug/L							

Blank (6B02008-BLK3)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:22

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.230	U	2.00	ug/L							

Blank (6B02008-BLK4)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:25

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.230	U	2.00	ug/L							

LCS (6B02008-BS1)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:28

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.99		0.200	ug/L	5.00		100	85-115			

Matrix Spike (6B02008-MS1)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:35

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.66		0.200	ug/L	5.00	0.524	103	70-130			

Matrix Spike Dup (6B02008-MSD1)

Prepared: 02/04/2016 12:06 Analyzed: 02/05/2016 06:38

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.73		0.200	ug/L	5.00	0.524	104	70-130	1	10	

Post Spike (6B02008-PS1)

Prepared: 02/05/2016 06:00 Analyzed: 02/05/2016 06:41

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	6.59		0.200	ug/L	5.61	0.494	109	75-125			

Batch 6B04004 - EPA 3005A

Blank (6B04004-BLK1)

Prepared: 02/04/2016 05:24 Analyzed: 02/05/2016 08:37

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	1.10	U	20.0	ug/L							
Thallium	0.580	U	1.00	ug/L							

QUALITY CONTROL DATA

Metals by EPA 200 Series Methods - Quality Control

Batch 6B04004 - EPA 3005A - Continued

Blank (6B04004-BLK2)

Prepared: 02/04/2016 05:24 Analyzed: 02/05/2016 08:40

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.110	U	2.00	ug/L							
Thallium	0.058	U	0.100	ug/L							

LCS (6B04004-BS1)

Prepared: 02/04/2016 05:24 Analyzed: 02/05/2016 08:49

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	47.3		20.0	ug/L	50.0		95	85-115			
Thallium	50.1		1.00	ug/L	50.0		100	85-115			

Matrix Spike (6B04004-MS1)

Prepared: 02/04/2016 05:24 Analyzed: 02/05/2016 09:40

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	13.7	I	20.0	ug/L	50.0	2.17	23	70-130			QM-07
Thallium	52.4		1.00	ug/L	50.0	0.729	103	70-130			

Matrix Spike Dup (6B04004-MSD1)

Prepared: 02/04/2016 05:24 Analyzed: 02/05/2016 09:46

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	13.3	I	20.0	ug/L	50.0	2.17	22	70-130	3	30	QM-07
Thallium	53.9		1.00	ug/L	50.0	0.729	106	70-130	3	30	

Post Spike (6B04004-PS1)

Prepared: 02/05/2016 08:00 Analyzed: 02/05/2016 09:01

Source: AZ00457-06

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	4.76		2.00	ug/L	4.90	0.110 U	93	75-125			
Thallium	5.14		0.100	ug/L	4.90	0.058 U	103	75-125			

Metals by EPA 200 Series Methods - Quality Control

Batch 6B05002 - EPA 3005A

Blank (6B05002-BLK1)

Prepared: 02/05/2016 09:14 Analyzed: 02/08/2016 10:37

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	8.00	U	10.0	ug/L							
Barium	0.390	U	10.0	ug/L							
Beryllium	0.120	U	1.00	ug/L							
Boron	3.70	U	50.0	ug/L							
Cadmium	0.280	U	1.00	ug/L							
Calcium	39.0	U	500	ug/L							
Chromium	1.10	U	10.0	ug/L							
Cobalt	1.50	U	10.0	ug/L							
Lead	2.50	U	10.0	ug/L							
Lithium	2.60	U	20.0	ug/L							
Molybdenum	5.00	U	10.0	ug/L							
Selenium	8.20	U	40.0	ug/L							

QUALITY CONTROL DATA

Metals by EPA 200 Series Methods - Quality Control

Batch 6B05002 - EPA 3005A - Continued

LCS (6B05002-BS1)

Prepared: 02/05/2016 09:14 Analyzed: 02/08/2016 10:39

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	476		10.0	ug/L	500		95	85-115			
Barium	490		10.0	ug/L	500		98	85-115			
Beryllium	48.4		1.00	ug/L	50.0		97	85-115			
Boron	2380		50.0	ug/L	2500		95	85-115			
Cadmium	48.5		1.00	ug/L	50.0		97	85-115			
Calcium	4720		500	ug/L	5000		94	85-115			
Chromium	484		10.0	ug/L	500		97	85-115			
Cobalt	486		10.0	ug/L	500		97	85-115			
Lead	487		10.0	ug/L	500		97	85-115			
Lithium	483		20.0	ug/L	500		97	85-115			
Molybdenum	472		10.0	ug/L	500		94	85-115			
Selenium	486		40.0	ug/L	500		97	85-115			

Matrix Spike (6B05002-MS1)

Prepared: 02/05/2016 09:14 Analyzed: 02/08/2016 10:41

Source: BZ00572-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	1880		50.0	ug/L	2500	52.9	73	70-130			
Barium	2830		50.0	ug/L	2500	500	93	70-130			
Beryllium	241		5.00	ug/L	250	8.54	93	70-130			
Boron	11100		250	ug/L	12500	91.1	88	70-130			
Cadmium	233		5.00	ug/L	250	5.80	91	70-130			
Calcium	80200		2500	ug/L	25000	57800	90	70-130			
Chromium	3250		50.0	ug/L	2500	838	96	70-130			
Cobalt	2330		50.0	ug/L	2500	28.0	92	70-130			
Lead	2570		50.0	ug/L	2500	235	93	70-130			
Lithium	2710		100	ug/L	2500	193	101	70-130			
Molybdenum	1910		50.0	ug/L	2500	52.7	74	70-130			
Selenium	1670		200	ug/L	2500	41.0 U	67	70-130			QM-07

Matrix Spike Dup (6B05002-MSD1)

Prepared: 02/05/2016 09:14 Analyzed: 02/08/2016 10:42

Source: BZ00572-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	1950		50.0	ug/L	2500	52.9	76	70-130	4	25	
Barium	2830		50.0	ug/L	2500	500	93	70-130	0.2	25	
Beryllium	241		5.00	ug/L	250	8.54	93	70-130	0.3	25	
Boron	11200		250	ug/L	12500	91.1	89	70-130	0.1	25	
Cadmium	233		5.00	ug/L	250	5.80	91	70-130	0.2	25	
Calcium	79700		2500	ug/L	25000	57800	87	70-130	0.7	25	
Chromium	3270		50.0	ug/L	2500	838	97	70-130	0.7	25	
Cobalt	2330		50.0	ug/L	2500	28.0	92	70-130	0.08	25	
Lead	2580		50.0	ug/L	2500	235	94	70-130	0.2	25	
Lithium	2700		100	ug/L	2500	193	100	70-130	0.5	25	
Molybdenum	1940		50.0	ug/L	2500	52.7	76	70-130	2	25	
Selenium	1780		200	ug/L	2500	41.0 U	71	70-130	6	25	

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
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.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

10775 Central Port Dr.
Orlando, FL 32824
(407) 626-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 11
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwind Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name Orlando Utilities Commission (OR021)						Project Number [none]						
Address 3800 Gardenia Ave, Orlando, FL 32839						Project Name/Desc: New SEC Lettered Monitor Wells - Monthly						
City/State/ Tel Fax						PO # / Billing Info						
Reporting Contact Donna McCue												
Billing Contact Angella Young												
Site Location / Time Zone												
Sampler(s) Signature												
Requested Turnaround Times												
Note : Rush requests subject to acceptance by the facility												
☐ Standard												
☒ Expedited												
Due / /												
Lab Workorder -A700684												

[illegible]

Sample Kit Prepared By SR	Date/Time 02/01/16 1625	Relinquished By [Signature]	Date/Time 02/01/16 1625	Received By S. Casady	Date/Time 02/3/16 1450
Comments/Special Reporting Requirements		Relinquished By [Signature]	Date/Time	Received By	Date/Time
Relinquished By [Signature]		Date/Time 2-3-2016 1450	Received By S. Casady	Date/Time 02/3/16 1450	
Cooler #1 & Temps on Receipt SPH-110610 @ 1.2°C		Condition Upon Receipt ☒ Acceptable ☐ Unacceptable			

Aliases: **GW**-Groundwater **SO**-Soil **DW**-Drinking Water **SE**-Sediment **SW**-Surface Water **WW**-Wastewater **A**-Air **O**-Other (detail in comments)

Preservation: **Ice** **HCl** **N-HNO₃** **S-H₂SO₄** **NO** **NaOH** **O**-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist.



The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1603062

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 31 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

May 05, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1603062**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1603062-01	Equipment Blank	03/22/2016
1603062-02	SEC Monitoring Well C	03/22/2016
1603062-03	SEC Monitoring Well B	03/22/2016
1603062-04	SEC Monitoring Well B Field Duplicate	03/22/2016
1603062-05	SEC Monitoring Well A	03/22/2016
1603062-06	SEC Monitoring Well D	03/22/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1603062-01
Date/Time Collected 03/22/2016 08:20
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	14.3 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 08:59	03/25/16 10:16	6C24003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 08:59	03/25/16 10:16	6C24003	ACV
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 08:59	03/25/16 10:16	6C24003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 08:59	03/25/16 10:16	6C24003	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 08:59	03/25/16 10:16	6C24003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1603062-02
Date/Time Collected 03/22/2016 10:26
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	20.5 <i>IV, J-ox</i>	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 09:01	03/25/16 10:59	6C24004	ACV
Lithium	5.44 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 09:01	03/25/16 10:59	6C24004	ACV
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 09:01	03/25/16 10:59	6C24004	ACV
Lead	2.56 <i>I</i>	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 09:01	03/25/16 10:59	6C24004	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 09:01	03/25/16 10:59	6C24004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1603062-03
Date/Time Collected 03/22/2016 10:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	33.5 <i>IV, J-ox</i>	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 09:01	03/25/16 11:01	6C24004	ACV
Lithium	8.31 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 09:01	03/25/16 11:01	6C24004	ACV
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 09:01	03/25/16 11:01	6C24004	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 09:01	03/25/16 11:01	6C24004	ACV
Selenium	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 09:01	03/25/16 11:01	6C24004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B Field Duplicate
Matrix Water
WQLAB Sample Number 1603062-04
Date/Time Collected 03/22/2016 11:17
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	32.2 μV , $J\text{-}\alpha$	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 09:01	03/25/16 11:02	6C24004	ACV
Lithium	7.06 μI	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 09:01	03/25/16 11:02	6C24004	ACV
Arsenic	8.00 μV	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 09:01	03/25/16 11:02	6C24004	ACV
Lead	2.50 μV	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 09:01	03/25/16 11:02	6C24004	ACV
Selenium	8.20 μV	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 09:01	03/25/16 11:02	6C24004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
 Sample Designation SEC Monitoring Well A
 Matrix Water
 WQLAB Sample Number 1603062-05
 Date/Time Collected 03/22/2016 12:16
 Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	57.7 v, QB-or	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 09:01	03/25/16 11:04	6C24004	ACV
Lithium	99.4	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 09:01	03/25/16 11:04	6C24004	ACV
Arsenic	8.00 u	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 09:01	03/25/16 11:04	6C24004	ACV
Lead	11.2	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 09:01	03/25/16 11:04	6C24004	ACV
Selenium	8.20 u	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 09:01	03/25/16 11:04	6C24004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1603062-06
Date/Time Collected 03/22/2016 12:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	18.5 μV , $J\text{-}\alpha$	ug/L	EPA 200.7	1	3.70	50.0	03/24/16 09:01	03/25/16 11:05	6C24004	ACV
Lithium	2.72 μ	ug/L	EPA 200.7	1	2.60	20.0	03/24/16 09:01	03/25/16 11:05	6C24004	ACV
Arsenic	8.00 μ	ug/L	EPA 200.7	1	8.00	10.0	03/24/16 09:01	03/25/16 11:05	6C24004	ACV
Lead	2.50 μ	ug/L	EPA 200.7	1	2.50	10.0	03/24/16 09:01	03/25/16 11:05	6C24004	ACV
Selenium	8.20 μ	ug/L	EPA 200.7	1	8.20	40.0	03/24/16 09:01	03/25/16 11:05	6C24004	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1603062-01
Date/Time Collected 03/22/2016 08:20
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:11	6C23025	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 07:41	6C22004	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:11	6C23025	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1603062-02
Date/Time Collected 03/22/2016 10:26
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:12	6C23025	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 07:50	6C22004	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:12	6C23025	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1603062-03
Date/Time Collected 03/22/2016 10:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:15	6C23025	JMA
Mercury	0.023 <i>U</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 07:53	6C22004	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:15	6C23025	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B Field Duplicate
Matrix Water
WQLAB Sample Number 1603062-04
Date/Time Collected 03/22/2016 11:17
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:16	6C23025	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 07:56	6C22004	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:16	6C23025	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1603062-05
Date/Time Collected 03/22/2016 12:16
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>U</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:19	6C23025	JMA
Mercury	0.023 <i>U</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 08:00	6C22004	IR
Thallium	0.580 <i>U</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:19	6C23025	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1603062-06
Date/Time Collected 03/22/2016 12:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	03/23/16 11:26	03/24/16 08:20	6C23025	JMA
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	03/28/16 07:56	03/29/16 08:03	6C22004	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	03/23/16 11:26	03/24/16 08:20	6C23025	JMA

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1603062-01
Date/Time Collected 03/22/2016 08:20
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	03/28/16 19:21	03/28/16 19:21	B16C148	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 19:21	03/28/16 19:21	B16C148	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	03/28/16 19:21	03/28/16 19:21	B16C148	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	03/23/16 15:15	03/23/16 15:15	B16C141	CRW
Barium	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 11:57	B16D003	DWM
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 11:57	B16D003	DWM
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 11:57	B16D003	DWM
Calcium	0.500 <i>u</i>	mg/L	EPA 200.7	1	0.500	0.500	03/24/16 15:46	03/24/16 15:46	B16C136	JIMMY
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 11:57	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 11:57	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 11:57	B16D003	DWM

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1603062-02
Date/Time Collected 03/22/2016 10:26
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.45	mg/L	EPA 300.0	1	1.00	1.00	03/28/16 19:54	03/28/16 19:54	B16C148	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 19:54	03/28/16 19:54	B16C148	JLK
Sulfate	1.86	mg/L	EPA 300.0	1	0.25	0.25	03/28/16 19:54	03/28/16 19:54	B16C148	JLK
pH	5.41	SU	SM 4500-H B	1			03/23/16 09:04	03/23/16 09:06	B16C118	CRW
Total Dissolved Solids	53.0	mg/L	SM 2540 C	1	5.00	5.00	03/23/16 15:15	03/23/16 15:15	B16C141	CRW
Barium	0.025	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:03	B16D003	DWM
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 12:03	B16D003	DWM
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:03	B16D003	DWM
Calcium	6.59	mg/L	EPA 200.7	1	0.500	0.500	03/24/16 15:49	03/24/16 15:49	B16C136	JIMMY
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:03	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:03	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 12:03	B16D003	DWM

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1603062-03
Date/Time Collected 03/22/2016 10:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	0.16	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 22:04	03/28/16 22:04	B16C148	JLK
pH	4.36	SU	SM 4500-H B	1			03/23/16 09:04	03/23/16 09:06	B16C118	CRW
Total Dissolved Solids	225	mg/L	SM 2540 C	1	5.00	5.00	03/23/16 15:15	03/23/16 15:15	B16C141	CRW
Barium	0.252	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:08	B16D003	DWM
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 12:08	B16D003	DWM
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:08	B16D003	DWM
Calcium	17.3	mg/L	EPA 200.7	1	0.500	0.500	03/24/16 15:51	03/24/16 15:51	B16C136	JIMMY
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:08	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:08	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 12:08	B16D003	DWM

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1603062-03RE1
Date/Time Collected 03/22/2016 10:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	71.7	mg/L	EPA 300.0	10	10.0	10.0	03/29/16 00:14	03/29/16 00:14	B16C148	JLK
Sulfate (Reshot)	49.8	mg/L	EPA 300.0	10	2.50	2.50	03/29/16 00:14	03/29/16 00:14	B16C148	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B Field Duplicate
Matrix Water
WQLAB Sample Number 1603062-04
Date/Time Collected 03/22/2016 11:17
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	0.16	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 22:36	03/28/16 22:36	B16C148	JLK
pH	4.38	SU	SM 4500-H B	1			03/23/16 09:04	03/23/16 09:06	B16C118	CRW
Total Dissolved Solids	234	mg/L	SM 2540 C	1	5.00	5.00	03/23/16 15:15	03/23/16 15:15	B16C141	CRW
Barium	0.225	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:13	B16D003	DWM
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 12:13	B16D003	DWM
Cadmium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:13	B16D003	DWM
Calcium	15.7	mg/L	EPA 200.7	1	0.500	0.500	03/24/16 15:53	03/24/16 15:53	B16C136	JIMMY
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:13	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:13	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 12:13	B16D003	DWM

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B Field Duplicate
Matrix Water
WQLAB Sample Number 1603062-04RE1
Date/Time Collected 03/22/2016 11:17
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	67.8	mg/L	EPA 300.0	10	10.0	10.0	03/29/16 00:46	03/29/16 00:46	B16C148	JLK
Sulfate (Reshot)	47.5	mg/L	EPA 300.0	10	2.50	2.50	03/29/16 00:46	03/29/16 00:46	B16C148	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1603062-05
Date/Time Collected 03/22/2016 12:16
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 23:09	03/28/16 23:09	B16C148	JLK
pH	4.06	SU	SM 4500-H B	1			03/23/16 09:04	03/23/16 09:06	B16C118	CRW
Total Dissolved Solids	20200	mg/L	SM 2540 C	10	50.0	50.0	03/24/16 12:20	03/24/16 12:20	B16C141	CRW
Barium	0.362	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:19	B16D003	DWM
Beryllium	0.002	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 12:19	B16D003	DWM
Cadmium	0.002	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:19	B16D003	DWM
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:19	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:19	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 12:19	B16D003	DWM

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1603062-05RE1
Date/Time Collected 03/22/2016 12:16
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	11600	mg/L	EPA 300.0	1000	1000	1000	03/29/16 01:19	03/29/16 01:19	B16C148	JLK
Calcium (Reshot)	2370	mg/L	EPA 200.7	100	50.0	50.0	03/24/16 16:18	03/24/16 16:18	B16C136	JIMMY

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1603062-05RE2
Date/Time Collected 03/22/2016 12:16
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Sulfate (Reshot)	811	mg/L	EPA 300.0	100	25.0	25.0	03/29/16 01:51	03/29/16 01:51	B16C148	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1603062-06
Date/Time Collected 03/22/2016 12:59
Date/Time Received 03/22/2016 16:10

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	7.49	mg/L	EPA 300.0	1	1.00	1.00	03/28/16 21:31	03/28/16 21:31	B16C148	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	03/28/16 21:31	03/28/16 21:31	B16C148	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	03/28/16 21:31	03/28/16 21:31	B16C148	JLK
pH	5.32	SU	SM 4500-H B	1			03/23/16 09:04	03/23/16 09:06	B16C118	CRW
Total Dissolved Solids	50.0	mg/L	SM 2540 C	1	5.00	5.00	03/23/16 15:15	03/23/16 15:15	B16C141	CRW
Barium	0.009	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:24	B16D003	DWM
Beryllium	0.001 <i>u</i>	mg/L	EPA 200.7	1	0.001	0.001	03/23/16 08:00	04/01/16 12:24	B16D003	DWM
Cadmium	0.002	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:24	B16D003	DWM
Calcium	2.74	mg/L	EPA 200.7	1	0.500	0.500	03/24/16 16:01	03/24/16 16:01	B16C136	JIMMY
Chromium	0.002 <i>u</i>	mg/L	EPA 200.7	1	0.002	0.002	03/23/16 08:00	04/01/16 12:24	B16D003	DWM
Cobalt	0.005 <i>u</i>	mg/L	EPA 200.7	1	0.005	0.005	03/23/16 08:00	04/01/16 12:24	B16D003	DWM
Molybdenum	0.010 <i>u</i>	mg/L	EPA 200.7	1	0.010	0.010	03/23/16 08:00	04/01/16 12:24	B16D003	DWM

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16C148

Blank (B16C148-BLK1)

Prepared & Analyzed: 28-Mar-16

Sulfate	0.25 U	0.25	mg/L		0.25				
Fluoride	0.10 U	0.10	mg/L		0.10				
Chloride	1.00 U	1.00	mg/L		1.00				

LCS (B16C148-BS1)

Prepared & Analyzed: 28-Mar-16

Sulfate	4.85		mg/L	5.00		97.0	90-110		
Fluoride	0.60		mg/L	0.600		99.2	90-110		
Chloride	5.01		mg/L	5.00		100	90-110		

Duplicate (B16C148-DUP1)

Source: 1603062-02

Prepared & Analyzed: 28-Mar-16

Sulfate	1.82	0.25	mg/L		1.86			1.85	10
Fluoride	0.10 U	0.10	mg/L		0.10				10
Chloride	8.51	1.00	mg/L		8.45			0.684	10

Matrix Spike (B16C148-MS1)

Source: 1603062-02

Prepared & Analyzed: 28-Mar-16

Fluoride	0.70	0.10	mg/L	0.600	ND	116	80-120		
Sulfate	6.01	0.25	mg/L	4.00	1.86	104	80-120		
Chloride	12.5	1.00	mg/L	4.00	8.45	100	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16C118

LCS (B16C118-BS1)

Prepared & Analyzed: 23-Mar-16

pH	7.99		SU	8.00		99.9	97.5-102.5		
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Duplicate (B16C118-DUP1)

Source: 1603062-02

Prepared & Analyzed: 23-Mar-16

pH	5.41		SU		5.41			0.00	10
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Batch: B16C141

Blank (B16C141-BLK1)

Prepared & Analyzed: 23-Mar-16

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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LCS (B16C141-BS1)

Prepared & Analyzed: 23-Mar-16

Total Dissolved Solids	400	5.00	mg/L	410		97.6	80-120		
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Duplicate (B16C141-DUP1)

Source: 1603062-02

Prepared & Analyzed: 23-Mar-16

Total Dissolved Solids	52.0	5.00	mg/L		53.0			1.90	10
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Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Quality Control Orlando Utilities Commission FLDOH# E53566

Metals (Total) by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16C136									
Blank (B16C136-BLK1)				Prepared & Analyzed: 24-Mar-16					
Calcium	0.500 U	0.500	mg/L		0.500				
LCS (B16C136-BS1)				Prepared & Analyzed: 24-Mar-16					
Calcium	0.988	0.500	mg/L	1.00		98.8	85-115		
Duplicate (B16C136-DUP1)				Prepared & Analyzed: 24-Mar-16					
Calcium	2.66	0.500	mg/L		2.74			3.07	10
Matrix Spike (B16C136-MS1)				Prepared & Analyzed: 24-Mar-16					
Calcium	3.77	0.500	mg/L	1.00	2.74	103	70-130		
Batch: B16D003									
Blank (B16D003-BLK1)				Prepared & Analyzed: 01-Apr-16					
Cadmium	0.002 U	0.002	mg/L		0.002				
Chromium	0.002 U	0.002	mg/L		0.002				
Barium	0.005 U	0.005	mg/L		0.005				
Beryllium	0.001 U	0.001	mg/L		0.001				
Cobalt	0.005 U	0.005	mg/L		0.005				
Molybdenum	0.010 U	0.010	mg/L		0.010				
LCS (B16D003-BS1)				Prepared & Analyzed: 01-Apr-16					
Barium	0.477	0.005	mg/L	0.500		95.4	85-115		
Cadmium	0.497	0.002	mg/L	0.500		99.4	85-115		
Chromium	0.511	0.002	mg/L	0.500		102	85-115		
Molybdenum	0.505	0.010	mg/L	0.500		101	85-115		
Cobalt	0.499	0.005	mg/L	0.500		99.7	85-115		
Beryllium	0.491	0.001	mg/L	0.500		98.2	85-115		
Duplicate (B16D003-DUP1)				Prepared & Analyzed: 01-Apr-16					
Chromium	0.002 U	0.002	mg/L		0.002				10
Cobalt	0.005 U	0.005	mg/L		0.005				10
Molybdenum	0.010 U	0.010	mg/L		0.010				10
Cadmium	0.002 U	0.002	mg/L		0.002				10
Barium	0.009	0.005	mg/L		0.009			1.07	10
Beryllium	0.001 U	0.001	mg/L		0.001				10
Matrix Spike (B16D003-MS1)				Prepared & Analyzed: 01-Apr-16					
Chromium	0.516	0.002	mg/L	0.500	ND	103	70-130		
Molybdenum	0.522	0.010	mg/L	0.500	ND	104	70-130		
Beryllium	0.508	0.001	mg/L	0.500	ND	102	70-130		
Barium	0.462	0.005	mg/L	0.500	0.009	90.6	70-130		
Cadmium	0.513	0.002	mg/L	0.500	0.002	102	70-130		
Cobalt	0.507	0.005	mg/L	0.500	ND	101	70-130		

Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Quality Control Orlando Utilities Commission FLDOH# E53566

Metals by AA Furnace SM 3113 B (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16D029									
Blank (B16D029-BLK1)									
Lead	0.001 U	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.001				
Blank (B16D029-BLK2)									
Lead	0.001 U	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.001				
LCS (B16D029-BS1)									
Lead	0.005	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00500	105	90-110		
LCS (B16D029-BS2)									
Lead	0.005	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00500	102	90-110		
Duplicate (B16D029-DUP1)									
Lead	0.001 U	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.001				10
Duplicate (B16D029-DUP2)									
Lead	0.008	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 ND				10
Matrix Spike (B16D029-MS1)									
Lead	0.003	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00300	ND	99.9	90-110	
Matrix Spike (B16D029-MS2)									
Lead	0.005	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00500	ND	100	90-110	
Matrix Spike Dup (B16D029-MSD1)									
Lead	0.003	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00300	ND	109	90-110	9.02 200
Matrix Spike Dup (B16D029-MSD2)									
Lead	0.005	0.001	mg/L		Prepared & Analyzed: 08-Apr-16 0.00500	ND	106	90-110	5.71 200

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C22004									
Blank (6C22004-BLK1)									
Mercury	0.023 U	0.200	ug/L		Prepared: 28-Mar-16 Analyzed: 29-Mar-16 0.023				
Blank (6C22004-BLK2)									
Mercury	0.230 U	2.00	ug/L		Prepared: 28-Mar-16 Analyzed: 29-Mar-16 0.230				
Blank (6C22004-BLK3)									
Mercury	0.230 U	2.00	ug/L		Prepared: 28-Mar-16 Analyzed: 29-Mar-16 0.230				
LCS (6C22004-BS1)									
Mercury	4.92	0.200	ug/L		Prepared: 28-Mar-16 Analyzed: 29-Mar-16 5.00	98	85-115		
Matrix Spike (6C22004-MS1)									
Mercury	4.90	0.200	ug/L		Prepared: 28-Mar-16 Analyzed: 29-Mar-16 5.00	ND	98	70-130	
Matrix Spike Dup (6C22004-MSD1)									
		Source: AZ01920-01			Prepared: 28-Mar-16 Analyzed: 29-Mar-16				

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C22004 (Continued)									
Matrix Spike Dup (6C22004-MSD1)									
Mercury	4.91	0.200	ug/L	5.00	ND	98	70-130	0.3	10
Post Spike (6C22004-PS1)									
Mercury	5.18		ug/L	5.61	ND	92	75-125		
Batch: 6C23025									
Blank (6C23025-BLK1)									
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
LCS (6C23025-BS1)									
Antimony	49.8	20.0	ug/L	50.0		100	85-115		
Thallium	51.8	1.00	ug/L	50.0		104	85-115		
Matrix Spike (6C23025-MS1)									
Antimony	50.5	20.0	ug/L	50.0	ND	101	70-130		
Thallium	49.6	1.00	ug/L	50.0	ND	99	70-130		
Matrix Spike Dup (6C23025-MSD1)									
Antimony	51.8	20.0	ug/L	50.0	ND	104	70-130	3	30
Thallium	49.3	1.00	ug/L	50.0	ND	99	70-130	0.6	30
Post Spike (6C23025-PS1)									
Antimony	4.98		ug/L	4.90	ND	100	75-125		
Thallium	4.77		ug/L	4.90	ND	97	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C24003									
Blank (6C24003-BLK1)									
Boron	8.67 I	50.0	ug/L		3.70				
Lithium	2.60 U	20.0	ug/L		2.60				
LCS (6C24003-BS1)									
Boron	2210	50.0	ug/L	2500		88	85-115		
Lithium	464	20.0	ug/L	500		93	85-115		
Matrix Spike (6C24003-MS1)									
Boron	2300	50.0	ug/L	2500	59.1	90	70-130		
Lithium	482	20.0	ug/L	500	7.98	95	70-130		
Matrix Spike Dup (6C24003-MSD1)									
Boron	2300	50.0	ug/L	2500	59.1	90	70-130	0.2	25
Lithium	478	20.0	ug/L	500	7.98	94	70-130	0.9	25

Batch: 6C24004

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C24004 (Continued)									
Blank (6C24004-BLK1)									
Lithium	2.60 U	20.0	ug/L		2.60				
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
Blank (6C24004-BLK2)									
Boron	4.36 I	50.0	ug/L		3.70				
Prepared: 24-Mar-16 Analyzed: 28-Mar-16									
LCS (6C24004-BS1)									
Boron	2270	50.0	ug/L	2500		91	85-115		
Lithium	477	20.0	ug/L	500		95	85-115		
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
Matrix Spike (6C24004-MS1)									
Boron	2330	50.0	ug/L	2500	49.9	91	70-130		
Lithium	483	20.0	ug/L	500	ND	97	70-130		
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
Matrix Spike Dup (6C24004-MSD1)									
Boron	2360	50.0	ug/L	2500	49.9	92	70-130	1	25
Lithium	483	20.0	ug/L	500	ND	97	70-130	0.09	25

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C24003									
Blank (6C24003-BLK1)									
Arsenic	8.00 U	10.0	ug/L		8.00				
Lead	2.50 U	10.0	ug/L		2.50				
Selenium	8.20 U	40.0	ug/L		8.20				
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
LCS (6C24003-BS1)									
Arsenic	460	10.0	ug/L	500		92	85-115		
Lead	480	10.0	ug/L	500		96	85-115		
Selenium	480	40.0	ug/L	500		96	85-115		
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
Matrix Spike (6C24003-MS1)									
Arsenic	472	10.0	ug/L	500	ND	94	70-130		
Lead	477	10.0	ug/L	500	ND	95	70-130		
Selenium	434	40.0	ug/L	500	ND	87	70-130		
Prepared: 24-Mar-16 Analyzed: 25-Mar-16									
Matrix Spike Dup (6C24003-MSD1)									
Arsenic	469	10.0	ug/L	500	ND	94	70-130	0.5	25
Lead	474	10.0	ug/L	500	ND	95	70-130	0.5	25
Selenium	435	40.0	ug/L	500	ND	87	70-130	0.4	25

Batch: 6C24004

Blank (6C24004-BLK1)

Arsenic	8.00 U	10.0	ug/L		8.00				
Lead	2.50 U	10.0	ug/L		2.50				
Selenium	8.20 U	40.0	ug/L		8.20				

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6C24004 (Continued)									
LCS (6C24004-BS1)				Prepared: 24-Mar-16 Analyzed: 25-Mar-16					
Arsenic	459	10.0	ug/L	500		92	85-115		
Lead	489	10.0	ug/L	500		98	85-115		
Selenium	489	40.0	ug/L	500		98	85-115		
Matrix Spike (6C24004-MS1)				Source: BZ01206-02		Prepared: 24-Mar-16 Analyzed: 25-Mar-16			
Arsenic	477	10.0	ug/L	500	ND	95	70-130		
Lead	487	10.0	ug/L	500	ND	97	70-130		
Selenium	500	40.0	ug/L	500	15.6	97	70-130		
Matrix Spike Dup (6C24004-MSD1)				Source: BZ01206-02		Prepared: 24-Mar-16 Analyzed: 25-Mar-16			
Arsenic	481	10.0	ug/L	500	ND	96	70-130	0.8	25
Lead	492	10.0	ug/L	500	ND	98	70-130	1	25
Selenium	506	40.0	ug/L	500	15.6	98	70-130	1	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

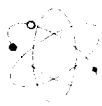
- Qualifiers:
- J-01 Result may be biased high due to positive results in the associated method blank.
 - QB-01 The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result. There is minimal impact to the data.
 - U Compound was analyzed for but not detected
 - I The reported value is between the laboratory method detection limit and the practical quantitation limit
 - V Analyte was detected in both the sample and the associated method blank
 - L Off-scale high. Actual value is known to be greater than the value given

- Acronyms:
- Dil Dilution Factor
 - LCS Laboratory Control Sample
 - LCSD Laboratory Control Sample Duplicate
 - MDL Method detection limit.
 - MS Matrix Spike
 - MSD Matrix Spike Duplicate
 - NC Laboratory lacks NELAC certification for this analyte.
 - NS Not Screened
 - PQL Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
 - RPD Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1603161

Report Date: 03/30/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

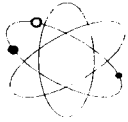
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

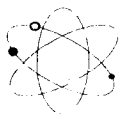
3-30-16



Florida Radiochemistry Services, Inc.

Sample Login

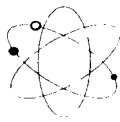
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		03/22/16 15:02	1603161
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1603161-01	Equipment Blank	03/22/16 08:20	Ra226, Ra228
1603161-02	SEC MW C	03/22/16 10:26	Ra226, Ra228
1603161-03	SEC MW B	03/22/16 10:59	Ra226, Ra228
1603161-04	SEC MW B FD	03/22/16 11:17	Ra226, Ra228
1603161-05	SEC MW A	03/22/16 12:16	Ra226, Ra228
1603161-06	SEC MW D	03/22/16 12:59	Ra226, Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1603161-01	1603161-02	1603161-03	1603161-04	1603161-05	1603161-06
Client I.D.	Equipment Blank	SEC MW C	SEC MW B	SEC MW B FD	SEC MW A	SEC MW D
Radium 226	0.2U	0.3	1.4	1.5	18.3	0.2U
Error +/-	0.1	0.2	0.2	0.2	0.6	0.1
MDL	0.2	0.2	0.2	0.2	0.2	0.2
EPA Method	903.1	903.1	903.1	903.1	903.1	903.1
Prep Date	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16
Prep Time	08:12	08:12	08:12	08:12	08:12	08:12
Analysis Date	03/29/16	03/29/16	03/29/16	03/29/16	03/29/16	03/29/16
Analysis Time	09:57	09:57	09:57	10:59	10:59	10:59
Analyst	MJN	MJN	MJN	MJN	MJN	MJN
Radium 228	0.9U	0.8U	0.9	1.0	4.8	0.7U
Error +/-	0.6	0.5	0.5	0.6	0.8	0.5
MDL	0.9	0.8	0.8	0.7	0.8	0.7
EPA Method	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05
Prep Date	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16
Prep Time	08:12	08:12	08:12	08:12	08:12	08:12
Analysis Date	03/29/16	03/29/16	03/29/16	03/29/16	03/29/16	03/29/16
Analysis Time	11:19	11:19	11:19	11:19	11:19	12:21
Analyst	SN	SN	SN	SN	SN	SN
Combined Ra226 + Ra228	0.9U	0.8U	2.3	2.5	23.1	0.7U
Error +/-	0.6	0.5	0.5	0.6	1.0	0.5
MDL	0.9	0.8	0.8	0.7	0.8	0.7
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1603161-06	03/29/16	<0.2	25.2	24.9	23.9	99	4.1
Radium 228	1603161-06	03/29/16	<0.7	6.7	7.2	6.9	107	4.3

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Chain of Custody



Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL 32812
 Ph. (407) 382-7733
 Fax (407) 382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

CUC

Phone # 407-

Address:

3800 Gardenia Ave

Fax # 407-

City / State / Zip

Orlando, FL 32833

Send Report to:

dmccue@cuc.com

Additional Report:

Invoice to:

Project I.D.

P.O. #

Sample I. D.

Date / Time Sampled

Sample # of

Pres.

Analysis

Remarks

(Sample Location)

Type Btls

Requested

1	Equipment Blank	3-22-2016 / 0820	6	2	HNO ₃	Ra 226 + Ra 228	
2	SEC MW C	/ 1020					
3	B	/ 1059					
4	B FD	/ 1117					
5	A	/ 1216					
6	D	/ 1259					
7							
8							
9							
10							

Relinquished by:

James Siroemulker

Sampled By:

Client

Date/Time

3-22-2016 1502

J. Siroemulker

Received by:

[Signature]

Date/Time

3-22-16 1502

Relinquished by:

Date/Time

Received by:

Date/Time

OUC GROUNDWATER SAMPLING LOG

Site Name: MW C		Site Location:
Well No.	Sample ID: 1603062-02	Date: 03/22/16

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: J. Shoemaker, C. Wright				Sampler(s) Signature(s): <i>[Signature]</i>				Sampling initiated at: 1026		Sampling ended at: 1036	
Pump or tubing depth in well (feet): 22'				Tubing Material Code: PE			Field-filtered: Y N		Filter Size: _____ µm		
Field Decontamination:				Pump Y <u>(N)</u>		Tubing Y <u>(N (replaced))</u>		Filtration Equipment Type:		Duplicate: Y <u>(N)</u>	
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)		
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH					
Remarks:											
(Sulfite: _____ mg/L)											
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other											
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other											

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units Temperature: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: MW B	Site Location:
Well No.	Sample ID: 1603062-03 Date: 3-22-2016

(-04 for FD)

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 5.10	Sampling Device: AP							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (32.6 feet - 5.10 feet) X 0.16 gallons/foot = 4.4 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22	Final Pump or Tubing Depth in Well: (feet): 22		Purging Initiated at: 6:55	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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
1053	14.50	14.50	0.25	5.35	4.34	23.66	441	0.26	0.55	Clear	Sulfide
1056	0.75	15.25	0.25	5.35	4.34	23.66	440	0.27	0.79	↓	↓
1059	0.75	16.00	↓	5.35	4.35	23.73	438	0.25	0.84	↓	↓
1111	19.00	19.00	0.25	5.36	4.34	23.52	440	0.27	1.66	Clear	Sulfide
1114	0.75	19.75	↓	5.36	4.34	23.59	439	0.26	1.72	↓	↓
1117	0.75	20.50	↓	5.36	4.34	23.55	437	0.26	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 diameter capacity (Gallons Per Foot): 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

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: MWA	Site Location: SEC
Well No.	Sample ID: 1603062-05 Date: 03/22/16

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units Temperature: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: MW 1	Site Location:
Well No.	Sample ID: 1603062-06 Date: 03/22/16

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)



The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1604065

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 27 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

June 16, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1604065**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1604065-01	Equipment Blank	04/27/2016
1604065-02	SEC Monitoring Well C	04/27/2016
1604065-03	SEC Monitoring Well B	04/27/2016
1604065-04	SEC Monitoring Well D, Field Duplicate	04/27/2016
1604065-05	SEC Monitoring Well A	04/27/2016
1604065-06	SEC Monitoring Well D	04/27/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1604065-01
Date/Time Collected 04/27/2016 09:45
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Barium	0.390 <i>U</i>	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Boron	5.75 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Calcium	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:26	6D29003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1604065-02
Date/Time Collected 04/27/2016 11:28
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Barium	27.0	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Boron	15.6 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Calcium	7140	ug/L	EPA 200.7	1	39.0	500	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:23	6D29003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1604065-03
Date/Time Collected 04/27/2016 12:06
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Barium	226	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Beryllium	0.594 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Boron	28.0 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Calcium	13200	ug/L	EPA 200.7	1	39.0	500	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV
Lithium	3.07 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:24	6D29003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D, Field Duplicate
Matrix Water
WQLAB Sample Number 1604065-04
Date/Time Collected 04/27/2016 13:24
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Barium	11.1	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Boron	20.3 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Calcium	2970	ug/L	EPA 200.7	1	39.0	500	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:21	6D29003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1604065-05
Date/Time Collected 04/27/2016 12:33
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	39.1	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Barium	508	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Beryllium	2.18	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Boron	57.5 ν , J- α	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Cadmium	1.61	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Chromium	1.38 I	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Cobalt	15.5	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Lead	2.50 U	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV
Lithium	88.5	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:27	6D29003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1604065-05RE1
Date/Time Collected 04/27/2016 12:33
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Calcium (Reshot)	2950000	ug/L	EPA 200.7	100	3900	50000	04/29/16 10:52	05/03/16 12:11	6D29003	ACV

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Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1604065-06
Date/Time Collected 04/27/2016 13:09
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Barium	11.5	ug/L	EPA 200.7	1	0.390	10.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Beryllium	0.126 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Boron	16.6 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Cadmium	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	1.00	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Calcium	2870	ug/L	EPA 200.7	1	39.0	500	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Chromium	2.57 <i>I</i>	ug/L	EPA 200.7	1	1.10	10.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Lead	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	04/29/16 10:52	05/02/16 11:29	6D29003	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1604065-01
Date/Time Collected 04/27/2016 09:45
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	04/28/16 09:59	04/28/16 14:01	6D28009	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:10	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:01	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1604065-02
Date/Time Collected 04/27/2016 11:28
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	04/28/16 09:59	04/28/16 14:04	6D28009	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:13	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:04	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1604065-03
Date/Time Collected 04/27/2016 12:06
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	04/28/16 09:59	04/28/16 14:12	6D28009	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:16	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:12	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D, Field Duplicate
Matrix Water
WQLAB Sample Number 1604065-04
Date/Time Collected 04/27/2016 13:24
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	04/28/16 09:59	04/28/16 14:15	6D28009	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:19	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:15	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1604065-05
Date/Time Collected 04/27/2016 12:33
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:22	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:22	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1604065-05RE1
Date/Time Collected 04/27/2016 12:33
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	5.50 μ , R- σ	ug/L	EPA 200.8	5	5.50	100	04/28/16 09:59	04/28/16 14:30	6D28009	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1604065-06
Date/Time Collected 04/27/2016 13:09
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	1.10 <i>u</i>	ug/L	EPA 200.8	1	1.10	20.0	04/28/16 09:59	04/28/16 14:26	6D28009	JAY
Mercury	0.023 <i>u</i>	ug/L	EPA 245.1	1	0.023	0.200	05/03/16 12:10	05/04/16 09:32	6D26013	IR
Thallium	0.580 <i>u</i>	ug/L	EPA 200.8	1	0.580	1.00	04/28/16 09:59	04/28/16 14:26	6D28009	JAY

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1604065-01
Date/Time Collected 04/27/2016 09:45
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	04/28/16 15:50	04/28/16 15:50	B16E012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	04/28/16 15:50	04/28/16 15:50	B16E013	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	04/28/16 15:50	04/28/16 15:50	B16E010	JLK
pH	4.58	SU	SM 4500-H B	1			04/28/16 08:59	04/28/16 08:59	B16D112	CRW
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1604065-02
Date/Time Collected 04/27/2016 11:28
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.94	mg/L	EPA 300.0	1	1.00	1.00	04/28/16 16:22	04/28/16 16:22	B16E012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	04/28/16 16:22	04/28/16 16:22	B16E013	JLK
Sulfate	0.52	mg/L	EPA 300.0	1	0.25	0.25	04/28/16 16:22	04/28/16 16:22	B16E010	JLK
pH	5.14	SU	SM 4500-H B	1			04/28/16 09:01	04/28/16 09:01	B16D112	CRW
Total Dissolved Solids	52.0	mg/L	SM 2540 C	1	5.00	5.00	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1604065-03
Date/Time Collected 04/27/2016 12:06
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	71.0	mg/L	EPA 300.0	10	10.0	10.0	04/28/16 18:59	04/28/16 18:59	B16E012	JLK
Fluoride	1.0 <i>u</i>	mg/L	EPA 300.0	10	1.0	1.0	04/28/16 18:59	04/28/16 18:59	B16E013	JLK
Sulfate	56.9	mg/L	EPA 300.0	10	2.50	2.50	04/28/16 18:59	04/28/16 18:59	B16E010	JLK
pH	4.41	SU	SM 4500-H B	1			04/28/16 09:07	04/28/16 09:07	B16D112	CRW
Total Dissolved Solids	205	mg/L	SM 2540 C	1	5.00	5.00	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D, Field Duplicate
Matrix Water
WQLAB Sample Number 1604065-04
Date/Time Collected 04/27/2016 13:24
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	8.04	mg/L	EPA 300.0	1	1.00	1.00	04/28/16 18:28	04/28/16 18:28	B16E012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	04/28/16 18:28	04/28/16 18:28	B16E013	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	04/28/16 18:28	04/28/16 18:28	B16E010	JLK
pH	4.81	SU	SM 4500-H B	1			04/28/16 09:09	04/28/16 09:09	B16D112	CRW
Total Dissolved Solids	40.0	mg/L	SM 2540 C	1	5.00	5.00	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1604065-05
Date/Time Collected 04/27/2016 12:33
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	12000	mg/L	EPA 300.0	1000	1000	1000	04/28/16 19:31	04/28/16 19:31	B16E012	JLK
Fluoride	100 <i>u</i>	mg/L	EPA 300.0	1000	100	100	04/28/16 19:31	04/28/16 19:31	B16E013	JLK
Sulfate	938	mg/L	EPA 300.0	1000	250	250	04/28/16 19:31	04/28/16 19:31	B16E010	JLK
pH	4.05	SU	SM 4500-H B	1			04/28/16 09:13	04/28/16 09:13	B16D112	CRW
Total Dissolved Solids	19700	mg/L	SM 2540 C	10	50.0	50.0	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1604065-06
Date/Time Collected 04/27/2016 13:09
Date/Time Received 04/27/2016 16:20

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	7.79	mg/L	EPA 300.0	1	1.00	1.00	04/28/16 17:56	04/28/16 17:56	B16E012	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	04/28/16 17:56	04/28/16 17:56	B16E013	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	04/28/16 17:56	04/28/16 17:56	B16E010	JLK
pH	5.02	SU	SM 4500-H B	1			04/28/16 09:15	04/28/16 09:15	B16D112	CRW
Total Dissolved Solids	44.0	mg/L	SM 2540 C	1	5.00	5.00	05/02/16 10:50	05/02/16 10:50	B16E001	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16E010									
Blank (B16E010-BLK1)									
Sulfate	0.25 U	0.25	mg/L		0.25				
Prepared & Analyzed: 28-Apr-16									
LCS (B16E010-BS1)									
Sulfate	5.10		mg/L	5.00		102	90-110		
Prepared & Analyzed: 28-Apr-16									
Duplicate (B16E010-DUP1)									
Sulfate	0.52	0.25	mg/L	0.52				0.769	10
Prepared & Analyzed: 28-Apr-16									
Matrix Spike (B16E010-MS1)									
Sulfate	4.53	0.25	mg/L	4.00	0.52	100	80-120		
Prepared & Analyzed: 28-Apr-16									
Batch: B16E012									
Blank (B16E012-BLK1)									
Chloride	1.00 U	1.00	mg/L	1.00					
Prepared & Analyzed: 28-Apr-16									
LCS (B16E012-BS1)									
Chloride	5.06		mg/L	5.00		101	90-110		
Prepared & Analyzed: 28-Apr-16									
Duplicate (B16E012-DUP1)									
Chloride	8.94	1.00	mg/L	8.94				0.0336	10
Prepared & Analyzed: 28-Apr-16									
Matrix Spike (B16E012-MS1)									
Chloride	12.9	1.00	mg/L	4.00	8.94	99.4	80-120		
Prepared & Analyzed: 28-Apr-16									
Batch: B16E013									
Blank (B16E013-BLK1)									
Fluoride	0.10 U	0.10	mg/L	0.10					
Prepared & Analyzed: 28-Apr-16									
LCS (B16E013-BS1)									
Fluoride	0.81		mg/L	0.800		101	90-110		
Prepared & Analyzed: 28-Apr-16									
Duplicate (B16E013-DUP1)									
Fluoride	0.10 U	0.10	mg/L	0.10					10
Prepared & Analyzed: 28-Apr-16									
Matrix Spike (B16E013-MS1)									
Fluoride	0.90	0.10	mg/L	0.800	ND	112	80-120		
Prepared & Analyzed: 28-Apr-16									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16D112									
LCS (B16D112-BS1)									
pH	8.00		SU	8.00		100	97.5-102.5		
Prepared & Analyzed: 28-Apr-16									
Duplicate (B16D112-DUP1)									
pH	5.19		SU	5.14				0.968	10
Prepared & Analyzed: 28-Apr-16									

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B16E001									
Blank (B16E001-BLK1)									
Total Dissolved Solids	5.00 U	5.00	mg/L	Prepared & Analyzed: 02-May-16 5.00					
LCS (B16E001-BS1)									
Total Dissolved Solids	410	10.0	mg/L	Prepared & Analyzed: 02-May-16 410 100 80-120					
Duplicate (B16E001-DUP1)									
Total Dissolved Solids	218	5.00	mg/L	Prepared & Analyzed: 02-May-16 205 6.15 10					
Source: 1604065-03									

