

**SUMTER COUNTY  
(CLOSED) LANDFILL  
QUARTERLY GROUNDWATER  
MONITORING REPORT  
Quarter I (February) 2013**

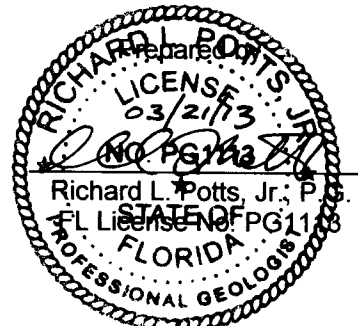
*Prepared for:*

**SUMTER COUNTY  
SOLID WASTE DEPARTMENT  
SUMTER COUNTY, FLORIDA**

*Prepared by:*

**THE COLINAS GROUP, INC.**  
377 Maitland Avenue, Suite 2012  
Altamonte Springs, Florida 32701

**March 2013**



# Florida Department of Environmental Protection

3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767

## Ground Water Monitoring Report Certification Form

Rule 62-520.600(11)

### PART I GENERAL INFORMATION

(1) Facility Name Sumter County Closed Class I Landfill

Address 835 C.R. 529

City Lake Panasoffkee

Zip 33538

County Sumter

Telephone Number (352)-793-3368

E-mail address jackey.jackson@sumtercountyfl.gov

(2) WACS Facility 53008

(3) DEP Permit Number 22926-004-SF

(4) Authorized Representative's Name Jackey Jackson

Title Ass't. Director Public Works

Address 319 E. Anderson Avenue

City Bushnell

Zip 33513

County Sumter

Telephone Number (352)-793-0240

E-mail address jackey.jackson@sumtercountyfl.gov

(5) Type of Discharge NA

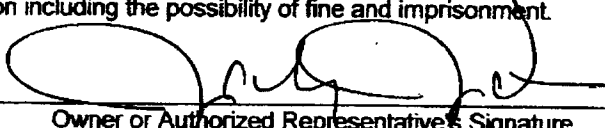
(6) Method of Discharge NA

### CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

3/21/13

Date

  
Owner or Authorized Representative's Signature

### PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Name & DOH # The Colinas Group, Inc. / 870148G/3

Analytical Lab Organization DOH # E53076 E84589 E82574

Lab Name Advanced Environmental Laboratories, Inc.

Address 6601 Southport Parkway, Jacksonville, Florida 32216

Phone Number (904)-363-9350

E-mail Address msantiago@aellab.com

---

# THE COLINAS GROUP, INC.

HYDROGEOLOGISTS & ENGINEERS

---

March 20, 2013

**Mr. F. Thomas Lubozynski, P.E.**  
Florida Department of Environmental Protection  
Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Subj: **Quarter I (February) 2013 Groundwater Monitoring Report  
Sumter County Closed Class I Landfill  
Sumter County, Florida  
FDEP Permit No. 22926-003-SF**

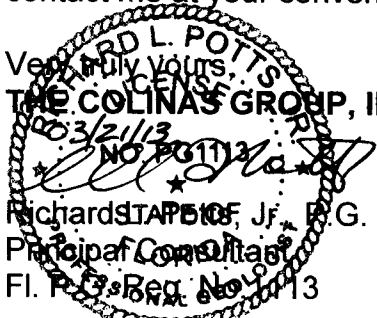
Dear Mr. Lubozynski:

On behalf of Sumter County Board of County Commissioners, The Colinas Group, Inc. (TCG) herewith submits one Electronic Data Deliverable and one (1) bound paper copy of the report prepared by TCG entitled:

**Sumter County (Closed) Landfill Quarterly Groundwater Monitoring Report,  
Quarter I (February) 2013**

The report was prepared and is submitted in satisfaction of part of the requirements of the Sumter County Closed Landfill Long-Term Care Permit.

If you have any questions concerning the contents of the report please do not hesitate to contact me at your convenience.

Very truly yours,  
  
**THE COLINAS GROUP, INC.**  
3/21/13  
Richard L. Potts, Jr., P.E.  
Principal Consultant  
Fl. P.E. Reg. No. 1113

cc: Mr. Jackey Jackson (Sumter County)  
Ms. Denise Warnock (Sumter County)  
Mr. John Morris, P.G. (FDEP SW District)

**SUMTER COUNTY (CLOSED) LANDFILL  
GROUNDWATER MONITORING REPORT  
SUMTER COUNTY, FLORIDA  
Quarter I (February) 2013**

**TABLE OF CONTENTS**

**EXECUTIVE SUMMARY**

INTRODUCTION

SAMPLING EVENT

RESULTS

SUMMARY AND RECOMMENDATIONS

Table I - Field Parameter Results Summary

Table II - Summary of Groundwater Levels

Table III - Summary of Laboratory Results

**APPENDIX**

**ATTACHMENTS:**

1. Quarter I (February) 2013 Groundwater Contour Map
2. Laboratory Analytical Report
3. Field Sampling and Testing Logs
4. Chain-of-Custody Forms
5. Laboratory/Field Quality Control Reports
6. FDEP ADaPT/EDD Disc - (In Pocket)

\* \* \* \* \*

**Sumter County (Closed) Landfill  
Quarterly Groundwater Monitoring Report  
Quarter I (February) 2013**

**INTRODUCTION**

The Colinas Group, Inc. (TCG) has reviewed the groundwater monitoring well sampling and analytical results for the Quarter I (February) 2013 sampling event at the Sumter County (Closed) Landfill near Lake Panasoffkee in Sumter County. The sampling event was completed in accordance with the quarterly water quality monitoring and reporting requirements of the closed landfill's FDEP Long-Term Care Permit #22926-003-SF.