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6D26013									
Blank (6D26013-BLK1)				Prepared: 03-May-16 Analyzed: 04-May-16					
Mercury	0.023 U	0.200	ug/L		0.023				
Blank (6D26013-BLK2)				Prepared: 03-May-16 Analyzed: 04-May-16					
Mercury	0.230 U	2.00	ug/L		0.230				
LCS (6D26013-BS1)				Prepared: 03-May-16 Analyzed: 04-May-16					
Mercury	4.98	0.200	ug/L	5.00		100	85-115		
Matrix Spike (6D26013-MS1)				Prepared: 03-May-16 Analyzed: 04-May-16					
Mercury	5.21	0.200	ug/L	5.00	ND	104	70-130		
Matrix Spike Dup (6D26013-MSD1)				Prepared: 03-May-16 Analyzed: 04-May-16					
Mercury	5.16	0.200	ug/L	5.00	ND	103	70-130	1	10
Post Spike (6D26013-PS1)				Prepared & Analyzed: 04-May-16					
Mercury	5.10		ug/L	5.61	-0.006	91	75-125		
Batch: 6D28009									
Blank (6D28009-BLK1)				Prepared & Analyzed: 28-Apr-16					
Antimony	1.10 U	20.0	ug/L		1.10				
Thallium	0.580 U	1.00	ug/L		0.580				
LCS (6D28009-BS1)				Prepared & Analyzed: 28-Apr-16					
Antimony	47.4	20.0	ug/L	50.0		95	85-115		
Thallium	49.9	1.00	ug/L	50.0		100	85-115		
Matrix Spike (6D28009-MS1)				Prepared & Analyzed: 28-Apr-16					
Antimony	46.9	20.0	ug/L	50.0	ND	94	70-130		
Thallium	48.8	1.00	ug/L	50.0	ND	98	70-130		
Matrix Spike Dup (6D28009-MSD1)				Prepared & Analyzed: 28-Apr-16					
Antimony	46.4	20.0	ug/L	50.0	ND	93	70-130	0.9	30
Thallium	50.1	1.00	ug/L	50.0	ND	100	70-130	3	30
Post Spike (6D28009-PS1)				Prepared & Analyzed: 28-Apr-16					
				Source: AZ02881-01					

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6D28009 (Continued)

Post Spike (6D28009-PS1)

Source: AZ02881-01

Prepared & Analyzed: 28-Apr-16

Antimony	4.56		ug/L	4.90	0.005	93	75-125		
Thallium	4.72		ug/L	4.90	0.035	95	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6D29003

Blank (6D29003-BLK1)

Prepared: 29-Apr-16 Analyzed: 02-May-16

Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	5.98 I	50.0	ug/L		3.70				
Cadmium	0.280 U	1.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				

LCS (6D29003-BS1)

Prepared: 29-Apr-16 Analyzed: 02-May-16

Arsenic	514	10.0	ug/L	500		103	85-115		
Barium	514	10.0	ug/L	500		103	85-115		
Beryllium	51.6	1.00	ug/L	50.0		103	85-115		
Boron	2430	50.0	ug/L	2500		97	85-115		
Cadmium	51.6	1.00	ug/L	50.0		103	85-115		
Calcium	5030	500	ug/L	5000		101	85-115		
Chromium	511	10.0	ug/L	500		102	85-115		
Cobalt	510	10.0	ug/L	500		102	85-115		
Lead	517	10.0	ug/L	500		103	85-115		
Lithium	502	20.0	ug/L	500		100	85-115		

Matrix Spike (6D29003-MS1)

Source: BZ01783-01

Prepared: 29-Apr-16 Analyzed: 02-May-16

Arsenic	512	10.0	ug/L	500	ND	102	70-130		
Barium	513	10.0	ug/L	500	12.9	100	70-130		
Beryllium	51.2	1.00	ug/L	50.0	ND	102	70-130		
Boron	2500	50.0	ug/L	2500	91.1	96	70-130		
Cadmium	49.5	1.00	ug/L	50.0	ND	99	70-130		
Calcium	119000	500	ug/L	5000	114000	98	70-130		
Chromium	498	10.0	ug/L	500	ND	100	70-130		
Cobalt	496	10.0	ug/L	500	ND	99	70-130		
Lead	496	10.0	ug/L	500	ND	99	70-130		
Lithium	497	20.0	ug/L	500	ND	99	70-130		

Matrix Spike Dup (6D29003-MSD1)

Source: BZ01783-01

Prepared: 29-Apr-16 Analyzed: 02-May-16

Arsenic	497	10.0	ug/L	500	ND	99	70-130	3	25
Barium	512	10.0	ug/L	500	12.9	100	70-130	0.2	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6D29003 (Continued)									
Matrix Spike Dup (6D29003-MSD1)									
		Source: BZ01783-01		Prepared: 29-Apr-16 Analyzed: 02-May-16					
Beryllium	51.0	1.00	ug/L	50.0	ND	102	70-130	0.5	25
Boron	2490	50.0	ug/L	2500	91.1	96	70-130	0.2	25
Cadmium	49.6	1.00	ug/L	50.0	ND	99	70-130	0.1	25
Calcium	117000	500	ug/L	5000	114000	73	70-130	1	25
Chromium	498	10.0	ug/L	500	ND	100	70-130	0.01	25
Cobalt	494	10.0	ug/L	500	ND	99	70-130	0.3	25
Lead	497	10.0	ug/L	500	ND	99	70-130	0.3	25
Lithium	495	20.0	ug/L	500	ND	99	70-130	0.3	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

J-01	Result may be biased high due to positive results in the associated method blank.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor



Client Name Orlando Utilities Commission (OR021)	Project Number [none]	Requested Turnaround Times Note : Rush requests subject to acceptance by the facility ____ Standard ____ Expedited Due ____ / ____ / ____	
Address 3800 Gardenia Ave. Orlando, FL 32839	Project Name/Desc New SEC Lettered Monitoring Wells	Requested Analyses	
City/ST/Zip	PO # / Billing Info		
Tel 407-434-2547	Reporting Contact Donna McCue		
Fax	Billing Contact Angelisa Young		
Sampler(s) Name, Affiliation (Print)	Site Location / Time Zone		
Sampler(s) Signature			

[illegible]

Sample Kit Prepared By		Date/Time	<-- Total # of Containers					
BH 4-4-16 1300			Relinquished By B. Hart	Date/Time 4-4-16 1300	Received By	Date/Time		
Comments/Special Reporting Requirements			Relinquished By bm & mmr ovc wcl	Date/Time 4-27-16 1517	Received By S. Casap	Date/Time 4-27-16 1517		
			Relinquished By	Date/Time	Received By	Date/Time		
			Cooler #'s & Temps on Receipt				Condition Upon Receipt	
Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air C-Coolant O-Oils & Greases								
						Acceptable	Unacceptable	

Sediment **SW**-Surface Water **WW**-Wastewater **A**-Air **O**-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO₃ S-H₂SO₄ NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

Chain of Custody

		Florida Radiochemistry Services, Inc. 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812 Ph. (407) 382-7733 Fax (407) 382-7744 Email: flradiochemistry@cfl.rr.com		FL Certification E83033	
Company Name:					
Address:					
City / State / Zip					
Send Report to:					
Additional Report:					
Invoice to:					
Project I.D.					
P.O. #					
Sample I.D. (Sample Location)		Date / Time Sampled		Pres.	
1 SEC MW C		04/27/2016		# of Btls	
2 SEC MW B		1128		Analysis Requested	
3 SEC MW A		1206		Ra 226 + Ra 228	
4 SEC MW D ⁸⁴²⁷		1233		✓	
5 SEC MW D, FI		1309		✓	
6 Equipment Blank		1324		✓	
7		0945		✓	
8					
9					
10					
Relinquished by:		Date/Time		Sampled By:	
4.27.2016 14:55		4.27.2016 14:55		OVC-WQL	
Received by:		Date/Time			
4/27/16 14:55					
Relinquished by:		Date/Time			
Received by:		Date/Time			
Date/Time					

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill		Site Location: MW A
Well No. A	Sample ID:	Date: 04/27/16

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/CRW OUC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 1233		Sampling ended at: 1241	
Pump or tubing depth in well (feet): 33				Tubing Material Code: PE			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			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
										(Sulfite: mg/L)
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill		Site Location: MW B
Well No. B	Sample ID:	Date: 04/27/16

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/CRW OVC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 1206		Sampling ended at: 12:13	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y (N)		Filter Size: _____ µm	
Field Decontamination: Pump Y (N)				Tubing Y (N (replaced))			Filtration Equipment Type:		Duplicate: Y (N)	
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:								(Sulfite: _____ mg/L)		
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other 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										

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 the last three consecutive readings (see FS 2212, Section 3)

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

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill		Site Location: MW C	
Well No. C	Sample ID:	Date:	

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/CRW OVC-WOL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 11-28		Sampling ended at: 11-35	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N ☐		Filter Size: _____ µm	
Field Decontamination: Pump Y ☒ N ☐				Tubing Y ☒ N (replaced) ☐				Duplicate: Y ☒ N ☐		
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: _____ mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill		Site Location: MW D	
Well No. D	Sample ID:	Date: 04/27/16	

PURGING DATA

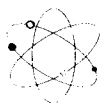
Well Diameter: 2"		Tubing Diameter: 1/4"		Well Screen Depth Interval: 20-30'		Static Depth to Water: 5.75		Sampling Device: PP 1			
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (32.53 feet - 5.75 feet) X 0.16 gallons/foot = 4.28 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22			Final Pump or Tubing Depth in Well: (feet): 22			Purging Initiated at: 11:50		Purging ended at: 13:30		Total Volume Purged (gallons): 12.25	
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)	Odor (Describe)
1300	17.50	17.50	0.25	5.97	4.59	23.35	60	0.51	0.56	Clear	None
1303	0.75	18.25	↓	5.97	4.71	23.44	57	0.34	0.46		
1306	0.75	19.00	↓	5.97	4.75	23.46	55	0.26	0.54		
1309	0.75	19.75	↓	5.98	4.77	23.49	54	0.23	0.43		
1318	22.00	22.00	0.25	5.99	4.73	23.42	52	0.27	0.52	Clear	None
1321	0.75	22.75	↓	5.98	4.75	23.39	53	0.23	0.55		
1324	0.75	23.50	↓	5.98	4.77	23.35	53	0.19	0.51		
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 diameter capacity (Gallons Per Foot): 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)											

Field Dup.

SAMPLING DATA

Sampled By (Print) / Affiliation: JES/CRW OUC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 1309 1324		Sampling ended at: 1318 1330	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y (N) Filter Size: 4.27 µm		Filtration Equipment Type:	
Field Decontamination: Pump Y (N) Tubing Y (N (replaced))							Duplicate: Y (N)			
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method		Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH		Sampling Equipment Code		
Remarks: (Sulfite: mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T = Teflon; O = Other 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										

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 the 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)



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1604187

Report Date: 05/09/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

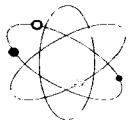
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

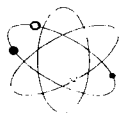
5-9-16



Florida Radiochemistry Services, Inc.

Sample Login

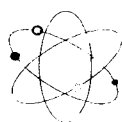
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		04/27/16 14:55	1604187
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1604187-01	SEC MW C	04/27/16 11:28	Ra226, Ra228
1604187-02	SEC MW B	04/27/16 12:06	Ra226, Ra228
1604187-03	SEC MW A	04/27/16 12:33	Ra226, Ra228
1604187-04	SEC MW D	04/27/16 13:09	Ra226, Ra228
1604187-05	SEC MW D,FD	04/27/16 13:24	Ra226, Ra228
1604187-06	Equipment Blank	04/27/16 09:45	Ra226, Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1604187-01	1604187-02	1604187-03	1604187-04	1604187-05	1604187-06
Client I.D.	SEC MW C	SEC MW B	SEC MW A	SEC MW D	SEC MW D,FD	Equipment Blank
Radium 226	0.5	1.1	23.5	0.2	0.3	0.2U
Error +/-	0.2	0.3	1.3	0.2	0.2	0.1
MDL	0.2	0.2	0.1	0.2	0.2	0.2
EPA Method	903.1	903.1	903.1	903.1	903.1	903.1
Prep Date	04/28/16	04/28/16	04/28/16	04/28/16	04/28/16	04/28/16
Prep Time	08:15	08:15	08:15	08:15	08:15	08:15
Analysis Date	05/06/16	05/06/16	05/06/16	05/06/16	05/06/16	05/06/16
Analysis Time	09:50	09:50	09:50	10:55	10:55	10:55
Analyst	MJN	MJN	MJN	MJN	MJN	MJN
Radium 228	0.8U	0.8U	3.5	0.7U	0.8U	0.7U
Error +/-	0.6	0.5	0.7	0.4	0.5	0.5
MDL	0.8	0.8	0.8	0.7	0.8	0.7
EPA Method	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05
Prep Date	04/28/16	04/28/16	04/28/16	04/28/16	04/28/16	04/28/16
Prep Time	08:15	08:15	08:15	08:15	08:15	08:15
Analysis Date	05/05/16	05/05/16	05/05/16	05/05/16	05/05/16	05/05/16
Analysis Time	13:31	13:31	13:31	13:31	13:31	14:39
Analyst	SN	SN	SN	SN	SN	SN
Combined Ra226 + Ra228	0.8U	1.5	27.0	0.7U	0.8U	0.7U
Error +/-	0.6	0.6	1.5	0.4	0.5	0.5
MDL	0.8	0.8	0.8	0.7	0.8	0.7
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1604181-02	05/06/16	9.3	25.2	33.4	35.5	96	6.1
Radium 228	1604181-02	05/05/16	3.6	6.7	10.5	10.1	103	3.9

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Chain of Custody



Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Address:

City / State / Zip

Send Report to:

Additional Report:

Invoice to:

Project I.D.

P.O. #

Sample I. D.

(Sample Location)

Date / Time Sampled

Sample # of Pres.

Type Btls

Analysis

Requested

Remarks

1	SEC MW C	04/27/2016	1128	2	1:1 HNO ₃	Rel 226 + Rel 228	
2	SEC MW B		1206	2			
3	SEC MW A		1233	2			
4	SEC MW D #427		1309	2			
5	SEC MW D, FA		1324	2			
6	Equipment Blank		0945	2			
7							
8							
9							
10							

Relinquished by:

Date/Time

Received by:

Date/Time

Relinquished by:

Date/Time

Received by:

Date/Time

Sampled By:

COC-WQL



The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1607066

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 29 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

August 05, 2016

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1607066**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1607066-01	Equipment Blank	07/20/2016
1607066-02	SEC Monitoring Well C	07/20/2016
1607066-03	SEC Monitoring Well B	07/20/2016
1607066-04	SEC Monitoring Well B, Field Duplicate	07/20/2016
1607066-05	SEC Monitoring Well A	07/20/2016
1607066-06	SEC Monitoring Well D	07/20/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1607066-01RE1
Date/Time Collected 07/20/2016 08:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	20.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Barium (Reshot)	0.390 <i>U</i>	ug/L	EPA 200.7	1	0.390	10.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Boron (Reshot)	10.4 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	2.00	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Calcium (Reshot)	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	07/21/16 09:17	07/22/16 12:16	6G21004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1607066-02RE1
Date/Time Collected 07/20/2016 10:03
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	20.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Barium (Reshot)	30.1	ug/L	EPA 200.7	1	0.390	10.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Boron (Reshot)	16.7 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	2.00	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Calcium (Reshot)	5740	ug/L	EPA 200.7	1	39.0	500	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Lithium (Reshot)	4.58 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	07/21/16 09:17	07/22/16 12:18	6G21004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
 Sample Designation SEC Monitoring Well B
 Matrix Water
 WQLAB Sample Number 1607066-03RE1
 Date/Time Collected 07/20/2016 11:15
 Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	20.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Barium (Reshot)	202	ug/L	EPA 200.7	1	0.390	10.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Beryllium (Reshot)	0.551 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Boron (Reshot)	32.9 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	2.00	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Calcium (Reshot)	12400	ug/L	EPA 200.7	1	39.0	500	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Lithium (Reshot)	6.68 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	07/21/16 09:17	07/22/16 12:19	6G21004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1607066-04RE1
Date/Time Collected 07/20/2016 11:27
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	20.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Barium (Reshot)	220	ug/L	EPA 200.7	1	0.390	10.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Beryllium (Reshot)	0.547 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Boron (Reshot)	31.5 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	2.00	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Calcium (Reshot)	13200	ug/L	EPA 200.7	1	39.0	500	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Lithium (Reshot)	6.48 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	07/21/16 09:17	07/22/16 12:21	6G21004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1607066-05
Date/Time Collected 07/20/2016 11:51
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	160 U	ug/L	EPA 200.7	20	160	400	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Barium	558	ug/L	EPA 200.7	20	7.80	200	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Beryllium	2.40 U	ug/L	EPA 200.7	20	2.40	20.0	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Boron	80.5 IV, QB-or	ug/L	EPA 200.7	20	74.0	1000	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Cadmium	5.60 U	ug/L	EPA 200.7	20	5.60	40.0	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Calcium	2870000	ug/L	EPA 200.7	20	780	10000	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Chromium	22.0 U	ug/L	EPA 200.7	20	22.0	200	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Cobalt	33.1 I	ug/L	EPA 200.7	20	30.0	200	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Lead	50.0 U	ug/L	EPA 200.7	20	50.0	200	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Lithium	170 I	ug/L	EPA 200.7	20	52.0	400	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Molybdenum	140 I	ug/L	EPA 200.7	20	100	200	07/21/16 09:17	07/22/16 11:06	6G21004	ACV
Selenium	341 I	ug/L	EPA 200.7	20	164	800	07/21/16 09:17	07/22/16 11:06	6G21004	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1607066-06RE1
Date/Time Collected 07/20/2016 12:33
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	20.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Barium (Reshot)	12.5	ug/L	EPA 200.7	1	0.390	10.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Boron (Reshot)	20.1 <i>IV, J-α</i>	ug/L	EPA 200.7	1	3.70	50.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Cadmium (Reshot)	0.280 <i>U</i>	ug/L	EPA 200.7	1	0.280	2.00	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Calcium (Reshot)	2290	ug/L	EPA 200.7	1	39.0	500	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Lead (Reshot)	2.50 <i>U</i>	ug/L	EPA 200.7	1	2.50	10.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Lithium (Reshot)	3.28 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV
Selenium (Reshot)	8.20 <i>U</i>	ug/L	EPA 200.7	1	8.20	40.0	07/21/16 09:17	07/22/16 12:22	6G21004	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1607066-01
Date/Time Collected 07/20/2016 08:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.126 <i>I</i>	ug/L	EPA 200.8	1	0.110	2.00	07/21/16 15:23	07/22/16 11:17	6G21038	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:17	6G20023	IR
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/16 15:23	07/22/16 11:17	6G21038	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1607066-02
Date/Time Collected 07/20/2016 10:03
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.217 I	ug/L	EPA 200.8	1	0.110	2.00	07/21/16 15:23	07/22/16 11:26	6G21038	JMA
Mercury	0.0230 U	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:26	6G20023	IR
Thallium	0.0580 U	ug/L	EPA 200.8	1	0.0580	0.100	07/21/16 15:23	07/22/16 11:26	6G21038	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1607066-03
Date/Time Collected 07/20/2016 11:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.241 I	ug/L	EPA 200.8	1	0.110	2.00	07/21/16 15:23	07/22/16 11:36	6G21038	JMA
Mercury	0.0230 U	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:29	6G20023	IR
Thallium	0.0580 U	ug/L	EPA 200.8	1	0.0580	0.100	07/21/16 15:23	07/22/16 11:36	6G21038	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1607066-04
Date/Time Collected 07/20/2016 11:27
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.229 I	ug/L	EPA 200.8	1	0.110	2.00	07/21/16 15:23	07/22/16 11:38	6G21038	JMA
Mercury	0.0230 U	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:33	6G20023	IR
Thallium	0.0580 U	ug/L	EPA 200.8	1	0.0580	0.100	07/21/16 15:23	07/22/16 11:38	6G21038	JMA

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1607066-05
Date/Time Collected 07/20/2016 11:51
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst	
Mercury	0.0230	u	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:36	6G20023	IR

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1607066-05RE1
Date/Time Collected 07/20/2016 11:51
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	2.20 U, R-σ	ug/L	EPA 200.8	20	2.20	40.0	07/21/16 15:23	07/22/16 11:47	6G21038	JMA
Thallium (Reshot)	1.16 U, R-σ	ug/L	EPA 200.8	20	1.16	2.00	07/21/16 15:23	07/22/16 11:47	6G21038	JMA

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1607066-06
Date/Time Collected 07/20/2016 12:33
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.110 <i>U</i>	ug/L	EPA 200.8	1	0.110	2.00	07/21/16 15:23	07/22/16 11:52	6G21038	JMA
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/22/16 10:56	07/25/16 08:39	6G20023	IR
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/16 15:23	07/22/16 11:52	6G21038	JMA

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation Equipment Blank
Matrix Water
WQLAB Sample Number 1607066-01
Date/Time Collected 07/20/2016 08:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	07/20/16 18:55	07/20/16 18:55	B16G159	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/16 18:55	07/20/16 18:55	B16G159	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	07/20/16 18:55	07/20/16 18:55	B16G159	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1607066-02
Date/Time Collected 07/20/2016 10:03
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.14	SU	FT 1100	1			07/20/16 10:03	07/20/16 10:03	B16H036	JES
Chloride	10.1	mg/L	EPA 300.0	1	1.00	1.00	07/20/16 20:57	07/20/16 20:57	B16G159	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/16 20:57	07/20/16 20:57	B16G159	JLK
Sulfate	0.58	mg/L	EPA 300.0	1	0.25	0.25	07/20/16 20:57	07/20/16 20:57	B16G159	JLK
Total Dissolved Solids	51.0	mg/L	SM 2540 C	1	5.00	5.00	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1607066-03
Date/Time Collected 07/20/2016 11:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.36	SU	FT 1100	1			07/20/16 11:15	07/20/16 11:15	B16H036	JES
Fluoride	0.14	mg/L	EPA 300.0	1	0.10	0.10	07/20/16 23:30	07/20/16 23:30	B16G159	JLK
Total Dissolved Solids	211	mg/L	SM 2540 C	1	5.00	5.00	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1607066-03RE1
Date/Time Collected 07/20/2016 11:15
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	66.2	mg/L	EPA 300.0	10	10.0	10.0	07/20/16 21:28	07/20/16 21:28	B16G159	JLK
Sulfate (Reshot)	55.3	mg/L	EPA 300.0	10	2.50	2.50	07/20/16 21:28	07/20/16 21:28	B16G159	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1607066-04
Date/Time Collected 07/20/2016 11:27
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.36	SU	FT 1100	1			07/20/16 11:27	07/20/16 11:27	B16H036	JES
Fluoride	0.14	mg/L	EPA 300.0	1	0.10	0.10	07/21/16 00:00	07/21/16 00:00	B16G159	JLK
Total Dissolved Solids	212	mg/L	SM 2540 C	1	5.00	5.00	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1607066-04RE1
Date/Time Collected 07/20/2016 11:27
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	65.2	mg/L	EPA 300.0	10	10.0	10.0	07/20/16 21:58	07/20/16 21:58	B16G159	JLK
Sulfate (Reshot)	53.6	mg/L	EPA 300.0	10	2.50	2.50	07/20/16 21:58	07/20/16 21:58	B16G159	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1607066-05
Date/Time Collected 07/20/2016 11:51
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	3.99	SU	FT 1100	1			07/20/16 11:51	07/20/16 11:51	B16H036	JES
Total Dissolved Solids	23000	mg/L	SM 2540 C	20	100	100	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1607066-05RE1
Date/Time Collected 07/20/2016 11:51
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride (Reshot)	12600	mg/L	EPA 300.0	1000	1000	1000	07/20/16 22:29	07/20/16 22:29	B16G159	JLK
Fluoride (Reshot)	10 <i>u</i>	mg/L	EPA 300.0	100	10	10	07/20/16 22:59	07/20/16 22:59	B16G159	JLK
Sulfate (Reshot)	1180	mg/L	EPA 300.0	1000	250	250	07/20/16 22:29	07/20/16 22:29	B16G159	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1607066-06
Date/Time Collected 07/20/2016 12:33
Date/Time Received 07/20/2016 14:55

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.63	SU	FT 1100	1			07/20/16 12:33	07/20/16 12:33	B16H036	JES
Chloride	10.9	mg/L	EPA 300.0	1	1.00	1.00	07/20/16 19:26	07/20/16 19:26	B16G159	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/16 19:26	07/20/16 19:26	B16G159	JLK
Sulfate	0.25	mg/L	EPA 300.0	1	0.25	0.25	07/20/16 19:26	07/20/16 19:26	B16G159	JLK
Total Dissolved Solids	39.0	mg/L	SM 2540 C	1	5.00	5.00	07/21/16 13:05	07/21/16 13:05	B16G111	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16G159

Blank (B16G159-BLK1)

Prepared & Analyzed: 20-Jul-16

Fluoride	0.10 U	0.10	mg/L		0.10				
Sulfate	0.25 U	0.25	mg/L		0.25				
Chloride	1.00 U	1.00	mg/L		1.00				

LCS (B16G159-BS1)

Prepared & Analyzed: 20-Jul-16

Sulfate	1.87		mg/L	2.00		93.5	90-110		
Fluoride	0.60		mg/L	0.600		99.8	90-110		
Chloride	6.05		mg/L	6.00		101	90-110		

Duplicate (B16G159-DUP1)

Source: 1607066-06

Prepared & Analyzed: 20-Jul-16

Fluoride	0.10 U	0.10	mg/L		0.10				10
Chloride	10.9	1.00	mg/L		10.9			0.128	10
Sulfate	0.25	0.25	mg/L		0.25				10

Matrix Spike (B16G159-MS1)

Source: 1607066-06

Prepared & Analyzed: 20-Jul-16

Sulfate	3.89	0.25	mg/L	4.00	0.25	97.2	80-120		
Fluoride	1.1	0.10	mg/L	1.00	ND	105	80-120		
Chloride	14.9	1.00	mg/L	4.00	10.9	100	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16G111

Blank (B16G111-BLK1)

Prepared & Analyzed: 21-Jul-16

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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LCS (B16G111-BS1)

Prepared & Analyzed: 21-Jul-16

Total Dissolved Solids	396	10.0	mg/L	410		96.6	80-120		
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Duplicate (B16G111-DUP1)

Source: 1607066-02

Prepared & Analyzed: 21-Jul-16

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				10
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6G20023

Blank (6G20023-BLK1)

Prepared: 22-Jul-16 Analyzed: 25-Jul-16

Mercury	0.0230 U	0.200	ug/L		0.0230				
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LCS (6G20023-BS1)

Prepared: 22-Jul-16 Analyzed: 25-Jul-16

Mercury	4.91	0.200	ug/L	5.00		98	85-115		
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Matrix Spike (6G20023-MS1)

Source: AZ04180-02

Prepared: 22-Jul-16 Analyzed: 25-Jul-16

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6G20023 (Continued)									
Matrix Spike (6G20023-MS1)		Source: AZ04180-02		Prepared: 22-Jul-16 Analyzed: 25-Jul-16					
Mercury	5.00	0.200	ug/L	5.00	ND	100	70-130		
Matrix Spike Dup (6G20023-MSD1)		Source: AZ04180-02		Prepared: 22-Jul-16 Analyzed: 25-Jul-16					
Mercury	4.99	0.200	ug/L	5.00	ND	100	70-130	0.2	10
Post Spike (6G20023-PS1)		Source: AZ04180-02		Prepared & Analyzed: 25-Jul-16					
Mercury	5.00		ug/L	5.61	0.000867	89	75-125		
Batch: 6G21038									
Blank (6G21038-BLK1)		Prepared: 21-Jul-16 Analyzed: 22-Jul-16							
Antimony	0.110 U	2.00	ug/L		0.110				
Thallium	0.0580 U	0.100	ug/L		0.0580				
LCS (6G21038-BS1)		Prepared: 21-Jul-16 Analyzed: 22-Jul-16							
Antimony	5.09	2.00	ug/L	5.00		102	85-115		
Thallium	4.98	0.100	ug/L	5.00		100	85-115		
Matrix Spike (6G21038-MS1)		Source: 1607066-01		Prepared: 21-Jul-16 Analyzed: 22-Jul-16					
Antimony	5.21	2.00	ug/L	5.00	0.126	102	70-130		
Thallium	5.11	0.100	ug/L	5.00	ND	102	70-130		
Matrix Spike Dup (6G21038-MSD1)		Source: 1607066-01		Prepared: 21-Jul-16 Analyzed: 22-Jul-16					
Antimony	5.40	2.00	ug/L	5.00	0.126	105	70-130	4	30
Thallium	5.03	0.100	ug/L	5.00	ND	101	70-130	2	30

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6G21004									
Blank (6G21004-BLK1)		Prepared: 21-Jul-16 Analyzed: 22-Jul-16							
Arsenic	8.00 U	20.0	ug/L		8.00				
Barium	0.390 U	10.0	ug/L		0.390				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	4.84 I	50.0	ug/L		3.70				
Cadmium	0.280 U	2.00	ug/L		0.280				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.50 U	10.0	ug/L		2.50				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	8.20 U	40.0	ug/L		8.20				
LCS (6G21004-BS1)		Prepared: 21-Jul-16 Analyzed: 22-Jul-16							
Arsenic	506	20.0	ug/L	500		101	85-115		
Barium	522	10.0	ug/L	500		104	85-115		

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6G21004 (Continued)

LCS (6G21004-BS1)

Prepared: 21-Jul-16 Analyzed: 22-Jul-16

Beryllium	51.6	1.00	ug/L	50.0		103	85-115		
Boron	2430	50.0	ug/L	2500		97	85-115		
Cadmium	51.9	2.00	ug/L	50.0		104	85-115		
Calcium	5150	500	ug/L	5000		103	85-115		
Chromium	513	10.0	ug/L	500		103	85-115		
Cobalt	509	10.0	ug/L	500		102	85-115		
Lead	531	10.0	ug/L	500		106	85-115		
Lithium	509	20.0	ug/L	500		102	85-115		
Molybdenum	506	10.0	ug/L	500		101	85-115		
Selenium	525	40.0	ug/L	500		105	85-115		

Matrix Spike (6G21004-MS1)

Source: BZ03282-01

Prepared: 21-Jul-16 Analyzed: 22-Jul-16

Arsenic	507	20.0	ug/L	500	ND	101	70-130		
Barium	525	10.0	ug/L	500	15.9	102	70-130		
Beryllium	51.1	1.00	ug/L	50.0	ND	102	70-130		
Boron	2440	50.0	ug/L	2500	18.4	97	70-130		
Cadmium	52.1	2.00	ug/L	50.0	0.741	103	70-130		
Calcium	21100	500	ug/L	5000	16900	84	70-130		
Chromium	504	10.0	ug/L	500	ND	101	70-130		
Cobalt	496	10.0	ug/L	500	ND	99	70-130		
Lead	526	10.0	ug/L	500	ND	105	70-130		
Lithium	496	20.0	ug/L	500	7.41	98	70-130		
Molybdenum	514	10.0	ug/L	500	8.48	101	70-130		
Selenium	519	40.0	ug/L	500	ND	104	70-130		

Matrix Spike Dup (6G21004-MSD1)

Source: BZ03282-01

Prepared: 21-Jul-16 Analyzed: 22-Jul-16

Arsenic	504	20.0	ug/L	500	ND	101	70-130	0.6	25
Barium	531	10.0	ug/L	500	15.9	103	70-130	1	25
Beryllium	51.4	1.00	ug/L	50.0	ND	103	70-130	0.5	25
Boron	2430	50.0	ug/L	2500	18.4	96	70-130	0.5	25
Cadmium	52.0	2.00	ug/L	50.0	0.741	102	70-130	0.2	25
Calcium	21500	500	ug/L	5000	16900	93	70-130	2	25
Chromium	509	10.0	ug/L	500	ND	102	70-130	1	25
Cobalt	501	10.0	ug/L	500	ND	100	70-130	1	25
Lead	526	10.0	ug/L	500	ND	105	70-130	0.2	25
Lithium	501	20.0	ug/L	500	7.41	99	70-130	1	25
Molybdenum	515	10.0	ug/L	500	8.48	101	70-130	0.07	25
Selenium	524	40.0	ug/L	500	ND	105	70-130	1	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

- Qualifiers:
- J-01 Result may be biased high due to positive results in the associated method blank.
 - QB-01 The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result. There is minimal impact to the data.
 - R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
 - U Compound was analyzed for but not detected
 - I The reported value is between the laboratory method detection limit and the practical quantitation limit
 - V Analyte was detected in both the sample and the associated method blank
 - L Off-scale high. Actual value is known to be greater than the value given

- Acronyms:
- Dil Dilution Factor
 - LCS Laboratory Control Sample
 - LCSD Laboratory Control Sample Duplicate
 - MDL Method detection limit.
 - MS Matrix Spike
 - MSD Matrix Spike Duplicate
 - NC Laboratory lacks NELAC certification for this analyte.
 - NS Not Screened
 - PQL Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
 - RPD Relative Percent Difference

Approved by:

Donna McCue

Donna McCue
Laboratory Supervisor



Phone: 407-434-2549; Fax: 407-434-2619

PROJECT #: 1601066

Container Type	Codes
AV = Amber Vial	AR = Amber Plastic
CV = Clear Vial	AG = Amber Glass
P = Plastic	PLC = Plastic
AL = Amber Litter	Container
CL = Clear Litter	Other
Size(s): 100 ml, 250 ml, 500 ml	

Example: 1 L AG = 1 liter amber glass

GW = Ground Wtr DW = Drinking Wtr

GW = Ground Wtr DW = Drinking Wtr

EFF = Effluent
SW = Surface Wtr

$$I_{\text{eff}} = I_{\text{eff}, \text{ref}} + \frac{I_{\text{eff}, \text{ref}}}{\gamma} \left(\frac{I_{\text{eff}}}{I_{\text{eff}, \text{ref}}} - 1 \right)$$

100

O - Other _____ (specify)

Pres. Coues

A. None	G. Na ₂ S ₂ O ₃	Other:

B. HNO_3	I. Ice
-------------------	--------

C. H2SO4 J. MCAA

0
1
2
3
4
5
6
7
8
9

[illegible]

L: 100 L
 L: 100 L

F. EDA	M. NH ₄ Cl
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REMARKS

1000 JOURNAL OF CLIMATE

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[illegible]

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[illegible]

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Lab Use Only

Yes / No N/A

✓ 120

Rec'd within holding time? ☒

Volatile rec'd without headsps: ☒

Proper Containers Used?	✓
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[illegible]

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

Project/Site: 3rd Air Lettered Wells / SEC

Date: 7-20-2016

Meter # YSI 556 MDS; 06H1774AB

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

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
------------------	--------------------	----------	------	------	-----------------	---------------	------	---------	------	------------------------------------	-----------------

CAL	ICV	CCV		7-20-16	0754			8.82	21.26	100.7	P F
CAL	ICV	CCV			1620			8.58	22.72	100.0	P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard µmhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading µmhos/cm	Pass or Fail
-------------------------	--------------------	----------	------	------	----------------------	-----------	-------	----------	------------------	---------------------	-----------------

CAL	ICV	CCV		7-20-16	1616	1413	12/2017	2512C64	02-93	1386	P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	--------------------	----------	------	------	----------------	-----------	-------	----------	-------	---------------	-----------------

CAL	ICV	CCV		7-20-16	0747	7.00	1/2017	148470	02-48	6.96	P F
CAL	ICV	CCV				4.00	8/2017	155560	02-86	4.00	P F
CAL	ICV	CCV				7.00	As	Above		6.98	P F
CAL	ICV	CCV			1613	4.63	3/2018	161874	02-107	4.59	P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F
CAL	ICV	CCV									P F

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

Notes:

Perform only in Calibrate Mode:
Perform only in Run Mode:
Perform only in Run Mode:

CAL - Calibrate -
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

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

OUC GROUNDWATER SAMPLING LOG

Site Name:		Site Location: SEC
Well No. A	Sample ID: 1607066-05	Date: 07/20/16

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES, CRW / OUC - WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 11:51		Sampling ended at: 11:58	
Pump or tubing depth in well (feet): 28				Tubing Material Code: PE			Field-filtered: Y <u>N</u>		Filter Size: _____ µm	
Field Decontamination: Pump Y <u>N</u>				Tubing Y <u>N (replaced)</u>			Duplicate: Y <u>N</u>			
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
										(Sulfite: _____ mg/L)
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the 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)

OUC GROUNDWATER SAMPLING LOG

Site Name:		Site Location: SEC
Well No. B	Sample ID: 1607066-03	Date: 07/20/16

066-04 = FD

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: 4.07	Sampling Device: PP3							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (32.6 feet - 4.07 feet) X 0.16 gallons/foot = 4.56 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22		Final Pump or Tubing Depth in Well: (feet): 22		Purging Initiated at: 09:38	Purging ended at: 11:32	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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
11:09	22.75	22.75	0.25	4.36	4.35	24.35	360	0.37	1.71	Clear	H ₂ S
11:12	0.75	23.50	0.25	4.36	4.35	24.38	362	0.29	1.81		
11:15	0.75	24.25	0.25	4.36	4.36	24.25	355	0.23	1.67		
11:21	25.75	25.75	0.25	4.36	4.36	24.31	357	0.20	2.45	Clear	H ₂ S
11:24	0.75	26.50	0.25	4.37	4.36	24.35	355	0.19	3.39		
11:27	0.75	27.25	0.25	4.37	4.36	24.19	356	0.17	3.16		
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 diameter capacity (Gallons Per Foot): 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: JES, CRW / OVC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 11:15, 11:27		Sampling ended at: 11:26, 11:32	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y (N)		Filter Size: _____ µm	
Field Decontamination: Pump Y (N)				Tubing Y (N (replaced))				Duplicate: Y (N)		
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: _____ mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +5 NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name:		Site Location: SEC MW C	
Well No. C	Sample ID: 1607066-02	Date: 07/20/16	

PURGING DATA

Well Diameter: 2"		Tubing Diameter: ¼"		Well Screen Depth Interval: 20-30'			Static Depth to Water: 5.51		Sampling Device: PPI		
Well Volume Purge: 1 Well Volume = (Total Well Depth – Static Depth to Water) X Well Capacity = (31.5 feet - 5.51 feet) X 0.16 gallons/foot = 4.2 gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): 22			Final Pump or Tubing Depth in Well: (feet):			Purging Initiated at: 9:29	Purging ended at: 10:09	Total Volume Purged (gallons):			
Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (feet)	pH (Standard units) (2w H₂O/L)	Temp (°C)	Cond. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
09:57	7.00	7.00	0.25	5.65	24.513	24.80	69	0.21	11.2	Slightly Cloudy	H ₂ S
10:00	0.75	7.75	0.25	5.66	5.13	24.71	68	0.19	8.40		
10:03	0.75	8.50	0.25	5.66	5.14	24.78	68	0.19	9.74		
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 diameter capacity (Gallons Per Foot): 1/8"=0.0006; 3/16"=0.0014; ¼"=0.0026; 5/16"=0.004; 3/8"=0.006; ½"=0.010; 5/8"=0.016											
Purging Equipment Codes: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

Sampled By (Print) / Affiliation: JES, CRW / OUC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 10:03		Sampling ended at: 10:09	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y ☒ N		Filter Size: _____ µm	
Field Decontamination: Pump Y ☒ N				Tubing Y ☒ N (replaced)			Filtration Equipment Type:			
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Duplicate: Y ☒ N		
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH		Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Remarks:										
(Sulfite: _____ mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units Temperature: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name:		Site Location: SEC
Well No. D	Sample ID: 1607066-06	Date: 7-20-2016

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: JES, CRW / OVC-WQL				Sampler(s) Signature(s): [Signature]			Sampling initiated at: 1233		Sampling ended at: 1239	
Pump or tubing depth in well (feet): 18				Tubing Material Code: PE			Field-filtered: Y <u>N</u>		Filter Size: _____ µm	
Field Decontamination: Pump Y <u>N</u>				Tubing Y <u>N (replaced)</u>			Filtration Equipment Type:			
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
								(Sulfite: _____ mg/L)		
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+5$ NTU or $\pm 10\%$ (whichever is greater)



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WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1611064

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 27 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

January 12, 2017

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1611064**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1611064-01	SEC Monitoring Well C	11/29/2016
1611064-02	SEC Monitoring Well C, Field Duplicate	11/29/2016
1611064-03	SEC Monitoring Well B	11/29/2016
1611064-04	SEC Monitoring Well D	11/29/2016
1611064-05	SEC Monitoring Well A	11/29/2016
1611064-06	Field Blank/Equipment Blank	11/29/2016

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1611064-01RE1
Date/Time Collected 11/29/2016 11:00
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Barium (Reshot)	30.7	ug/L	EPA 200.7	1	0.530	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Boron (Reshot)	32.4 <i>I</i>	ug/L	EPA 200.7	1	20.0	50.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Calcium (Reshot)	6860	ug/L	EPA 200.7	1	39.0	500	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	12/01/16 13:19	12/05/16 13:26	6L01006	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, Field Duplicate
Matrix Water
WQLAB Sample Number 1611064-02RE1
Date/Time Collected 11/29/2016 11:16
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Barium (Reshot)	30.9	ug/L	EPA 200.7	1	0.530	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Boron (Reshot)	29.7 <i>I</i>	ug/L	EPA 200.7	1	20.0	50.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Calcium (Reshot)	6870	ug/L	EPA 200.7	1	39.0	500	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	12/01/16 13:19	12/05/16 13:29	6L01006	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1611064-03RE1
Date/Time Collected 11/29/2016 12:01
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Barium (Reshot)	142	ug/L	EPA 200.7	1	0.530	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Beryllium (Reshot)	0.317 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Boron (Reshot)	74.9	ug/L	EPA 200.7	1	20.0	50.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Calcium (Reshot)	3800	ug/L	EPA 200.7	1	39.0	500	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Lithium (Reshot)	3.93 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	12/01/16 13:19	12/05/16 13:25	6L01006	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1611064-04RE1
Date/Time Collected 11/29/2016 12:54
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Barium (Reshot)	14.2	ug/L	EPA 200.7	1	0.530	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Beryllium (Reshot)	0.141 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Boron (Reshot)	34.1 <i>I</i>	ug/L	EPA 200.7	1	20.0	50.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Calcium (Reshot)	2220	ug/L	EPA 200.7	1	39.0	500	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	12/01/16 13:19	12/05/16 13:28	6L01006	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1611064-05RE1
Date/Time Collected 11/29/2016 13:26
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	53.8	ug/L	EPA 200.7	5	40.0	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Barium (Reshot)	542	ug/L	EPA 200.7	5	2.65	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Beryllium (Reshot)	2.38 <i>I</i>	ug/L	EPA 200.7	5	0.600	5.00	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Boron (Reshot)	1010	ug/L	EPA 200.7	5	100	250	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Cadmium (Reshot)	2.25 <i>U</i>	ug/L	EPA 200.7	5	2.25	5.00	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Calcium (Reshot)	3080000	ug/L	EPA 200.7	5	195	2500	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Chromium (Reshot)	5.50 <i>U</i>	ug/L	EPA 200.7	5	5.50	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Cobalt (Reshot)	20.2 <i>I</i>	ug/L	EPA 200.7	5	7.50	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Lead (Reshot)	14.0 <i>U</i>	ug/L	EPA 200.7	5	14.0	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Lithium (Reshot)	234	ug/L	EPA 200.7	5	13.0	100	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Molybdenum (Reshot)	25.0 <i>U</i>	ug/L	EPA 200.7	5	25.0	50.0	12/01/16 13:19	12/05/16 13:37	6L01006	ACV
Selenium (Reshot)	50.0 <i>U</i>	ug/L	EPA 200.7	5	50.0	200	12/01/16 13:19	12/05/16 13:37	6L01006	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1611064-06
Date/Time Collected 11/29/2016 10:36
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Barium	0.530 <i>u</i>	ug/L	EPA 200.7	1	0.530	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Beryllium	0.120 <i>u</i>	ug/L	EPA 200.7	1	0.120	1.00	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Boron	20.0 <i>u</i>	ug/L	EPA 200.7	1	20.0	50.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Cadmium	0.450 <i>u</i>	ug/L	EPA 200.7	1	0.450	1.00	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Calcium	39.0 <i>u</i>	ug/L	EPA 200.7	1	39.0	500	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Cobalt	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Lead	2.80 <i>u</i>	ug/L	EPA 200.7	1	2.80	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Lithium	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Molybdenum	5.00 <i>u</i>	ug/L	EPA 200.7	1	5.00	10.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV
Selenium	10.0 <i>u</i>	ug/L	EPA 200.7	1	10.0	40.0	12/01/16 13:21	12/02/16 11:54	6L01007	ACV

Laboratory Report ENCO Orlando FLDOH# E83182

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1611064-01
Date/Time Collected 11/29/2016 11:00
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	11/30/16 14:18	12/01/16 12:25	6K30021	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:50	6K29008	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	11/30/16 14:18	12/01/16 12:25	6K30021	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, Field Duplicate
Matrix Water
WQLAB Sample Number 1611064-02
Date/Time Collected 11/29/2016 11:16
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	11/30/16 14:18	12/01/16 12:46	6K30021	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:56	6K29008	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	11/30/16 14:18	12/01/16 12:46	6K30021	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1611064-03
Date/Time Collected 11/29/2016 12:01
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	11/30/16 14:18	12/01/16 12:14	6K30021	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:47	6K29008	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	11/30/16 14:18	12/01/16 12:14	6K30021	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1611064-04
Date/Time Collected 11/29/2016 12:54
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	11/30/16 14:18	12/01/16 12:35	6K30021	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:53	6K29008	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	11/30/16 14:18	12/01/16 12:35	6K30021	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1611064-05
Date/Time Collected 11/29/2016 13:26
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.0230 u	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:37	6K29008	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1611064-05RE1
Date/Time Collected 11/29/2016 13:26
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	3.75 <i>u</i>	ug/L	EPA 200.8	15	3.75	7.50	11/30/16 14:18	12/01/16 13:44	6K30021	JAY
Thallium (Reshot)	0.870 <i>u</i>	ug/L	EPA 200.8	15	0.870	1.50	11/30/16 14:18	12/01/16 13:44	6K30021	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1611064-06
Date/Time Collected 11/29/2016 10:36
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	11/30/16 14:18	12/01/16 10:39	6K30021	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	12/05/16 11:00	12/06/16 07:59	6K29008	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	11/30/16 14:18	12/01/16 10:39	6K30021	JAY

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1611064-01
Date/Time Collected 11/29/2016 11:00
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.05	SU	FT 1100	1			11/29/16 11:00	11/29/16 11:00	B16K123	CRW
Chloride	11.4	mg/L	EPA 300.0	1	1.00	1.00	11/30/16 17:13	11/30/16 17:13	B16L003	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	11/30/16 17:13	11/30/16 17:13	B16L003	JLK
Sulfate	0.44	mg/L	EPA 300.0	1	0.25	0.25	11/30/16 17:13	11/30/16 17:13	B16L003	JLK
Total Dissolved Solids	59.0	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C, Field Duplicate
Matrix Water
WQLAB Sample Number 1611064-02
Date/Time Collected 11/29/2016 11:16
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.11	SU	FT 1100	1			11/29/16 11:16	11/29/16 11:16	B16K123	CRW
Chloride	11.4	mg/L	EPA 300.0	1	1.00	1.00	11/30/16 18:45	11/30/16 18:45	B16L003	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	11/30/16 18:45	11/30/16 18:45	B16L003	JLK
Sulfate	0.54	mg/L	EPA 300.0	1	0.25	0.25	11/30/16 18:45	11/30/16 18:45	B16L003	JLK
Total Dissolved Solids	58.0	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1611064-03
Date/Time Collected 11/29/2016 12:01
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.64	SU	FT 1100	1			11/29/16 12:01	11/29/16 12:01	B16K123	CRW
Chloride	33.7	mg/L	EPA 300.0	10	10.0	10.0	11/30/16 19:46	11/30/16 19:46	B16L003	JLK
Fluoride	1.0 <i>u</i>	mg/L	EPA 300.0	10	1.0	1.0	11/30/16 19:46	11/30/16 19:46	B16L003	JLK
Sulfate	54.5	mg/L	EPA 300.0	10	2.50	2.50	11/30/16 19:46	11/30/16 19:46	B16L003	JLK
Total Dissolved Solids	162	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1611064-04
Date/Time Collected 11/29/2016 12:54
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.41	SU	FT 1100	1			11/29/16 12:54	11/29/16 12:54	B16K123	CRW
Chloride	13.3	mg/L	EPA 300.0	1	1.00	1.00	11/30/16 20:16	11/30/16 20:16	B16L003	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	11/30/16 20:16	11/30/16 20:16	B16L003	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	11/30/16 20:16	11/30/16 20:16	B16L003	JLK
Total Dissolved Solids	53.0	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1611064-05
Date/Time Collected 11/29/2016 13:26
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.09	SU	FT 1100	1			11/29/16 13:26	11/29/16 13:26	B16K123	CRW
Chloride	13200	mg/L	EPA 300.0	1000	1000	1000	11/30/16 20:47	11/30/16 20:47	B16L003	JLK
Fluoride	100 <i>u</i>	mg/L	EPA 300.0	1000	100	100	11/30/16 20:47	11/30/16 20:47	B16L003	JLK
Sulfate	1130	mg/L	EPA 300.0	1000	250	250	11/30/16 20:47	11/30/16 20:47	B16L003	JLK
Total Dissolved Solids	26100	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1611064-06
Date/Time Collected 11/29/2016 10:36
Date/Time Received 11/29/2016 16:30

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	11/30/16 16:43	11/30/16 16:43	B16L003	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	11/30/16 16:43	11/30/16 16:43	B16L003	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	11/30/16 16:43	11/30/16 16:43	B16L003	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	11/30/16 12:40	11/30/16 12:40	B16L006	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16L003

Blank (B16L003-BLK1)

Prepared & Analyzed: 30-Nov-16

Sulfate	0.25 U	0.25	mg/L	0.25					
Chloride	1.00 U	1.00	mg/L	1.00					
Fluoride	0.10 U	0.10	mg/L	0.10					

LCS (B16L003-BS1)

Prepared & Analyzed: 30-Nov-16

Sulfate	5.27		mg/L	5.00		105	90-110		
Fluoride	0.80		mg/L	0.800		100	90-110		
Chloride	8.10		mg/L	8.00		101	90-110		

Duplicate (B16L003-DUP1)

Source: 1611064-01

Prepared & Analyzed: 30-Nov-16

Chloride	11.4	1.00	mg/L	11.4				0.158	10
Fluoride	0.10 U	0.10	mg/L	0.10					10
Sulfate	0.45	0.25	mg/L	0.44				1.12	10

Matrix Spike (B16L003-MS1)

Source: 1611064-01

Prepared & Analyzed: 30-Nov-16

Chloride	15.4	1.00	mg/L	4.00	11.4	101	80-120		
Sulfate	4.34	0.25	mg/L	4.00	0.44	97.4	80-120		
Fluoride	1.1	0.10	mg/L	1.00	ND	113	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B16L006

Blank (B16L006-BLK1)

Prepared & Analyzed: 30-Nov-16

Total Dissolved Solids	5.00 U	5.00	mg/L	5.00					
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LCS (B16L006-BS1)

Prepared & Analyzed: 30-Nov-16

Total Dissolved Solids	481	5.00	mg/L	481		100	80-120		
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Duplicate (B16L006-DUP1)

Source: 1611064-03

Prepared & Analyzed: 30-Nov-16

Total Dissolved Solids	165	5.00	mg/L	162				1.83	10
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6K29008

Blank (6K29008-BLK1)

Prepared: 05-Dec-16 Analyzed: 06-Dec-16

Mercury	0.0230 U	0.200	ug/L	0.0230					
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Blank (6K29008-BLK2)

Prepared: 05-Dec-16 Analyzed: 06-Dec-16

Mercury	0.230 U	2.00	ug/L	0.230					
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LCS (6K29008-BS1)

Prepared: 05-Dec-16 Analyzed: 06-Dec-16

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6K29008 (Continued)									
LCS (6K29008-BS1)									
Mercury	4.78	0.200	ug/L	5.00		96	85-115		
Prepared: 05-Dec-16 Analyzed: 06-Dec-16									
Matrix Spike (6K29008-MS1)									
Mercury	5.27	0.200	ug/L	5.00	ND	105	70-130		
Source: AZ08031-01 Prepared: 05-Dec-16 Analyzed: 06-Dec-16									
Matrix Spike Dup (6K29008-MSD1)									
Mercury	5.27	0.200	ug/L	5.00	ND	105	70-130	0.008	10
Source: AZ08031-01 Prepared: 05-Dec-16 Analyzed: 06-Dec-16									
Post Spike (6K29008-PS1)									
Mercury	5.17		ug/L	5.61	-0.0109	92	75-125		
Source: AZ08031-01 Prepared & Analyzed: 06-Dec-16									
Batch: 6K30021									
Blank (6K30021-BLK1)									
Antimony	2.50 U	5.00	ug/L		2.50				
Thallium	0.580 U	1.00	ug/L		0.580				
Prepared: 30-Nov-16 Analyzed: 01-Dec-16									
Blank (6K30021-BLK2)									
Antimony	0.250 U	0.500	ug/L		0.250				
Thallium	0.0580 U	0.100	ug/L		0.0580				
Prepared: 30-Nov-16 Analyzed: 01-Dec-16									
LCS (6K30021-BS1)									
Antimony	46.8	5.00	ug/L	50.0		94	85-115		
Thallium	49.7	1.00	ug/L	50.0		99	85-115		
Prepared: 30-Nov-16 Analyzed: 01-Dec-16									
Matrix Spike (6K30021-MS1)									
Antimony	48.3	5.00	ug/L	50.0	ND	97	70-130		
Thallium	49.3	1.00	ug/L	50.0	ND	99	70-130		
Source: AZ08031-01 Prepared: 30-Nov-16 Analyzed: 01-Dec-16									
Matrix Spike Dup (6K30021-MSD1)									
Antimony	46.7	5.00	ug/L	50.0	ND	93	70-130	3	30
Thallium	45.2	1.00	ug/L	50.0	ND	90	70-130	9	30
Source: AZ08031-01 Prepared: 30-Nov-16 Analyzed: 01-Dec-16									
Post Spike (6K30021-PS1)									
Antimony	4.67		ug/L	4.90	0.0114	95	75-125		
Thallium	4.89		ug/L	4.90	0.0137	99	75-125		
Source: AZ08031-01 Prepared & Analyzed: 01-Dec-16									

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 6L01006									
Blank (6L01006-BLK1)									
Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.530 U	10.0	ug/L		0.530				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	20.0 U	50.0	ug/L		20.0				
Cadmium	0.450 U	1.00	ug/L		0.450				
Calcium	39.0 U	500	ug/L		39.0				
Prepared: 01-Dec-16 Analyzed: 02-Dec-16									

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6L01006 (Continued)

Blank (6L01006-BLK1)

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.80 U	10.0	ug/L		2.80				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	10.0 U	40.0	ug/L		10.0				

LCS (6L01006-BS1)

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	500	10.0	ug/L	500		100	85-115		
Barium	513	10.0	ug/L	500		103	85-115		
Beryllium	51.8	1.00	ug/L	50.0		104	85-115		
Boron	2440	50.0	ug/L	2500		98	85-115		
Cadmium	52.0	1.00	ug/L	50.0		104	85-115		
Calcium	5120	500	ug/L	5000		102	85-115		
Chromium	510	10.0	ug/L	500		102	85-115		
Cobalt	511	10.0	ug/L	500		102	85-115		
Lead	515	10.0	ug/L	500		103	85-115		
Lithium	505	20.0	ug/L	500		101	85-115		
Molybdenum	500	10.0	ug/L	500		100	85-115		
Selenium	531	40.0	ug/L	500		106	85-115		

Matrix Spike (6L01006-MS1)

Source: BZ05242-01

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	489	10.0	ug/L	500	ND	98	70-130		
Barium	507	10.0	ug/L	500	10.5	99	70-130		
Beryllium	50.7	1.00	ug/L	50.0	ND	101	70-130		
Boron	2390	50.0	ug/L	2500	22.9	95	70-130		
Cadmium	49.9	1.00	ug/L	50.0	ND	100	70-130		
Calcium	24200	500	ug/L	5000	19200	99	70-130		
Chromium	496	10.0	ug/L	500	ND	99	70-130		
Cobalt	498	10.0	ug/L	500	ND	100	70-130		
Lead	495	10.0	ug/L	500	ND	99	70-130		
Lithium	497	20.0	ug/L	500	ND	99	70-130		
Molybdenum	495	10.0	ug/L	500	ND	99	70-130		
Selenium	509	40.0	ug/L	500	ND	102	70-130		

Matrix Spike Dup (6L01006-MSD1)

Source: BZ05242-01

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	490	10.0	ug/L	500	ND	98	70-130	0.3	25
Barium	509	10.0	ug/L	500	10.5	100	70-130	0.2	25
Beryllium	50.9	1.00	ug/L	50.0	ND	102	70-130	0.3	25
Boron	2420	50.0	ug/L	2500	22.9	96	70-130	1	25
Cadmium	50.3	1.00	ug/L	50.0	ND	101	70-130	0.9	25
Calcium	24200	500	ug/L	5000	19200	100	70-130	0.2	25
Chromium	497	10.0	ug/L	500	ND	99	70-130	0.2	25
Cobalt	502	10.0	ug/L	500	ND	100	70-130	0.9	25
Lead	499	10.0	ug/L	500	ND	100	70-130	0.9	25
Lithium	499	20.0	ug/L	500	ND	100	70-130	0.4	25
Molybdenum	499	10.0	ug/L	500	ND	100	70-130	0.7	25
Selenium	519	40.0	ug/L	500	ND	104	70-130	2	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6L01007

Blank (6L01007-BLK1)

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.530 U	10.0	ug/L		0.530				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	20.0 U	50.0	ug/L		20.0				
Cadmium	0.450 U	1.00	ug/L		0.450				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.80 U	10.0	ug/L		2.80				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	10.0 U	40.0	ug/L		10.0				

LCS (6L01007-BS1)

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	500	10.0	ug/L	500		100	85-115		
Barium	508	10.0	ug/L	500		102	85-115		
Beryllium	51.4	1.00	ug/L	50.0		103	85-115		
Boron	2420	50.0	ug/L	2500		97	85-115		
Cadmium	51.7	1.00	ug/L	50.0		103	85-115		
Calcium	5110	500	ug/L	5000		102	85-115		
Chromium	504	10.0	ug/L	500		101	85-115		
Cobalt	508	10.0	ug/L	500		102	85-115		
Lead	513	10.0	ug/L	500		103	85-115		
Lithium	500	20.0	ug/L	500		100	85-115		
Molybdenum	496	10.0	ug/L	500		99	85-115		
Selenium	527	40.0	ug/L	500		105	85-115		

Matrix Spike (6L01007-MS1)

Source: BZ05252-01

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	486	10.0	ug/L	500	8.07	96	70-130		
Barium	530	10.0	ug/L	500	37.6	98	70-130		
Beryllium	50.4	1.00	ug/L	50.0	0.346	100	70-130		
Boron	2380	50.0	ug/L	2500	27.3	94	70-130		
Cadmium	50.1	1.00	ug/L	50.0	0.625	99	70-130		
Calcium	16300	500	ug/L	5000	11400	97	70-130		
Chromium	495	10.0	ug/L	500	4.89	98	70-130		
Cobalt	493	10.0	ug/L	500	ND	99	70-130		
Lead	515	10.0	ug/L	500	17.4	99	70-130		
Lithium	497	20.0	ug/L	500	ND	99	70-130		
Molybdenum	490	10.0	ug/L	500	ND	98	70-130		
Selenium	491	40.0	ug/L	500	ND	98	70-130		

Matrix Spike Dup (6L01007-MSD1)

Source: BZ05252-01

Prepared: 01-Dec-16 Analyzed: 02-Dec-16

Arsenic	499	10.0	ug/L	500	8.07	98	70-130	3	25
Barium	544	10.0	ug/L	500	37.6	101	70-130	3	25
Beryllium	51.9	1.00	ug/L	50.0	0.346	103	70-130	3	25
Boron	2450	50.0	ug/L	2500	27.3	97	70-130	3	25
Cadmium	51.3	1.00	ug/L	50.0	0.625	101	70-130	2	25
Calcium	16400	500	ug/L	5000	11400	100	70-130	0.7	25
Chromium	508	10.0	ug/L	500	4.89	101	70-130	3	25
Cobalt	506	10.0	ug/L	500	ND	101	70-130	3	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 6L01007 (Continued)

Matrix Spike Dup (6L01007-MSD1)		Source: BZ05252-01		Prepared: 01-Dec-16 Analyzed: 02-Dec-16					
Lead	528	10.0	ug/L	500	17.4	102	70-130	3	25
Lithium	500	20.0	ug/L	500	ND	100	70-130	0.4	25
Molybdenum	504	10.0	ug/L	500	ND	101	70-130	3	25
Selenium	498	40.0	ug/L	500	ND	100	70-130	1	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

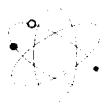
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:

Donna McCue
Laboratory Supervisor



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407) 382-7744

Certification I. D. # E83033

Work Order #: 1612003

Report Date: 12/09/16

Report to:

Orlando Utilities Commission

Water Quality Lab

3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

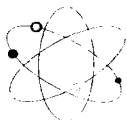
Signed

Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

12-7-16



Florida Radiochemistry Services, Inc.

Sample Login

Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		12/01/16 13:45	1612003
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Quarterly Moniroting Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1612003-01	SEC MW-C	11/29/16 11:00	Ra226, Ra228
1612003-02	SEC MW C, FD	11/29/16 11:16	Ra226, Ra228
1612003-03	SEC MW B	11/29/16 12:01	Ra226, Ra228
1612003-04	SEC MW D	11/29/16 12:54	Ra226, Ra228
1612003-05	SEC MW A	11/29/16 13:26	Ra226, Ra228
1612003-06	Field/Equip. Blank	11/29/16 10:36	Ra226, Ra228

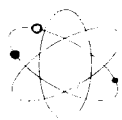


Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1612003-01	1612003-02	1612003-03	1612003-04	1612003-05	1612003-06
Client I.D.	SEC MW-C	SEC MW C, FD	SEC MW B	SEC MW D	SEC MW A	Field Blank/ Equip Blank
Radium 226	0.3U	0.2U	1.7	0.2U	0.2U	0.1
Error +/-	0.2	0.1	0.2	0.1	0.1	0.1
MDL	0.3	0.2	0.2	0.2	0.2	0.1
EPA Method	903.1	903.1	903.1	903.1	903.1	903.1
Prep Date	12/02/16	12/02/16	12/02/16	12/02/16	12/02/16	12/02/16
Prep Time	06:15	06:15	06:15	06:15	06:15	06:15
Analysis Date	12/08/16	12/08/16	12/08/16	12/08/16	12/08/16	12/08/16
Analysis Time	09:19	09:19	10:26	10:26	10:26	10:26
Analyst	MJN	MJN	MJN	MJN	MJN	MJN
Radium 228	0.8U	0.9U	0.8U	3.3	0.9U	0.8U
Error +/-	0.5	0.5	0.5	0.7	0.6	0.5
MDL	0.8	0.9	0.8	0.8	0.9	0.8
EPA Method	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05
Prep Date	12/02/16	12/02/16	12/02/16	12/02/16	12/02/16	12/02/16
Prep Time	06:15	06:15	06:15	06:15	06:15	06:15
Analysis Date	12/08/16	12/08/16	12/08/16	12/08/16	12/08/16	12/08/16
Analysis Time	11:32	11:32	11:32	11:32	12:36	12:36
Analyst	SN	SN	SN	SN	SN	SN
Combined Ra226 + Ra228	0.8U	0.9U	2.4	3.4	0.9U	0.8U
Error +/-	0.5	0.5	0.5	0.7	0.6	0.5
MDL	0.8	0.9	0.8	0.8	0.9	0.8
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l





Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1612003-01	12/08/16	<0.3	25.2	23.0	22.5	91	2.2
Radium 228	1612003-01	12/08/16	<0.8	6.1	6.0	5.8	98	3.4

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilites Commission

Phone # **407-434-2549**

Address:

3800 Gardenia Ave.

Fax # **407-434-2619**

City / State / Zip

Orlando FL 32839

Send Report to:

Donna McCue dmccue@ouc.com

Additional Report:

J Shoemaker jshoemaker@ouc.com

Invoice to:

Angelisa Pinkston-Young apinkstonyoung@ouc.com

Project I.D.

SEC Quarterly Monitoring Wells

P.O. #

Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks
1 SEC MW-C	11/29/2016 11:00	GW	2	HNO3	Ra 226 + Ra 228	All samples require Radium 226 and Radium 228.
2 SEC MW-C, FD	11/29/2016 11:16	GW	2	HNO3	Ra 226 + Ra 228	
3 SEC MW-B	11/29/2016 12:01	GW	2	HNO3	Ra 226 + Ra 228	
4 SEC MW-D	11/29/2016 12:54	GW	2	HNO3	Ra 226 + Ra 228	
5 SEC MW-A	11/29/2016 13:26	GW	2	HNO3	Ra 226 + Ra 228	
6 Field Blank/Equip. Blank	11/29/2016 10:36	GW	2	HNO3	Ra 226 + Ra 228	

Relinquished by:

Date/Time

Received by:

Date/Time

[Signature]
 12-1-2016 1345
[Signature]
 12-1-16 1345

Sampled By:
Christine Wright

Client
OUC-WQL



The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1701050

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 29 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

January 30, 2017

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1701050**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1701050-01	SEC Monitoring Well A	01/18/2017
1701050-02	SEC Monitoring Well B	01/18/2017
1701050-03	SEC Monitoring Well C	01/18/2017
1701050-04	SEC Monitoring Well D	01/18/2017
1701050-05	SEC Monitoring Well B, Field Duplicate	01/18/2017
1701050-06	Field Blank/Equipment Blank	01/18/2017

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1701050-01
Date/Time Collected 01/18/2017 11:25
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	251	ug/L	EPA 200.7	20	160	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Barium	563	ug/L	EPA 200.7	20	10.6	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Beryllium	2.40 <i>U</i>	ug/L	EPA 200.7	20	2.40	20.0	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Boron	400 <i>U</i>	ug/L	EPA 200.7	20	400	1000	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Cadmium	9.00 <i>U</i>	ug/L	EPA 200.7	20	9.00	20.0	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Calcium	3350000	ug/L	EPA 200.7	20	780	10000	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Chromium	22.0 <i>U</i>	ug/L	EPA 200.7	20	22.0	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Cobalt	30.0 <i>U</i>	ug/L	EPA 200.7	20	30.0	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Lead	56.0 <i>U</i>	ug/L	EPA 200.7	20	56.0	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Lithium	295 <i>I</i>	ug/L	EPA 200.7	20	52.0	400	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Molybdenum	100 <i>U</i>	ug/L	EPA 200.7	20	100	200	01/23/17 09:05	01/24/17 11:48	7A23003	ACV
Selenium	200 <i>U</i>	ug/L	EPA 200.7	20	200	800	01/23/17 09:05	01/24/17 11:48	7A23003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1701050-02RE1
Date/Time Collected 01/18/2017 10:43
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Barium (Reshot)	153	ug/L	EPA 200.7	1	0.530	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Beryllium (Reshot)	0.303 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Boron (Reshot)	77.2	ug/L	EPA 200.7	1	20.0	50.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Calcium (Reshot)	1230	ug/L	EPA 200.7	1	39.0	500	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Lithium (Reshot)	3.56 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV
Selenium (Reshot)	10.9 <i>I</i>	ug/L	EPA 200.7	1	10.0	40.0	01/23/17 09:05	01/25/17 10:48	7A23003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1701050-03RE1
Date/Time Collected 01/18/2017 10:19
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Barium (Reshot)	38.1	ug/L	EPA 200.7	1	0.530	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Beryllium (Reshot)	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Boron (Reshot)	20.0 <i>U</i>	ug/L	EPA 200.7	1	20.0	50.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Calcium (Reshot)	5850	ug/L	EPA 200.7	1	39.0	500	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV
Selenium (Reshot)	10.8 <i>I</i>	ug/L	EPA 200.7	1	10.0	40.0	01/23/17 09:05	01/25/17 10:50	7A23003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1701050-04RE1
Date/Time Collected 01/18/2017 12:28
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Barium (Reshot)	16.2	ug/L	EPA 200.7	1	0.530	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Beryllium (Reshot)	0.142 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Boron (Reshot)	20.0 <i>U</i>	ug/L	EPA 200.7	1	20.0	50.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Calcium (Reshot)	1810	ug/L	EPA 200.7	1	39.0	500	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Lithium (Reshot)	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	01/23/17 09:05	01/25/17 10:51	7A23003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1701050-05RE1
Date/Time Collected 01/18/2017 10:58
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic (Reshot)	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Barium (Reshot)	145	ug/L	EPA 200.7	1	0.530	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Beryllium (Reshot)	0.292 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Boron (Reshot)	73.6	ug/L	EPA 200.7	1	20.0	50.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Cadmium (Reshot)	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Calcium (Reshot)	1240	ug/L	EPA 200.7	1	39.0	500	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Chromium (Reshot)	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Cobalt (Reshot)	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Lead (Reshot)	2.80 <i>U</i>	ug/L	EPA 200.7	1	2.80	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Lithium (Reshot)	3.37 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Molybdenum (Reshot)	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV
Selenium (Reshot)	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	01/23/17 09:05	01/25/17 10:53	7A23003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1701050-06
Date/Time Collected 01/18/2017 11:53
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Barium	0.530 <i>U</i>	ug/L	EPA 200.7	1	0.530	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Beryllium	0.120 <i>U</i>	ug/L	EPA 200.7	1	0.120	1.00	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Boron	20.0 <i>U</i>	ug/L	EPA 200.7	1	20.0	50.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Cadmium	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Calcium	39.0 <i>U</i>	ug/L	EPA 200.7	1	39.0	500	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Lead	3.08 <i>I</i>	ug/L	EPA 200.7	1	2.80	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Molybdenum	5.00 <i>U</i>	ug/L	EPA 200.7	1	5.00	10.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV
Selenium	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	01/23/17 09:05	01/24/17 11:55	7A23003	ACV

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1701050-01
Date/Time Collected 01/18/2017 11:25
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst	
Mercury	0.0230	u	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 07:53	7A18006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1701050-01RE1
Date/Time Collected 01/18/2017 11:25
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	5.00 U, R-σ	ug/L	EPA 200.8	20	5.00	10.0	01/19/17 08:07	01/19/17 13:10	7A18029	JAY
Thallium (Reshot)	1.16 U, R-σ	ug/L	EPA 200.8	20	1.16	2.00	01/19/17 08:07	01/19/17 13:10	7A18029	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1701050-02
Date/Time Collected 01/18/2017 10:43
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	01/19/17 08:07	01/19/17 12:40	7A18029	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 07:56	7A18006	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	01/19/17 08:07	01/19/17 12:40	7A18029	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1701050-03
Date/Time Collected 01/18/2017 10:19
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	01/19/17 08:07	01/19/17 12:47	7A18029	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 08:00	7A18006	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	01/19/17 08:07	01/19/17 12:47	7A18029	JAY

Laboratory Report ENCO Orlando FLDOH# E83182

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1701050-04
Date/Time Collected 01/18/2017 12:28
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	01/19/17 08:07	01/19/17 12:54	7A18029	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 08:02	7A18006	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	01/19/17 08:07	01/19/17 12:54	7A18029	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1701050-05
Date/Time Collected 01/18/2017 10:58
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	01/19/17 08:07	01/19/17 13:01	7A18029	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 08:05	7A18006	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	01/19/17 08:07	01/19/17 13:01	7A18029	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1701050-06
Date/Time Collected 01/18/2017 11:53
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	01/19/17 08:07	01/19/17 11:14	7A18029	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	01/24/17 12:59	01/25/17 08:08	7A18006	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	01/19/17 08:07	01/19/17 11:14	7A18029	JAY

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1701050-01
Date/Time Collected 01/18/2017 11:25
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.35	SU	FT 1100	1			01/18/17 11:25	01/18/17 11:25	B17A072	DWM
Chloride	14700	mg/L	EPA 300.0	1000	1000	1000	01/18/17 19:56	01/18/17 19:56	B17A071	JLK
Fluoride	100 <i>u</i>	mg/L	EPA 300.0	1000	100	100	01/18/17 19:56	01/18/17 19:56	B17A071	JLK
Sulfate	1160	mg/L	EPA 300.0	1000	250	250	01/18/17 19:56	01/18/17 19:56	B17A071	JLK
Total Dissolved Solids	26600	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1701050-02
Date/Time Collected 01/18/2017 10:43
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.85	SU	FT 1100	1			01/18/17 10:43	01/18/17 10:43	B17A072	DWM
Chloride	27.4	mg/L	EPA 300.0	1	1.00	1.00	01/18/17 17:24	01/18/17 17:24	B17A071	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/18/17 17:24	01/18/17 17:24	B17A071	JLK
Sulfate	59.0	mg/L	EPA 300.0	1	0.25	0.25	01/18/17 17:24	01/18/17 17:24	B17A071	JLK
Total Dissolved Solids	143	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1701050-02RE1
Date/Time Collected 01/18/2017 10:43
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Sulfate (Reshot)	53.2	mg/L	EPA 300.0	10	2.50	2.50	01/18/17 18:25	01/18/17 18:25	B17A071	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1701050-03
Date/Time Collected 01/18/2017 10:19
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.39	SU	FT 1100	1			01/18/17 10:19	01/18/17 10:19	B17A072	DWM
Chloride	14.2	mg/L	EPA 300.0	1	1.00	1.00	01/18/17 16:23	01/18/17 16:23	B17A071	JLK
Fluoride	0.10	mg/L	EPA 300.0	1	0.10	0.10	01/18/17 16:23	01/18/17 16:23	B17A071	JLK
Sulfate	0.54	mg/L	EPA 300.0	1	0.25	0.25	01/18/17 16:23	01/18/17 16:23	B17A071	JLK
Total Dissolved Solids	50.0	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1701050-04
Date/Time Collected 01/18/2017 12:28
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.62	SU	FT 1100	1			01/18/17 12:28	01/18/17 12:28	B17A072	DWM
Chloride	11.8	mg/L	EPA 300.0	1	1.00	1.00	01/18/17 19:26	01/18/17 19:26	B17A071	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/18/17 19:26	01/18/17 19:26	B17A071	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	01/18/17 19:26	01/18/17 19:26	B17A071	JLK
Total Dissolved Solids	37.0	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1701050-05
Date/Time Collected 01/18/2017 10:58
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.84	SU	FT 1100	1			01/18/17 10:58	01/18/17 10:58	B17A072	DWM
Chloride	27.3	mg/L	EPA 300.0	1	1.00	1.00	01/18/17 17:54	01/18/17 17:54	B17A071	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/18/17 17:54	01/18/17 17:54	B17A071	JLK
Sulfate	59.0	mg/L	EPA 300.0	1	0.25	0.25	01/18/17 17:54	01/18/17 17:54	B17A071	JLK
Total Dissolved Solids	140	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1701050-05RE1
Date/Time Collected 01/18/2017 10:58
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Sulfate (Reshot)	51.6	mg/L	EPA 300.0	10	2.50	2.50	01/18/17 18:55	01/18/17 18:55	B17A071	JLK

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1701050-06
Date/Time Collected 01/18/2017 11:53
Date/Time Received 01/18/2017 14:50

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	01/18/17 15:22	01/18/17 15:22	B17A071	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	01/18/17 15:22	01/18/17 15:22	B17A071	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	01/18/17 15:22	01/18/17 15:22	B17A071	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	01/19/17 13:20	01/19/17 13:20	B17A070	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B17A071									
Blank (B17A071-BLK1)				Prepared & Analyzed: 18-Jan-17					
Chloride	1.00 U	1.00	mg/L		1.00				
Fluoride	0.10 U	0.10	mg/L		0.10				
Sulfate	0.25 U	0.25	mg/L		0.25				
LCS (B17A071-BS1)				Prepared & Analyzed: 18-Jan-17					
Fluoride	1.0		mg/L	1.00		103	90-110		
Sulfate	1.85		mg/L	2.00		92.7	90-110		
Chloride	9.86		mg/L	10.0		98.6	90-110		
Duplicate (B17A071-DUP1)				Source: 1701050-03		Prepared & Analyzed: 19-Jan-17			
Fluoride	0.10 U	0.10	mg/L		0.10				10
Sulfate	0.58	0.25	mg/L		0.54			7.90	10
Chloride	14.4	1.00	mg/L		14.2			1.68	10
Matrix Spike (B17A071-MS1)				Source: 1701050-03		Prepared & Analyzed: 18-Jan-17			
Fluoride	2.3	0.10	mg/L	2.00	0.10	113	80-120		
Sulfate	2.27	0.25	mg/L	2.00	0.54	86.8	80-120		
Chloride	16.4	1.00	mg/L	2.00	14.2	110	80-120		
Matrix Spike Dup (B17A071-MSD1)				Source: 1701050-03		Prepared & Analyzed: 19-Jan-17			
Chloride	16.5	1.00	mg/L	2.00	14.2	117	80-120	0.942	200
Fluoride	2.3	0.10	mg/L	2.00	0.10	114	80-120	0.574	200
Sulfate	2.30	0.25	mg/L	2.00	0.54	88.1	80-120	1.18	200

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B17A070									
Blank (B17A070-BLK1)				Prepared & Analyzed: 19-Jan-17					
Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
LCS (B17A070-BS1)				Prepared & Analyzed: 19-Jan-17					
Total Dissolved Solids	478	5.00	mg/L	481		99.4	80-120		
Duplicate (B17A070-DUP1)				Source: 1701050-03		Prepared & Analyzed: 19-Jan-17			
Total Dissolved Solids	49.0	5.00	mg/L		50.0			2.02	10

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 7A18006									
Blank (7A18006-BLK1)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit
Batch: 7A18006 (Continued)									
Blank (7A18006-BLK1)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					
Mercury	0.0230 U	0.200	ug/L		0.0230				
Blank (7A18006-BLK2)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					
Mercury	0.230 U	2.00	ug/L		0.230				
LCS (7A18006-BS1)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					
Mercury	4.90	0.200	ug/L	5.00		98	85-115		
Matrix Spike (7A18006-MS1)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					
Mercury	4.94	0.200	ug/L	5.00	ND	99	70-130		
Matrix Spike Dup (7A18006-MSD1)				Prepared: 24-Jan-17 Analyzed: 25-Jan-17					
Mercury	4.94	0.200	ug/L	5.00	ND	99	70-130	0.005	10
Post Spike (7A18006-PS1)				Prepared & Analyzed: 25-Jan-17					
Mercury	4.94		ug/L	5.61	8.16E-6	88	75-125		
Batch: 7A18029									
Blank (7A18029-BLK1)				Prepared: 18-Jan-17 Analyzed: 19-Jan-17					
Antimony	2.50 U	5.00	ug/L		2.50				
Thallium	0.580 U	1.00	ug/L		0.580				
Blank (7A18029-BLK2)				Prepared & Analyzed: 19-Jan-17					
Antimony	0.250 U	0.500	ug/L		0.250				
Thallium	0.0580 U	0.100	ug/L		0.0580				
LCS (7A18029-BS1)				Prepared: 18-Jan-17 Analyzed: 19-Jan-17					
Antimony	48.5	5.00	ug/L	50.0		97	85-115		
Thallium	48.8	1.00	ug/L	50.0		98	85-115		
Matrix Spike (7A18029-MS1)				Prepared: 18-Jan-17 Analyzed: 19-Jan-17					
Antimony	49.2	5.00	ug/L	50.0	ND	98	70-130		
Thallium	49.1	1.00	ug/L	50.0	ND	98	70-130		
Matrix Spike Dup (7A18029-MSD1)				Prepared: 18-Jan-17 Analyzed: 19-Jan-17					
Antimony	50.5	5.00	ug/L	50.0	ND	101	70-130	3	30
Thallium	49.4	1.00	ug/L	50.0	ND	99	70-130	0.6	30
Post Spike (7A18029-PS1)				Prepared & Analyzed: 19-Jan-17					
Antimony	4.84		ug/L	4.90	0.00324	99	75-125		
Thallium	4.79		ug/L	4.90	-0.00725	98	75-125		

Quality Control

Metals by EPA 200 Series Methods

Analyte	ResultQual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7A23003

Blank (7A23003-BLK1)

Prepared: 23-Jan-17 Analyzed: 24-Jan-17

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7A23003 (Continued)

Blank (7A23003-BLK1)

Prepared: 23-Jan-17 Analyzed: 24-Jan-17

Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	0.530 U	10.0	ug/L		0.530				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	20.0 U	50.0	ug/L		20.0				
Cadmium	0.450 U	1.00	ug/L		0.450				
Calcium	39.0 U	500	ug/L		39.0				
Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	2.80 U	10.0	ug/L		2.80				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	5.00 U	10.0	ug/L		5.00				
Selenium	10.0 U	40.0	ug/L		10.0				

LCS (7A23003-BS1)

Prepared: 23-Jan-17 Analyzed: 24-Jan-17

Arsenic	498	10.0	ug/L	500		100	85-115		
Barium	510	10.0	ug/L	500		102	85-115		
Beryllium	50.9	1.00	ug/L	50.0		102	85-115		
Boron	2380	50.0	ug/L	2500		95	85-115		
Cadmium	50.8	1.00	ug/L	50.0		102	85-115		
Calcium	5050	500	ug/L	5000		101	85-115		
Chromium	505	10.0	ug/L	500		101	85-115		
Cobalt	511	10.0	ug/L	500		102	85-115		
Lead	509	10.0	ug/L	500		102	85-115		
Lithium	514	20.0	ug/L	500		103	85-115		
Molybdenum	493	10.0	ug/L	500		99	85-115		
Selenium	520	40.0	ug/L	500		104	85-115		

Matrix Spike (7A23003-MS1)

Source: BA00334-02

Prepared: 23-Jan-17 Analyzed: 24-Jan-17

Arsenic	499	10.0	ug/L	500	ND	100	70-130		
Barium	509	10.0	ug/L	500	2.70	101	70-130		
Beryllium	51.0	1.00	ug/L	50.0	ND	102	70-130		
Boron	2390	50.0	ug/L	2500	23.6	95	70-130		
Cadmium	50.8	1.00	ug/L	50.0	ND	102	70-130		
Calcium	6800	500	ug/L	5000	1760	101	70-130		
Chromium	502	10.0	ug/L	500	ND	100	70-130		
Cobalt	513	10.0	ug/L	500	ND	103	70-130		
Lead	506	10.0	ug/L	500	ND	101	70-130		
Lithium	499	20.0	ug/L	500	ND	100	70-130		
Molybdenum	503	10.0	ug/L	500	ND	101	70-130		
Selenium	516	40.0	ug/L	500	ND	103	70-130		

Matrix Spike Dup (7A23003-MSD1)

Source: BA00334-02

Prepared: 23-Jan-17 Analyzed: 24-Jan-17

Arsenic	505	10.0	ug/L	500	ND	101	70-130	1	25
Barium	514	10.0	ug/L	500	2.70	102	70-130	0.9	25
Beryllium	51.4	1.00	ug/L	50.0	ND	103	70-130	0.8	25
Boron	2420	50.0	ug/L	2500	23.6	96	70-130	1	25
Cadmium	51.4	1.00	ug/L	50.0	ND	103	70-130	1	25
Calcium	6850	500	ug/L	5000	1760	102	70-130	0.8	25
Chromium	505	10.0	ug/L	500	ND	101	70-130	0.7	25
Cobalt	517	10.0	ug/L	500	ND	103	70-130	0.8	25

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7A23003 (Continued)

Matrix Spike Dup (7A23003-MSD1)		Source: BA00334-02		Prepared: 23-Jan-17 Analyzed: 24-Jan-17					
Lead	510	10.0	ug/L	500	ND	102	70-130	0.6	25
Lithium	506	20.0	ug/L	500	ND	101	70-130	1	25
Molybdenum	506	10.0	ug/L	500	ND	101	70-130	0.4	25
Selenium	516	40.0	ug/L	500	ND	103	70-130	0.01	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:

Donna McCue
Laboratory Supervisor

CHAIN OF CUSTODY RECORD

Work Order #: 1701050

WATER QUALITY LABORATORY
3800 GARDENIA AVENUE
ORLANDO, FL 32839

Phone: 407-434-2549 Fax: 407-434-2619 WQLAB@ouc.com

PAGE 1 of 1 (bvc)

LAB ANALYSIS

Address:	3100 Alafaya Trail
City:	Orlando
State:	FL
Zip:	32831
Attention:	Mark Corbett
Phone#:	
Fax #:	
Email:	mcorbett@ouc.com
Project Name:	SEC Landfill Monitoring Wells
Sampler(s) Signature:	
Sampler(s) Phone:	

Lab ID Number	Sample Name	Collect Date	Collect Time	Matrix Code*	Total # of Containers
1701-					
050-01	MW-A	1-18-17	11:25	GW	3
050-02	MW-B	1-18-17	10:43	GW	3
050-03	MW-C	1-18-17	10:19	GW	3
050-04	MW-D	1-18-17	12:28	GW	3
050-05	MW-B FD	1-18-17	10:58	GW	3
050-06	EQUIP BLANK	1-18-17	11:53	W	3

[illegible]

T.A.T. Request		Short Hold	
Standard	Rush		
(Y) N	Date Required	Yes ☐ No ☐	
Relinquished by		Affiliation	
Doreen McEue		ouc/woc 1-11	

Pres. Codes	A					B	Metals pH check
	Cl ⁻ , F ⁻ , SO ₄ ²⁻ , TDS					Ra 226 + Ra 228 (subbed)	pH > 2

[illegible]

date	Time	Received by	Affiliation	Date	Time	SAMPLE(S) CHECKED AGAINST COC BY:
8.17	14:50	J. Karchura	OUC WQAB	01/18/17	1450	

Matrix Codes*	Lot
GW = Ground Wtr	DW = Drinking Wtr
WW = Waste Wtr	SW = Surface Wtr
O = Other (specify):	

Pres. Codes			
A. None	B. HNO ₃	C. H ₂ SO ₄	
D. NH ₄ Cl	E. HCl	F. EDTA	
G. Na ₂ S ₂ O ₃	H. H ₃ PO ₄	I. Ascorbic Acid	
Code: _____	Lot: _____		
Code: _____	Lot: _____		
Code: _____	Lot: _____		

[illegible]

Lab Use Only		Yes	No	N/A
Sample INTACT upon arrival?		☒	☐	☐
Rec'd on Wet Ice? Temp	2.6	☒	☐	☐
Proper preservatives indicated?		☒	☐	☐
Rec'd within holding time?		☐	☐	☒
Volatile rec'd without headspace?		☒	☐	☐

[illegible]

		Florida Radiochemistry Services, Inc.				FL Certification E83033	
5456 Hoffner Ave., Suite 201		Orlando, FL. 32812					
Ph.(407)382-7733							
Fax(407)382-7744							
Email: flradiochemistry@cfl.rr.com							
Company Name:		Orlando Utilities Commission				Phone # 407-434-2549	
Address:		3800 Gardenia Ave.				Fax # 407-434-2619	
City / State / Zip		Orlando FL 32839					
Send Report to:		Donna McCue		dmccue@ouc.com			
Additional Report:		J Shoemaker		jshoemaker@ouc.com			
Invoice to:		Angelisa Pinkston-Young		apinkstonyoung@ouc.com			
Project I.D.		SEC Quarterly Landfill Monitoring Wells					
P.O. #							
Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks	
1 SEC MW- A	1-18-17 11:25	GW	2	HNO3	Ra 226 + Ra 228	All samples require Radium 226 and Radium 228.	
2 SEC MW- B	1-18-17 10:43	GW	2	HNO3	Ra 226 + Ra 228		
3 SEC MW- C	1-18-17 10:19	GW	2	HNO3	Ra 226 + Ra 228		
4 SEC MW- D	1-18-17 12:28	GW	2	HNO3	Ra 226 + Ra 228		
5 SEC MW- B, FD	1-18-17 10:58	GW	2	HNO3	Ra 226 + Ra 228		
6 Field Blank/Equip. Blank	1-18-17 11:53	GW	2	HNO3	Ra 226 + Ra 228		
Relinquished by:						Client DW M/JES	
Date/Time	1-19-2017 14:57					Sampled By:	
Received by:	<i>gr</i>					OUC-WQL	
Date/Time	1-19-17 14:57						



August 03, 2017

The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1707073

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 27 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

August 03, 2017

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1707073**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1707073-01	SEC Monitoring Well C	07/20/2017
1707073-02	SEC Monitoring Well B	07/20/2017
1707073-03	SEC Monitoring Well B, Field Duplicate	07/20/2017
1707073-04	SEC Monitoring Well A	07/20/2017
1707073-05	SEC Monitoring Well D	07/20/2017
1707073-06	Field Blank/Equipment Blank	07/20/2017

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1707073-01
Date/Time Collected 07/20/2017 09:34
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Barium	51.7	ug/L	EPA 200.7	1	2.00	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Beryllium	0.124 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Boron	20.0 <i>U</i>	ug/L	EPA 200.7	1	20.0	50.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Cadmium	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Calcium	5090	ug/L	EPA 200.7	1	39.0	500	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Lead	3.80 <i>U</i>	ug/L	EPA 200.7	1	3.80	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Lithium	3.51 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Molybdenum	7.30 <i>U</i>	ug/L	EPA 200.7	1	7.30	10.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV
Selenium	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	07/25/17 09:33	07/26/17 11:12	7G25003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1707073-02
Date/Time Collected 07/20/2017 09:57
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Barium	212	ug/L	EPA 200.7	1	2.00	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Beryllium	0.388 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Boron	76.2	ug/L	EPA 200.7	1	20.0	50.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Cadmium	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Calcium	4340	ug/L	EPA 200.7	1	39.0	500	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Lead	3.80 <i>U</i>	ug/L	EPA 200.7	1	3.80	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Lithium	5.04 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Molybdenum	7.30 <i>U</i>	ug/L	EPA 200.7	1	7.30	10.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV
Selenium	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	07/25/17 09:33	07/26/17 11:13	7G25003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1707073-03
Date/Time Collected 07/20/2017 10:11
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Barium	208	ug/L	EPA 200.7	1	2.00	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Beryllium	0.385 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Boron	79.2	ug/L	EPA 200.7	1	20.0	50.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Cadmium	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Calcium	4130	ug/L	EPA 200.7	1	39.0	500	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Lead	3.80 <i>U</i>	ug/L	EPA 200.7	1	3.80	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Lithium	3.69 <i>I</i>	ug/L	EPA 200.7	1	2.60	20.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Molybdenum	7.30 <i>U</i>	ug/L	EPA 200.7	1	7.30	10.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV
Selenium	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	07/25/17 09:33	07/26/17 11:15	7G25003	ACV

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(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1707073-04
Date/Time Collected 07/20/2017 10:37
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	160 <i>U</i>	ug/L	EPA 200.7	20	160	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Barium	621	ug/L	EPA 200.7	20	40.0	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Beryllium	2.40 <i>U</i>	ug/L	EPA 200.7	20	2.40	20.0	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Boron	400 <i>U</i>	ug/L	EPA 200.7	20	400	1000	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Cadmium	9.00 <i>U</i>	ug/L	EPA 200.7	20	9.00	20.0	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Calcium	3720000	ug/L	EPA 200.7	20	780	10000	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Chromium	22.0 <i>U</i>	ug/L	EPA 200.7	20	22.0	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Cobalt	30.0 <i>U</i>	ug/L	EPA 200.7	20	30.0	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Lead	76.0 <i>U</i>	ug/L	EPA 200.7	20	76.0	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Lithium	146 <i>I</i>	ug/L	EPA 200.7	20	52.0	400	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Molybdenum	146 <i>U</i>	ug/L	EPA 200.7	20	146	200	07/25/17 09:33	07/26/17 11:16	7G25003	ACV
Selenium	200 <i>U</i>	ug/L	EPA 200.7	20	200	800	07/25/17 09:33	07/26/17 11:16	7G25003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1707073-05
Date/Time Collected 07/20/2017 11:53
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>U</i>	ug/L	EPA 200.7	1	8.00	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Barium	29.8	ug/L	EPA 200.7	1	2.00	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Beryllium	0.132 <i>I</i>	ug/L	EPA 200.7	1	0.120	1.00	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Boron	20.0 <i>U</i>	ug/L	EPA 200.7	1	20.0	50.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Cadmium	0.450 <i>U</i>	ug/L	EPA 200.7	1	0.450	1.00	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Calcium	3560	ug/L	EPA 200.7	1	39.0	500	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Chromium	1.10 <i>U</i>	ug/L	EPA 200.7	1	1.10	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Cobalt	1.50 <i>U</i>	ug/L	EPA 200.7	1	1.50	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Lead	3.80 <i>U</i>	ug/L	EPA 200.7	1	3.80	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Lithium	2.60 <i>U</i>	ug/L	EPA 200.7	1	2.60	20.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Molybdenum	7.30 <i>U</i>	ug/L	EPA 200.7	1	7.30	10.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV
Selenium	10.0 <i>U</i>	ug/L	EPA 200.7	1	10.0	40.0	07/25/17 09:33	07/26/17 11:18	7G25003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1707073-06
Date/Time Collected 07/20/2017 11:08
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Arsenic	8.00 <i>u</i>	ug/L	EPA 200.7	1	8.00	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Barium	2.00 <i>u</i>	ug/L	EPA 200.7	1	2.00	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Beryllium	0.120 <i>u</i>	ug/L	EPA 200.7	1	0.120	1.00	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Boron	20.0 <i>u</i>	ug/L	EPA 200.7	1	20.0	50.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Cadmium	0.450 <i>u</i>	ug/L	EPA 200.7	1	0.450	1.00	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Calcium	39.0 <i>u</i>	ug/L	EPA 200.7	1	39.0	500	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Chromium	1.10 <i>u</i>	ug/L	EPA 200.7	1	1.10	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Cobalt	1.50 <i>u</i>	ug/L	EPA 200.7	1	1.50	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Lead	3.80 <i>u</i>	ug/L	EPA 200.7	1	3.80	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Lithium	2.60 <i>u</i>	ug/L	EPA 200.7	1	2.60	20.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Molybdenum	7.30 <i>u</i>	ug/L	EPA 200.7	1	7.30	10.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV
Selenium	10.0 <i>u</i>	ug/L	EPA 200.7	1	10.0	40.0	07/25/17 09:33	07/26/17 11:10	7G25003	ACV

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1707073-01
Date/Time Collected 07/20/2017 09:34
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	07/21/17 09:31	07/28/17 12:04	7G21006	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 07:50	7G21005	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/17 09:31	07/28/17 12:04	7G21006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1707073-02
Date/Time Collected 07/20/2017 09:57
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	07/21/17 09:31	07/28/17 12:33	7G21006	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 07:53	7G21005	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/17 09:31	07/28/17 12:33	7G21006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1707073-03
Date/Time Collected 07/20/2017 10:11
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>u</i>	ug/L	EPA 200.8	1	0.250	0.500	07/21/17 09:31	07/28/17 12:41	7G21006	JAY
Mercury	0.0230 <i>u</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 07:56	7G21005	JAY
Thallium	0.0580 <i>u</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/17 09:31	07/28/17 12:41	7G21006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1707073-04
Date/Time Collected 07/20/2017 10:37
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Mercury	0.0230	u	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 07:59	7G21005 JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1707073-04RE1
Date/Time Collected 07/20/2017 10:37
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony (Reshot)	125 U, R-σ	ug/L	EPA 200.8	500	125	250	07/21/17 09:31	07/28/17 13:30	7G21006	JAY
Thallium (Reshot)	29.0 U, R-σ	ug/L	EPA 200.8	500	29.0	50.0	07/21/17 09:31	07/28/17 13:30	7G21006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1707073-05
Date/Time Collected 07/20/2017 11:53
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	07/21/17 09:31	07/28/17 13:34	7G21006	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 08:03	7G21005	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/17 09:31	07/28/17 13:34	7G21006	JAY

Laboratory Report ENCO Orlando FLDOH# E83182
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1707073-06
Date/Time Collected 07/20/2017 11:08
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Antimony	0.250 <i>U</i>	ug/L	EPA 200.8	1	0.250	0.500	07/21/17 09:31	07/28/17 10:20	7G21006	JAY
Mercury	0.0230 <i>U</i>	ug/L	EPA 245.1	1	0.0230	0.200	07/26/17 10:28	07/27/17 07:47	7G21005	JAY
Thallium	0.0580 <i>U</i>	ug/L	EPA 200.8	1	0.0580	0.100	07/21/17 09:31	07/28/17 10:20	7G21006	JAY

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1707073-01
Date/Time Collected 07/20/2017 09:34
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.04	SU	FT 1100	1			07/20/17 09:34	07/20/17 09:34	B17G120	JES
Chloride	16.2	mg/L	EPA 300.0	1	1.00	1.00	07/20/17 21:08	07/20/17 21:08	B17G103	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/17 21:08	07/20/17 21:08	B17G103	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	07/20/17 21:08	07/20/17 21:08	B17G103	JLK
Total Dissolved Solids	54.0	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1707073-02
Date/Time Collected 07/20/2017 09:57
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.62	SU	FT 1100	1			07/20/17 09:57	07/20/17 09:57	B17G120	JES
Chloride	35.8	mg/L	EPA 300.0	1	1.00	1.00	07/20/17 23:10	07/20/17 23:10	B17G103	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/17 23:10	07/20/17 23:10	B17G103	JLK
Sulfate	52.7	mg/L	EPA 300.0	5	1.25	1.25	07/20/17 23:40	07/20/17 23:40	B17G103	JLK
Total Dissolved Solids	159	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1707073-03
Date/Time Collected 07/20/2017 10:11
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.64	SU	FT 1100	1			07/20/17 10:11	07/20/17 10:11	B17G120	JES
Chloride	35.1	mg/L	EPA 300.0	1	1.00	1.00	07/21/17 00:11	07/21/17 00:11	B17G103	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/21/17 00:11	07/21/17 00:11	B17G103	JLK
Sulfate	51.3	mg/L	EPA 300.0	5	1.25	1.25	07/21/17 00:41	07/21/17 00:41	B17G103	JLK
Total Dissolved Solids	160	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1707073-04
Date/Time Collected 07/20/2017 10:37
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.26	SU	FT 1100	1			07/20/17 10:37	07/20/17 10:37	B17G120	JES
Chloride	14400	mg/L	EPA 300.0	1000	1000	1000	07/21/17 01:42	07/21/17 01:42	B17G103	JLK
Fluoride	10 <i>u</i>	mg/L	EPA 300.0	100	10	10	07/21/17 01:12	07/21/17 01:12	B17G103	JLK
Sulfate	1080	mg/L	EPA 300.0	100	25.0	25.0	07/21/17 01:12	07/21/17 01:12	B17G103	JLK
Total Dissolved Solids	28500	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

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Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1707073-05
Date/Time Collected 07/20/2017 11:53
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.70	SU	FT 1100	1			07/20/17 11:53	07/20/17 11:53	B17G120	JES
Chloride	25.7	mg/L	EPA 300.0	1	1.00	1.00	07/20/17 22:39	07/20/17 22:39	B17G103	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/17 22:39	07/20/17 22:39	B17G103	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	07/20/17 22:39	07/20/17 22:39	B17G103	JLK
Total Dissolved Solids	64.0	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1707073-06
Date/Time Collected 07/20/2017 11:08
Date/Time Received 07/20/2017 14:00

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	07/20/17 20:37	07/20/17 20:37	B17G103	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	07/20/17 20:37	07/20/17 20:37	B17G103	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	07/20/17 20:37	07/20/17 20:37	B17G103	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	07/24/17 12:40	07/24/17 12:40	B17G125	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B17G103

Blank (B17G103-BLK1)

Prepared & Analyzed: 20-Jul-17

Sulfate	0.25 U	0.25	mg/L		0.25				
Chloride	1.00 U	1.00	mg/L		1.00				
Fluoride	0.10 U	0.10	mg/L		0.10				

LCS (B17G103-BS1)

Prepared & Analyzed: 20-Jul-17

Chloride	9.78		mg/L	10.0		97.8	90-110		
Fluoride	1.0		mg/L	1.00		99.6	90-110		
Sulfate	9.58		mg/L	10.0		95.8	90-110		

Duplicate (B17G103-DUP1)

Source: 1707073-01

Prepared & Analyzed: 20-Jul-17

Fluoride	0.10 U	0.10	mg/L		0.10				10
Chloride	16.3	1.00	mg/L		16.2			0.227	10
Sulfate	0.25 U	0.25	mg/L		0.25				10

Matrix Spike (B17G103-MS1)

Source: 1707073-01

Prepared & Analyzed: 20-Jul-17

Sulfate	8.31	0.25	mg/L	8.00	ND	104	80-120		
Fluoride	1.1	0.10	mg/L	1.00	ND	109	80-120		
Chloride	23.9	1.00	mg/L	8.00	16.2	96.1	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B17G125

Blank (B17G125-BLK1)

Prepared & Analyzed: 24-Jul-17

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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LCS (B17G125-BS1)

Prepared & Analyzed: 24-Jul-17

Total Dissolved Solids	376	5.00	mg/L	371		101	80-120		
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Duplicate (B17G125-DUP1)

Source: 1707073-01

Prepared & Analyzed: 24-Jul-17

Total Dissolved Solids	58.0	5.00	mg/L		54.0			7.14	10
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Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7G21005

Blank (7G21005-BLK1)

Prepared: 26-Jul-17 Analyzed: 27-Jul-17

Mercury	0.0230 U	0.200	ug/L		0.0230				
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Blank (7G21005-BLK2)

Prepared: 26-Jul-17 Analyzed: 27-Jul-17

Mercury	0.230 U	2.00	ug/L		0.230				
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LCS (7G21005-BS1)

Prepared: 26-Jul-17 Analyzed: 27-Jul-17

Quality Control ENCO Orlando FLDOH# E83182

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 7G21005 (Continued)									
LCS (7G21005-BS1)									
Mercury	5.08	0.200	ug/L	5.00		102	85-115		
Prepared: 26-Jul-17 Analyzed: 27-Jul-17									
Matrix Spike (7G21005-MS1)									
Mercury	5.42	0.200	ug/L	5.00	ND	108	70-130		
Prepared: 26-Jul-17 Analyzed: 27-Jul-17									
Matrix Spike Dup (7G21005-MSD1)									
Mercury	5.37	0.200	ug/L	5.00	ND	107	70-130	0.9	10
Prepared: 26-Jul-17 Analyzed: 27-Jul-17									
Post Spike (7G21005-PS1)									
Mercury	5.30		ug/L	5.61	0.0135	94	75-125		
Prepared & Analyzed: 27-Jul-17									
Batch: 7G21006									
Blank (7G21006-BLK1)									
Antimony	2.50 U	5.00	ug/L		2.50				
Thallium	0.580 U	1.00	ug/L		0.580				
Prepared: 21-Jul-17 Analyzed: 28-Jul-17									
Blank (7G21006-BLK2)									
Antimony	0.250 U	0.500	ug/L		0.250				
Thallium	0.0580 U	0.100	ug/L		0.0580				
Prepared: 21-Jul-17 Analyzed: 28-Jul-17									
LCS (7G21006-BS1)									
Antimony	48.4	5.00	ug/L	50.0		97	85-115		
Thallium	50.4	1.00	ug/L	50.0		101	85-115		
Prepared: 21-Jul-17 Analyzed: 28-Jul-17									
Matrix Spike (7G21006-MS1)									
Antimony	48.1	5.00	ug/L	50.0	ND	96	70-130		
Thallium	51.8	1.00	ug/L	50.0	ND	104	70-130		
Prepared: 21-Jul-17 Analyzed: 28-Jul-17									
Matrix Spike Dup (7G21006-MSD1)									
Antimony	48.1	5.00	ug/L	50.0	ND	96	70-130	0.02	30
Thallium	50.8	1.00	ug/L	50.0	ND	102	70-130	2	30
Prepared: 21-Jul-17 Analyzed: 28-Jul-17									
Post Spike (7G21006-PS1)									
Antimony	4.74		ug/L	4.90	-0.0136	97	75-125		
Thallium	5.09		ug/L	4.90	-0.0389	104	75-125		
Prepared & Analyzed: 28-Jul-17									

Quality Control

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 7G25003									
Blank (7G25003-BLK1)									
Arsenic	8.00 U	10.0	ug/L		8.00				
Barium	2.00 U	10.0	ug/L		2.00				
Beryllium	0.120 U	1.00	ug/L		0.120				
Boron	20.0 U	50.0	ug/L		20.0				
Cadmium	0.450 U	1.00	ug/L		0.450				
Calcium	39.0 U	500	ug/L		39.0				
Prepared: 25-Jul-17 Analyzed: 26-Jul-17									

Quality Control

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7G25003 (Continued)

Blank (7G25003-BLK1)

Prepared: 25-Jul-17 Analyzed: 26-Jul-17

Chromium	1.10 U	10.0	ug/L		1.10				
Cobalt	1.50 U	10.0	ug/L		1.50				
Lead	3.80 U	10.0	ug/L		3.80				
Lithium	2.60 U	20.0	ug/L		2.60				
Molybdenum	7.30 U	10.0	ug/L		7.30				
Selenium	10.0 U	40.0	ug/L		10.0				

LCS (7G25003-BS1)

Prepared: 25-Jul-17 Analyzed: 26-Jul-17

Arsenic	499	10.0	ug/L	500		100	85-115		
Barium	520	10.0	ug/L	500		104	85-115		
Beryllium	52.1	1.00	ug/L	50.0		104	85-115		
Boron	2570	50.0	ug/L	2500		103	85-115		
Cadmium	51.9	1.00	ug/L	50.0		104	85-115		
Calcium	5210	500	ug/L	5000		104	85-115		
Chromium	519	10.0	ug/L	500		104	85-115		
Cobalt	516	10.0	ug/L	500		103	85-115		
Lead	524	10.0	ug/L	500		105	85-115		
Lithium	518	20.0	ug/L	500		104	85-115		
Molybdenum	507	10.0	ug/L	500		101	85-115		
Selenium	532	40.0	ug/L	500		106	85-115		

Matrix Spike (7G25003-MS1)

Source: BA03299-01

Prepared: 25-Jul-17 Analyzed: 26-Jul-17

Arsenic	497	10.0	ug/L	500	ND	99	70-130		
Barium	541	10.0	ug/L	500	36.9	101	70-130		
Beryllium	51.5	1.00	ug/L	50.0	ND	103	70-130		
Boron	2560	50.0	ug/L	2500	35.2	101	70-130		
Cadmium	50.4	1.00	ug/L	50.0	ND	101	70-130		
Calcium	40500	500	ug/L	5000	37800	53	70-130		
Chromium	510	10.0	ug/L	500	ND	102	70-130		
Cobalt	506	10.0	ug/L	500	ND	101	70-130		
Lead	515	10.0	ug/L	500	ND	103	70-130		
Lithium	504	20.0	ug/L	500	ND	101	70-130		
Molybdenum	505	10.0	ug/L	500	ND	101	70-130		
Selenium	514	40.0	ug/L	500	ND	103	70-130		

Matrix Spike Dup (7G25003-MSD1)

Source: BA03299-01

Prepared: 25-Jul-17 Analyzed: 26-Jul-17

Arsenic	499	10.0	ug/L	500	ND	100	70-130	0.3	25
Barium	550	10.0	ug/L	500	36.9	103	70-130	2	25
Beryllium	51.9	1.00	ug/L	50.0	ND	104	70-130	0.8	25
Boron	2610	50.0	ug/L	2500	35.2	103	70-130	2	25
Cadmium	51.3	1.00	ug/L	50.0	ND	103	70-130	2	25
Calcium	41300	500	ug/L	5000	37800	69	70-130	2	25
Chromium	514	10.0	ug/L	500	ND	103	70-130	0.7	25
Cobalt	515	10.0	ug/L	500	ND	103	70-130	2	25
Lead	523	10.0	ug/L	500	ND	105	70-130	2	25
Lithium	511	20.0	ug/L	500	ND	102	70-130	2	25
Molybdenum	513	10.0	ug/L	500	ND	103	70-130	2	25
Selenium	522	40.0	ug/L	500	ND	104	70-130	2	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-

Page _____ of _____

Client Name Orlando Utilities Commission (OR021)	Project Number	Requested Turnaround Times					
Address 3800 Gardenia Ave.	Project Name/Desc New SEC Lettered Monitoring Wells	Note : Rush requests subject to acceptance by the facility					
City/ST/Zip Orlando, FL 32839	PO # / Billing Info						
Tel 407-434-2547	Fax	Due ____ / ____ / ____					
Sampler(s) Name, Affiliation (Print) James Shoemaker	Reporting Contact Donna McCue	Standard					
Sampler(s) Signature	Billing Contact Angelisa Young	Expedited					
	Site Location / Time Zone	Lab Workorder					

[illegible]

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
ECG	6/23/17 9:38	[Signature]	6/23/17 9:35	[Signature]	
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		[Signature]	6/20/17 14:11	[Signature]	7/20/17 1320
		Relinquished By	Date/Time	Received By	Date/Time
Cooler #s & Temps on Receipt		Condition Upon Receipt			
		7.0°C			
					Unacceptable

Matrix : GW-Groundwater **SO**-Soil **DW**-Drinking Water **SE**-Sediment **SW**-Surface Water **WW**-Wastewater **A**-Air **O**-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

		Florida Radiochemistry Services, Inc.				FL Certification E83033	
		5456 Hoffner Ave., Suite 201 Orlando, FL. 32812					
		Ph.(407)382-7733					
		Fax(407)382-7744					
		Email: flradiochemistry@cfl.rr.com					
Company Name:		Orlando Utilities Commission				Phone # 407-434-2549	
Address:		3800 Gardenia Ave.				Fax # 407-434-2619	
City / State / Zip		Orlando FL 32839					
Send Report to:		Donna McCue dmccue@ouc.com					
Additional Report:		J Shoemaker jshoemaker@ouc.com					
Invoice to:		Angelisa Pinkston-Young apinkstonyoung@ouc.com					
Project I.D.		SEC Quarterly Monitoring Wells					
P.O. #							
Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks	
1 SEC MW-C	7/20/2017 9:34	GW	2	HNO3	Ra 226 + Ra 228	All samples require Radium 226 and Radium 228.	
2 SEC MW-B	7/20/2017 9:57	GW	2	HNO3	Ra 226 + Ra 228		
3 SEC MW-B, FD	7/20/2017 10:11	GW	2	HNO3	Ra 226 + Ra 228		
4 SEC MW-A	7/20/2017 10:37	GW	2	HNO3	Ra 226 + Ra 228		
5 SEC MW-D	7/20/2017 11:53	GW	2	HNO3	Ra 226 + Ra 228		
6 Field Blank/Equip. Blank	7/20/2017 11:08	GW	2	HNO3	Ra 226 + Ra 228		
Relinquished by:				Sampled By:		Client	
Date/Time	07/21/17 1525			Christine Wright		OUC-WQL	
Received by:	SW						
Date/Time	7/21/17 15125						

OUC GROUNDWATER SAMPLING LOG

Site Name: Stanton Energy Center	Site Location: MW - C
Well No.	Sample ID: 1707073-01
	Date: 07/20/17

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: <u>Stanton Energy Center</u>	Site Location: <u>MW-B and MW-B, FD</u>
Well No. _____	Sample ID: <u>1707073-02</u> Date: <u>07/20/17</u>
1707073-03 -- FD	

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: <u>3.64</u>	Sampling Device: <u>PP #1</u>
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (<u>32.6</u> feet - <u>3.64</u> feet) X <u>0.16</u> gallons/foot = <u>4.63</u> gallons 09:42				
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons				
Initial Tubing Depth in Well (Feet): <u>22'</u>		Final Pump or Tubing Depth in Well: (feet): _____		Purging Initiated at: <u>09:04</u>
				Purging ended at: <u>10:16</u>
				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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
09:51	11.75	11.75	0.25	3.89	4.61	24.53	276	0.28	0.80	Clear	H ₂ S
09:54	0.75	12.50	0.25	3.88	4.62	24.41	275	0.24	0.94		
09:57	0.75	13.25	0.25	3.88	4.62	24.41	273	0.21	0.63		
10:05	15.25	15.25	0.25	3.89	4.63	24.46	274	0.20	0.97	Clear	H ₂ S
10:08	0.75	16.00	0.25	3.89	4.63	24.45	270	0.19	0.64		
10:11	0.75	16.75	0.25	3.89	4.64	24.40	264	0.19	0.87		

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 diameter capacity (Gallons Per Foot): 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: <u>CRN, JES / OUC WQL</u>				Sampler(s) Signature(s): <u>Christine Wright, Jim Brown</u>			Sampling initiated at: <u>09:57, 10:11</u>		Sampling ended at: <u>10:02, 10:16</u>	
Pump or tubing depth in well (feet): <u>22'</u>				Tubing Material Code: <u>PE</u>		Field-filtered: <u>Y</u> <u>(N)</u> Filter Size: _____ µm		Filtration Equipment Type: _____		
Field Decontamination: Pump <u>Y</u> <u>(N)</u> Tubing <u>Y</u> <u>(N)</u> (replaced)						Duplicate: <u>Y</u> <u>N</u>				

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH			

Remarks: _____

(Sulfite: NA mg/L)

Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T = Teflon; O = Other
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

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 the 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 or ± 10% (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: <i>Stanton Energy Center</i>		Site Location: <i>MW - A</i>
Well No.	Sample ID: <i>1707073-04</i>	Date: <i>07/20/17</i>

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: CRW/JES / OUCWR				Sampler(s) Signature(s): <i>[Signature]</i>			Sampling initiated at: 10:37		Sampling ended at: 10:43				
Pump or tubing depth in well (feet): 33'				Tubing Material Code: PE			Field-filtered: Y N		Filter Size: _____ µm				
Field Decontamination:				Pump	Y	N	Tubing	Y	N (replaced)	Duplicate:	Y	N	
Sample Container Specification				Sample Preservation						Intended Analysis and/or Method		Duplicate:	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH			Sampling Equipment Code		Sample Pump Flow Rate (mL per minute)		
Remarks:													
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other								(Sulfite: NA mg/L)					
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other													

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: Stanton Energy Center		Site Location: MW-D
Well No.	Sample ID: 1707073-05	Date: 07/20/17

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: <i>CRW, JES LOUC WQL</i>				Sampler(s) Signature(s): <i>[Signature]</i>			Sampling initiated at: <i>11:53</i>		Sampling ended at: <i>11:59</i>			
Pump or tubing depth in well (feet):				Tubing Material Code: <i>PE</i>			Field-filtered: Y ☒ N ☐		Filter Size: _____ µm			
Field Decontamination:				Pump	Y	N ☒	Tubing	Y	N ☒ (replaced)	Duplicate:	Y	N ☒
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)			
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH						
Remarks:										(Sulfite: <i>NA</i> mg/L)		
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other												
Sampling Equipment Codes: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other												

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 the last three consecutive readings (see FS 2212, Section 3)
pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

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

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

Project/Site: SEC Lettered Wells Date: 07/20/17 in log book Micro Temp. Meter # YSI 556MPS/06H1774 AB

Temperature (Quarterly) For Date of Last Temperature Verification see 07/10/17

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
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CAL	ICV	CCV	CRW	07/20/17	07:35		8.727	22.12	98.1	8.58	P
CAL	ICV	CCV	JES	7-20-17	1535		8.33	24.50	99.9	8.34	P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard umhos/cm	Exp. Date	Lot #	Bottle #	Cell Constant	Reading umhos/cm	Pass or Fail
----------------------	-----------------	----------	------	------	-------------------	-----------	-------	----------	---------------	------------------	--------------

CAL	ICV	CCV	CRW	07/20/17	07:40	100	2701A32	03-24		99	P
CAL	ICV	CCV	JES	7-20-17	1505	50,000	2509G14	02-125		50189	P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P

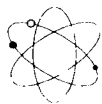
pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	-----------------	----------	------	------	-------------	-----------	-------	----------	-------	------------	--------------

CAL	ICV	CCV	CRW	07/20/17	07:42	7.00	165674	02-151		7.03	P
CAL	ICV	CCV	JES	7-20-17	1458	4.00	164608	02-150		4.05	P
CAL	ICV	CCV			1501	4.00	Above			4.08	P
CAL	ICV	CCV				7.00	"			6.92	P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P
CAL	ICV	CCV									P

Maintenance:	Weekly pH Slope:	Specific Conductance Probe Cleaned?	Yes	No	Dissolved Oxygen Membrane Changed?	Yes	No
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Perform only in Calibrate Mode:
Perform only in Run Mode:
Perform only in Run Mode:

CAL - Calibrate -
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification



Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407)382-7744

Certification I. D. # E83033

Work Order #: 1707205

Report Date: 08/02/17

Report to:

Orlando Utilities Commission

Water Quality Lab

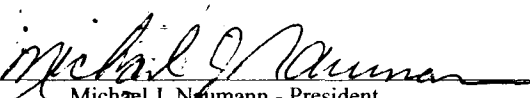
3800 Gardenia Ave.

Orlando, FL 32839

Attention: Donna McCue

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

Signed

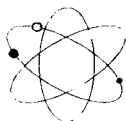


Michael J. Naumann - President

Shawn M. Naumann - Laboratory Director

Date

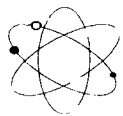
8-2-17



Florida Radiochemistry Services, Inc.

Sample Login

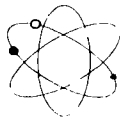
Client:	Orlando Utilities Commission	Date / Time Received	Work order #
		07/21/17 15:25	1707205
Client Contact:	Donna McCue		
Client P.O.			
Project I.D.	SEC Quarterly Monitoring Wells		
Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1707205-01	SEC MW-C	07/20/17 09:34	Ra226, Ra228
1707205-02	SEC MW-B	07/20/17 09:57	Ra226, Ra228
1707205-03	SEC MW-B, FD	07/20/17 10:11	Ra226, Ra228
1707205-04	SEC MW-A	07/20/17 10:37	Ra226, Ra228
1707205-05	SEC MW-D	07/20/17 11:53	Ra226, Ra228
1707205-06	Field Blank/Eq. Blank	07/20/17 11:08	Ra226, Ra228



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1707205-01	1707205-02	1707205-03	1707205-04	1707205-05	1707205-06
Client I.D.	SEC MW-C	SEC MW-B	SEC MW-B, FD	SEC MW-A	SEC MW-D	Field Blank / Eq. Blank
Radium 226	0.2	1.4	1.5	13.4	0.3	0.2U
Error +/-	0.1	0.2	0.2	0.6	0.1	0.1
MDL	0.2	0.1	0.2	0.1	0.2	0.2
EPA Method	903.1	903.1	903.1	903.1	903.1	903.1
Prep Date	07/26/17	07/26/17	07/26/17	07/26/17	07/26/17	07/26/17
Prep Time	07:36	07:36	07:36	07:36	07:36	07:36
Analysis Date	08/02/17	08/02/17	08/02/17	08/02/17	08/02/17	08/02/17
Analysis Time	09:57	09:57	10:59	10:59	10:59	10:59
Analyst	MJN	MJN	MJN	MJN	MJN	MJN
Radium 228	1.1	1.0	1.1	0.9U	0.9U	0.9U
Error +/-	0.6	0.6	0.7	0.6	0.6	0.6
MDL	0.9	0.9	0.9	0.9	0.9	0.9
EPA Method	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05
Prep Date	07/26/17	07/26/17	07/26/17	07/26/17	07/26/17	07/26/17
Prep Time	07:36	07:36	07:36	07:36	07:36	07:36
Analysis Date	08/02/17	08/02/17	08/02/17	08/02/17	08/02/17	08/02/17
Analysis Time	08:34	09:35	09:35	09:35	09:35	10:36
Analyst	SN	SN	SN	SN	SN	SN
Combined Ra226 + Ra228	1.3	2.4	2.6	14.1	0.9U	0.9U
Error +/-	0.6	0.6	0.7	0.8	0.6	0.6
MDL	0.9	0.9	0.9	0.9	0.9	0.9
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Radium 226	1707205-01	08/02/17	0.2	25.2	23.8	25.5	94	6.9
Radium 228	1707205-01	08/02/17	1.1	5.7	6.7	6.5	98	3.0

	Quality	Control	Limits
	% RPD		% Rec.
Radium 226	23.4		78-125
Radium 228	23.9		67-125

Florida Radiochemistry Services, Inc.
 5456 Hoffner Ave., Suite 201 Orlando, FL. 32812
 Ph.(407)382-7733
 Fax(407)382-7744
 Email: flradiochemistry@cfl.rr.com

FL Certification E83033

Company Name:

Orlando Utilites Commission

Phone # **407-434-2549**

Address:

3800 Gardenia Ave.

Fax # **407-434-2619**

City / State / Zip

Orlando FL 32839

Send Report to:

Donna McCue dmccue@ouc.com

Additional Report:

J Shoemaker jshoemaker@ouc.com

Invoice to:

Angelisa Pinkston-Young apinkstonyoung@ouc.com

Project I.D.

SEC Quarterly Monitoring Wells

P.O. #

Sample I. D. (Sample Location)	Date / Time Sampled	Sample Type	# of Btls	Pres.	Analysis Requested	Remarks
1 SEC MW-C	7/20/2017 9:34	GW	2	HNO3	Ra 226 + Ra 228	All samples require Radium 226 and Radium 228.
2 SEC MW-B	7/20/2017 9:57	GW	2	HNO3	Ra 226 + Ra 228	
3 SEC MW-B, FD	7/20/2017 10:11	GW	2	HNO3	Ra 226 + Ra 228	
4 SEC MW-A	7/20/2017 10:37	GW	2	HNO3	Ra 226 + Ra 228	
5 SEC MW-D	7/20/2017 11:53	GW	2	HNO3	Ra 226 + Ra 228	
6 Field Blank/Equip. Blank	7/20/2017 11:08	GW	2	HNO3	Ra 226 + Ra 228	

Relinquished by:

Date/Time

Received by:

Date/Time

Christine Wright
 7/21/17 1525
SW
 7/21/17 1525

Sampled By:
Christine Wright

Client
OUC-WQL



The *Reliable One*®

WATER QUALITY LABORATORY

Technical Report for:

OUC-Environmental Division

WQLAB Job Number:

1710086

Report to:

**Mark Corbett
OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193**

Total Number of Pages 19 (Including Cover Page)

Estimates of uncertainty of analysis are available on request.
These results relate only to the samples tested.



Test results contained in this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs, as applicable.

Donna McCue
Laboratory Supervisor

Certification: FLDOH Certification Number E53566

November 10, 2017

OUC-Environmental Division
PO Box 3193
Orlando, FL 32808-3193

RE: WQLAB Project Number: **1710086**
Client Project Description: **Combustion Waste Landfill Monitoring**

Enclosed is the report of laboratory analysis for the following samples:

Sample Number	Sample Description	Date Collected
1710086-01	SEC Monitoring Well A	10/30/2017
1710086-02	SEC Monitoring Well B	10/30/2017
1710086-03	SEC Monitoring Well B, Field Duplicate	10/30/2017
1710086-04	SEC Monitoring Well C	10/30/2017
1710086-05	SEC Monitoring Well D	10/30/2017
1710086-06	Field Blank/Equipment Blank	10/30/2017

Footnotes are given at the end of the report, when applicable.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,



Donna McCue
Laboratory Supervisor

Enclosures

Laboratory Report ENCO Jacksonville FLDOH# E82277

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1710086-01
Date/Time Collected 10/30/2017 11:11
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	400 <i>u</i>	ug/L	EPA 200.7	20	400	1000	10/31/17 12:11	11/01/17 10:29	7J31003	ACV
Calcium	3830000	ug/L	EPA 200.7	20	780	10000	10/31/17 12:11	11/01/17 10:29	7J31003	ACV

DRAFT

Laboratory Report ENCO Jacksonville FLDOH# E82277
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1710086-02
Date/Time Collected 10/30/2017 11:58
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	71.5	ug/L	EPA 200.7	1	20.0	50.0	10/31/17 12:11	11/01/17 10:26	7J31003	ACV
Calcium	17100	ug/L	EPA 200.7	1	39.0	500	10/31/17 12:11	11/01/17 10:26	7J31003	ACV

DRAFT

Laboratory Report ENCO Jacksonville FLDOH# E82277
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1710086-03
Date/Time Collected 10/30/2017 12:12
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	70.9	ug/L	EPA 200.7	1	20.0	50.0	10/31/17 12:11	11/01/17 10:28	7J31003	ACV
Calcium	17300	ug/L	EPA 200.7	1	39.0	500	10/31/17 12:11	11/01/17 10:28	7J31003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E82277
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1710086-04
Date/Time Collected 10/30/2017 12:36
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	20.0 <i>u</i>	ug/L	EPA 200.7	1	20.0	50.0	10/31/17 12:11	11/01/17 10:25	7J31003	ACV
Calcium	6770	ug/L	EPA 200.7	1	39.0	500	10/31/17 12:11	11/01/17 10:25	7J31003	ACV

Laboratory Report ENCO Jacksonville FLDOH# E82277
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1710086-05
Date/Time Collected 10/30/2017 13:12
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	31.0 I	ug/L	EPA 200.7	1	20.0	50.0	11/06/17 09:07	11/07/17 11:12	7K06001	ACV
Calcium	3720	ug/L	EPA 200.7	1	39.0	500	11/06/17 09:07	11/07/17 11:12	7K06001	ACV

Laboratory Report ENCO Jacksonville FLDOH# E82277
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1710086-06
Date/Time Collected 10/30/2017 13:25
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Boron	20.0 <i>u</i>	ug/L	EPA 200.7	1	20.0	50.0	10/31/17 12:11	11/01/17 10:23	7J31003	ACV
Calcium	39.0 <i>u</i>	ug/L	EPA 200.7	1	39.0	500	10/31/17 12:11	11/01/17 10:23	7J31003	ACV

Laboratory Report Orlando Utilities Commission FLDOH# E53566

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well A
Matrix Water
WQLAB Sample Number 1710086-01
Date/Time Collected 10/30/2017 11:11
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.01	SU	FT 1100	1			10/30/17 11:11	10/30/17 11:11	B17K044	JES
Chloride	14500	mg/L	EPA 300.0	1000	1000	1000	10/31/17 17:50	10/31/17 17:50	B17K001	JLK
Fluoride	100 <i>u</i>	mg/L	EPA 300.0	1000	100	100	10/31/17 17:50	10/31/17 17:50	B17K001	JLK
Sulfate	1340	mg/L	EPA 300.0	1000	250	250	10/31/17 17:50	10/31/17 17:50	B17K001	JLK
Total Dissolved Solids	32100	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B
Matrix Water
WQLAB Sample Number 1710086-02
Date/Time Collected 10/30/2017 11:58
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.37	SU	FT 1100	1			10/30/17 11:58	10/30/17 11:58	B17K044	JES
Chloride	72.2	mg/L	EPA 300.0	5	5.00	5.00	10/31/17 19:22	10/31/17 19:22	B17K001	JLK
Fluoride	0.14	mg/L	EPA 300.0	1	0.10	0.10	10/31/17 18:21	10/31/17 18:21	B17K001	JLK
Sulfate	60.4	mg/L	EPA 300.0	10	2.50	2.50	11/01/17 11:41	11/01/17 11:41	B17K001	JLK
Total Dissolved Solids	239	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566
(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well B, Field Duplicate
Matrix Water
WQLAB Sample Number 1710086-03
Date/Time Collected 10/30/2017 12:12
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.37	SU	FT 1100	1			10/30/17 12:12	10/30/17 12:12	B17K044	JES
Chloride	71.6	mg/L	EPA 300.0	5	5.00	5.00	10/31/17 19:52	10/31/17 19:52	B17K001	JLK
Fluoride	0.14	mg/L	EPA 300.0	1	0.10	0.10	10/31/17 18:51	10/31/17 18:51	B17K001	JLK
Sulfate	59.7	mg/L	EPA 300.0	10	2.50	2.50	11/01/17 12:12	11/01/17 12:12	B17K001	JLK
Total Dissolved Solids	231	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well C
Matrix Water
WQLAB Sample Number 1710086-04
Date/Time Collected 10/30/2017 12:36
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	5.16	SU	FT 1100	1			10/30/17 12:36	10/30/17 12:36	B17K044	JES
Chloride	16.0	mg/L	EPA 300.0	1	1.00	1.00	10/31/17 20:23	10/31/17 20:23	B17K001	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/31/17 20:23	10/31/17 20:23	B17K001	JLK
Sulfate	1.20	mg/L	EPA 300.0	1	0.25	0.25	10/31/17 20:23	10/31/17 20:23	B17K001	JLK
Total Dissolved Solids	65.0	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation SEC Monitoring Well D
Matrix Water
WQLAB Sample Number 1710086-05
Date/Time Collected 10/30/2017 13:12
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Field pH	4.46	SU	FT 1100	1			10/30/17 13:12	10/30/17 13:12	B17K044	JES
Chloride	29.2	mg/L	EPA 300.0	1	1.00	1.00	10/31/17 21:54	10/31/17 21:54	B17K001	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/31/17 21:54	10/31/17 21:54	B17K001	JLK
Sulfate	0.30	mg/L	EPA 300.0	1	0.25	0.25	10/31/17 21:54	10/31/17 21:54	B17K001	JLK
Total Dissolved Solids	63.0	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Laboratory Report Orlando Utilities Commission FLDOH# E53566

(Continued)

Project Name Combustion Waste Landfill Monitoring
Sample Designation Field Blank/Equipment Blank
Matrix Water
WQLAB Sample Number 1710086-06
Date/Time Collected 10/30/2017 13:25
Date/Time Received 10/30/2017 16:25

Parameters	Results	Units	Method	Dil	MDL	PQL	Date/Time Prepared	Date/Time Analyzed	Batch	Analyst
Chloride	1.00 <i>u</i>	mg/L	EPA 300.0	1	1.00	1.00	10/31/17 16:49	10/31/17 16:49	B17K001	JLK
Fluoride	0.10 <i>u</i>	mg/L	EPA 300.0	1	0.10	0.10	10/31/17 16:49	10/31/17 16:49	B17K001	JLK
Sulfate	0.25 <i>u</i>	mg/L	EPA 300.0	1	0.25	0.25	10/31/17 16:49	10/31/17 16:49	B17K001	JLK
Total Dissolved Solids	5.00 <i>u</i>	mg/L	SM 2540 C	1	5.00	5.00	11/02/17 14:50	11/02/17 14:50	B17K006	CRW

Quality Control Orlando Utilities Commission FLDOH# E53566

Anions by EPA Method 300.0

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: B17K001

Blank (B17K001-BLK1)

Prepared & Analyzed: 31-Oct-17

Chloride	1.00 U	1.00	mg/L		1.00				
Fluoride	0.10 U	0.10	mg/L		0.10				
Sulfate	0.25 U	0.25	mg/L		0.25				

LCS (B17K001-BS1)

Prepared & Analyzed: 31-Oct-17

Chloride	9.78		mg/L	10.0		97.8	90-110		
Fluoride	0.99		mg/L	1.00		99.3	90-110		
Sulfate	3.81		mg/L	4.00		95.3	90-110		

Duplicate (B17K001-DUP1)

Source: 1710086-04

Prepared & Analyzed: 31-Oct-17

Fluoride	0.10 U	0.10	mg/L		0.10				10
Sulfate	1.12	0.25	mg/L		1.20			6.74	10
Chloride	16.0	1.00	mg/L		16.0			0.00	10

Matrix Spike (B17K001-MS1)

Source: 1710086-04

Prepared & Analyzed: 31-Oct-17

Chloride	24.1	1.00	mg/L	8.00	16.0	100	80-120		
Fluoride	2.2	0.10	mg/L	2.00	ND	109	80-120		
Sulfate	4.71	0.25	mg/L	4.00	1.20	87.9	80-120		

Quality Control Orlando Utilities Commission FLDOH# E53566

Conventional Chemistry Parameters

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: B17K006

Blank (B17K006-BLK1)

Prepared & Analyzed: 02-Nov-17

Total Dissolved Solids	5.00 U	5.00	mg/L		5.00				
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LCS (B17K006-BS1)

Prepared & Analyzed: 02-Nov-17

Total Dissolved Solids	498	5.00	mg/L	501		99.4	80-120		
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Duplicate (B17K006-DUP1)

Source: 1710046-01

Prepared & Analyzed: 02-Nov-17

Total Dissolved Solids	282	5.00	mg/L		287			1.76	10
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Quality Control ENCO Jacksonville FLDOH# E82277

Metals by EPA 200 Series Methods

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: 7J31003

Blank (7J31003-BLK1)

Prepared: 31-Oct-17 Analyzed: 01-Nov-17

Boron	20.0 U	50.0	ug/L		20.0				
Calcium	39.0 U	500	ug/L		39.0				

LCS (7J31003-BS1)

Prepared: 31-Oct-17 Analyzed: 01-Nov-17

Boron	2570	50.0	ug/L	2500		103	85-115		
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Quality Control ENCO Jacksonville FLDOH# E82277

Metals by EPA 200 Series Methods (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: 7J31003 (Continued)									
LCS (7J31003-BS1)				Prepared: 31-Oct-17 Analyzed: 01-Nov-17					
Calcium	5090	500	ug/L	5000		102	85-115		
Matrix Spike (7J31003-MS1)				Source: BA04625-01 Prepared: 31-Oct-17 Analyzed: 01-Nov-17					
Boron	2610	50.0	ug/L	2500	60.0	102	70-130		
Calcium	78400	500	ug/L	5000	74200	83	70-130		
Matrix Spike Dup (7J31003-MSD1)				Source: BA04625-01 Prepared: 31-Oct-17 Analyzed: 01-Nov-17					
Boron	2670	50.0	ug/L	2500	60.0	104	70-130	2	25
Calcium	78500	500	ug/L	5000	74200	86	70-130	0.2	25
Batch: 7K06001									
Blank (7K06001-BLK1)				Prepared: 06-Nov-17 Analyzed: 07-Nov-17					
Boron	20.0 U	50.0	ug/L		20.0				
Calcium	39.0 U	500	ug/L		39.0				
LCS (7K06001-BS1)				Prepared: 06-Nov-17 Analyzed: 07-Nov-17					
Boron	2590	50.0	ug/L	2500		103	85-115		
Calcium	5170	500	ug/L	5000		103	85-115		
Matrix Spike (7K06001-MS1)				Source: BA04682-02 Prepared: 06-Nov-17 Analyzed: 07-Nov-17					
Boron	2860	50.0	ug/L	2500	269	104	70-130		
Calcium	8680	500	ug/L	5000	3520	103	70-130		
Matrix Spike Dup (7K06001-MSD1)				Source: BA04682-02 Prepared: 06-Nov-17 Analyzed: 07-Nov-17					
Boron	2940	50.0	ug/L	2500	269	107	70-130	3	25
Calcium	8800	500	ug/L	5000	3520	105	70-130	1	25

Project Name: Combustion Waste Landfill Monitoring

Footnotes

Qualifiers:

U	Compound was analyzed for but not detected
I	The reported value is between the laboratory method detection limit and the practical quantitation limit
V	Analyte was detected in both the sample and the associated method blank
L	Off-scale high. Actual value is known to be greater than the value given

Acronyms:

Dil	Dilution Factor
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method detection limit.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NC	Laboratory lacks NELAC certification for this analyte.
NS	Not Screened
PQL	Practical Quantitation Limit: the lowest result that can be routinely quantified and reported.
RPD	Relative Percent Difference

Approved by:



Donna McCue
Laboratory Supervisor

[illegible]

Sediment **SW**-Surface Water **WW**-Wastewater **A-Air** **O-Other** (detail in comments) **Preservation:** I-Ice **H-HCl** **N-HNO3** **S-H2SO4** **NO-NaOH** **O-Other** (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

Chain of Custody

		Florida Radiochemistry Services, Inc. 5456 Hoffner Ave., Suite 201 Orlando, FL 32812 Ph: (407) 382-7733 Fax: (407) 382-7744 Email: flradiochemistry@cfl.r.com		FL Certification E83033	
Company Name: Address: City / State / Zip Send Report to: Additional Report: Invoice to: Project I.D. P.O. #		OUC WQL 3800 Gardenia Ave. Orlando FL 32839 Donna McCut Jim Shoemaker Angelica Pinkston-Young		Phone # Fax # Email:	
Sample I.D. (Sample Location)		Date / Time Sampled		Sample # of Type Btls	
1 SEC MW A		10-30-2017 1111		G 2 HNO ₃ Ra 226 + Ra 228	
2 SEC MW B		1158		G 2	
3 SEC MW B, FD		1212		G 2	
4 SEC MW C		1236		G 2	
5 SEC MW D		1312		G 2	
6 Equip./Field Blank		1325		G 2	
7					
8					
9					
10					
Relinquished by: Date/Time		Jim Shoemaker 10-30-2017 1501		Analysis Requested Ra 226 + Ra 228	
Received by: Date/Time		SM 10-30-17 1301		Sampled By: OUC - WQL	
Relinquished by: Date/Time					
Received by: Date/Time					

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill Wells		Site Location: MW-A
Well No.	Sample ID:	Date: 10/30/17

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

OUC GROUNDWATER SAMPLING LOG

Site Name: <u>SEC Landfill Wells</u>	Site Location: <u>MW- B</u>
Well No. _____	Date: <u>10/30/17</u>

PURGING DATA

Well Diameter: 2"	Tubing Diameter: 1/4"	Well Screen Depth Interval: 20-30'	Static Depth to Water: <u>4.27'</u>	Sampling Device: <u>PP #3</u>							
Well Volume Purge: 1 Well Volume = (Total Well Depth - Static Depth to Water) X Well Capacity = (<u>32.6</u> feet - <u>4.27</u> feet) X <u>0.16</u> gallons/foot = <u>4.53</u> gallons											
Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume = 0 gallons + (0.0026 gallons / foot X 30 feet) + 0.12 gallons = 0.2 gallons											
Initial Tubing Depth in Well (Feet): <u>22'</u>		Final Pump or Tubing Depth in Well: (feet): <u>22</u>		Purging Initiated at: <u>10:41</u>							
				Purging ended at: <u>12:17</u>							
				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. µS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)
<u>11:52</u>	<u>17.75</u>	<u>17.75</u>	<u>0.25</u>	<u>4.55</u>	<u>4.38</u>	<u>24.50</u>	<u>384</u>	<u>0.65</u>	<u>1.58</u>	<u>Clear</u>	<u>H₂S</u>
<u>11:55</u>	<u>0.75</u>	<u>18.50</u>	<u>0.25</u>	<u>4.55</u>	<u>4.37</u>	<u>24.50</u>	<u>373</u>	<u>0.64</u>	<u>1.41</u>		
<u>11:58</u>	<u>0.75</u>	<u>19.25</u>	<u>0.25</u>	<u>4.55</u>	<u>4.37</u>	<u>24.49</u>	<u>382</u>	<u>0.65</u>	<u>1.68</u>		
<u>12:06</u>	<u>21.25</u>	<u>21.25</u>	<u>0.25</u>	<u>4.55</u>	<u>4.37</u>	<u>24.41</u>	<u>384</u>	<u>0.56</u>	<u>1.30</u>	<u>Clear</u>	<u>H₂S</u>
<u>12:09</u>	<u>0.75</u>	<u>22.00</u>	<u>0.25</u>	<u>4.55</u>	<u>4.37</u>	<u>24.43</u>	<u>385</u>	<u>0.55</u>	<u>0.98</u>		
<u>12:12</u>	<u>0.75</u>	<u>22.75</u>	<u>0.25</u>	<u>4.55</u>	<u>4.37</u>	<u>24.43</u>	<u>384</u>	<u>0.54</u>	<u>1.21</u>		
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 diameter capacity (Gallons Per Foot): 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: <u>Shoemaker & Wright / OUC-WQL</u>				Sampler(s) Signature(s): <u>[Signature]</u>			Sampling initiated at: <u>11:58, 12:12</u>		Sampling ended at: <u>12:04, 12:17</u>	
Pump or tubing depth in well (feet): <u>22</u>				Tubing Material Code: <u>PE</u>		Field-filtered: <u>Y</u> <u>N</u>		Filter Size: _____ µm		
Field Decontamination: Pump <u>Y</u> <u>N</u>				Tubing <u>Y</u> <u>N</u> (replaced)		Duplicate: <u>Y</u> <u>N</u>				
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method		Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH		Sampling Equipment Code		
Remarks: _____ (Sulfite: <u>NA</u> mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other 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										

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 the 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)

OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill Wells		Site Location: MW-C
Well No.	Sample ID:	Date: 10/30/17

PURGING DATA

[illegible]

SAMPLING DATA

Sampled By (Print) / Affiliation: Shoemaker & Wright / OVC - WQL				Sampler(s) Signature(s): <i>J. Shoemaker, Christine Wright</i>			Sampling initiated at: 1236		Sampling ended at: 1242	
Pump or tubing depth in well (feet): 22				Tubing Material Code: PE			Field-filtered: Y N		Filter Size: _____ µm	
Field Decontamination: Pump Y N				Tubing Y N (replaced)				Duplicate: Y N		
Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)	
Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Vol Added in Field (mL)	Final pH				
Remarks:										
(Sulfite: NA mg/L)										
Material codes: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; S = Silicone; T=Teflon; O = Other										
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										

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $< 20\text{ NTU}$; optionally $+ 5\text{ NTU}$ or $\pm 10\%$ (whichever is greater)

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OUC GROUNDWATER SAMPLING LOG

Site Name: SEC Landfill Wells		Site Location: MW-D
Well No.	Sample ID:	Date: 10/30/17

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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 the last three consecutive readings (see FS 2212, Section 3)

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $\pm 10\%$ (whichever is greater)

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

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

Project/Site: Lettered Wells/ SEC Date: 10-30-2017 Meter # YSI 556 MPS; 06H1774AB

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

Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail
------------------	-----------------	----------	------	------	--------------	------------	------	---------	------	------------------------------	--------------

CAL	ICV	CCV									
CAL	ICV	CCV	<u>10-30-17</u>	<u>0838</u>			<u>9.03</u>	<u>20.10</u>	<u>99.5</u>	<u>9.074</u>	<u>P</u>
CAL	ICV	CCV	<u>10-31-17</u>	<u>0937</u>			<u>9.8005</u>	<u>20.00</u>	<u>99.9</u>	<u>9.092</u>	<u>P</u>
CAL	ICV	CCV					<u>9.8005</u>				<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard $\mu\text{mhos/cm}$	Exp. Date	Lot #	Bottle #	Cell Constant	Reading $\mu\text{mhos/cm}$	Pass or Fail
----------------------	-----------------	----------	------	------	------------------------------	-----------	-------	----------	---------------	-----------------------------	--------------

CAL	ICV	CCV									
CAL	ICV	CCV	<u>10-30-17</u>	<u>0835</u>	<u>100</u>	<u>8/2019</u>	<u>2709755</u>	<u>Q3-49</u>		<u>102</u>	<u>P</u>
CAL	ICV	CCV	<u>10-31-17</u>	<u>0933</u>	<u>50,000</u>	<u>9/2017</u>	<u>2509614</u>	<u>Q2-125</u>		<u>52401</u>	<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	-----------------	----------	------	------	-------------	-----------	-------	----------	-------	------------	--------------

CAL	ICV	CCV									
CAL	ICV	CCV	<u>10-30-17</u>	<u>0821</u>	<u>7.00</u>	<u>8/2018</u>	<u>165674</u>	<u>Q2-151</u>		<u>7.00</u>	<u>P</u>
CAL	ICV	CCV			<u>4.00</u>	<u>7/2018</u>	<u>164668</u>	<u>Q2-150</u>		<u>4.00</u>	<u>P</u>
CAL	ICV	CCV		<u>0828</u>	<u>4.63</u>	<u>8/2018</u>	<u>164667</u>	<u>Q3-29</u>		<u>4.58</u>	<u>P</u>
CAL	ICV	CCV	<u>10-31-2017</u>	<u>0926</u>	<u>4.00</u>	<u>As Above</u>				<u>4.02</u>	<u>P</u>
CAL	ICV	CCV		<u>0929</u>	<u>7.00</u>	<u>As Above</u>				<u>7.00</u>	<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>
CAL	ICV	CCV									<u>P</u>

Maintenance: Weekly pH Slope: _____										
Notes: _____										

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

Project/Site: Lettered Wells / SEC

Date: 30 Oct. 2017

Turbidity Meter#	DEP SOP FT 1600	Initials	Date	Time	Standard NTU	Exp. Date	Lot #	Bottle #	Range	Reading NTU	Pass or Fail
Acceptance Criteria: +/-10%											
020700027220			10-30-17	0846	<0.1	11/2017	A6302	<0.1	Auto	0.09	P
CAL ICV CCV					20			20		19.9	P
CAL ICV CCV			10-31-2017	0943	<0.1	As Above				0.08	P
CAL ICV CCV					20	"				19.4	P
CAL ICV CCV					100	12/2017	A6271	100 NTU		97.9	P
CAL ICV CCV											P
CAL ICV CCV											P
Acceptance Criteria: +/- 10%											
Residual Cl2 Meter #	DEP SOP FT 2000	Initials	Date	Time	Standard mg/L	Exp. Date	Lot #	Bottle #	Slope	Reading mg/L	Pass or Fail
Acceptance Criteria: +/- 10%											
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
Acceptance Criteria: +/- 10%											
DEP SOP	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading	Pass or Fail	
Acceptance Criteria:											
CAL ICV CCV		10-30-17	0820	7.00	8/2018	165674	02-151			P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	
CAL ICV CCV										P	