**SAMPLING EVENT**

The Quarter I 2013 sampling event at the Sumter County Landfill was completed during the period February 11 - 13, 2013. Sampling was performed by TCG in accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOP) for Field Activities. Water samples collected from the facility groundwater monitoring wells were tested for the required field parameters. Monitoring wells were purged and the groundwater discharge allowed to stabilize prior to sample collection.

The results of field testing were recorded as part of the Field Reports (Attachment 3 ) and are listed in Table I. All samples were preserved and stored as required prior to shipment to the analytical laboratory.

Laboratory analytical services were provided by Advanced Environmental Laboratories, Inc. (AEL) in accordance with the laboratory's NELAC and FDHRS Certification No. E53076, E84589, and E82574. The original analytical reports prepared by AEL are presented in Attachment 2 to this report.

Water table depth measurements in each facility groundwater monitoring well and piezometer were recorded on February 11, 2013. These measurements were used to construct the Groundwater Contour Map shown on Figure 1 (Attachment 1) for the uppermost receiving groundwater aquifer beneath the site. Depth to water table measurements and corresponding groundwater elevations are listed in Table II.

## RESULTS

### Field Tested Parameters

Results of field testing completed at groundwater monitoring wells for the Quarter I 2013 sampling event are summarized in Table I. Field tests were completed in strict accordance with the FDEP SOP requirements.

#### pH

The field testing results indicate pH of groundwater in the uppermost aquifer was within the FDEP secondary standard (6.5 - 8.5 pH units) at six (6) of the nine (9) groundwater monitoring wells sampled. The nearly neutral to slightly basic pH values measured are consistent across the landfill property and appear normal considering the monitoring well screen intervals at and near the top of carbonate rocks and sediments.

One well (**MW-4B**) produced groundwater with a pH above the upper FDEP range at 8.93 pH units. This well has produced pH values above 8.5 since sampling of the well began in Quarter II of 2006. Wells **MW-9A** and **MW-11** reported pH slightly below the lower-range of 6.5 pH units. Groundwater pH at remaining wells ranged from 6.88 to 7.73 su.

#### Fluid Temperature

Temperature of each water sample was measured in the field immediately following discharge into the flow cell used to accept flow from the purging pump. Temperature measurements of groundwater from the monitoring wells varied through a relatively narrow range of 24.01 C to 26.76 C.

#### Dissolved Oxygen

Dissolved oxygen (DO) exceeded the FDEP sampling guidance level of 20% saturation at four (4) of the nine (9) monitoring wells sampled, including the facility background monitoring well **MW-6A**.

#### Specific Conductance

Specific conductance of groundwater samples collected during this sampling event are included in Table I. Specific conductance values varied through a relatively narrow range of 119 umhos/cm to 927 umhos/cm.

#### Turbidity

The FDEP recommends attainment of turbidity values less than 10 to 20 NTUs in groundwater samples obtained from monitoring wells. As shown in Table I, groundwater samples collected had measured turbidity values less than 20 NTUs at each of the nine (9) wells.

### **Regulatory Exceedances**

A summary of groundwater laboratory analytical results that exceeded the regulatory level for the particular parameter in the Quarter I 2013 sample set is presented in Table III. As shown, five (5) constituents were reported at specific monitoring wells at concentrations that exceed applicable regulatory levels. Exceeding parameters were: Aluminum, iron, manganese, nitrate nitrogen and total dissolved solids (TDS).

#### **Aluminum**

Aluminum was reported in water samples from two (2) of the nine (9) monitoring wells (22%) at concentrations slightly above the Florida Secondary Drinking Water Standards (FSDWS) MCL of 200 ug/l. The highest aluminum concentration was reported for new well **MW-4B** at 260 ug/l. Aluminum was nominally above the MCL at well **MW-9A** at 210 ug/l.

#### **Iron**

Dissolved iron was detected in two (2) monitoring wells at concentrations above the FSDWS MCL of 300 ug/l. Iron was reported at 1,700 ug/l at well **MW-9A** and 430 ug/l at **MW-10**. Iron was detected below 300 ug/l at one (1) monitoring well and was not detected above the laboratory method detection limit of 38 ug/l at six (6) wells.

#### **Manganese**

Manganese was measured at a concentration above the FSDWS MCL of 50 ug/l in monitoring well **MW-9A** at 96 ug/l. Manganese was detected at five (5) of the remaining monitoring wells at concentrations less than 50 ug/l.

#### **Nitrate Nitrogen**

Nitrate was reported above the FSDWS MCL (10 mg/l) at monitoring well **MW-4A** at 13 mg/l. Remaining detection/compliance wells reported nitrate values ranging from 0.34 mg/l (**MW-9A**) to 5.2 mg/l (**MW-4**). Background Well **MW-6A** reported an elevated nitrate concentration of 5.4 mg/l.

#### **Total Dissolved Solids (TDS)**

TDS concentration was reported nominally above the 500 mg/l FSDWS MCL at monitoring well **MW-9A** at 520 mg/l.

No other exceedance of a parameter regulatory concentration level was reported in the laboratory analytical results for samples from groundwater monitoring wells at the Sumter County Closed Landfill.

### Other Significant Detected Parameters

**Antimony** was reported at low concentrations at each of the landfill monitoring wells, including background / upgradient wells **MW-6A** and **MW-8**. Laboratory results for antimony analyses are flagged for evidence of internal laboratory contamination, indicating that the actual analyte concentration is less than reported.

**Chloride** concentrations reported for eight (8) of the eleven (11) monitoring wells, including the facility background monitoring well **MW-6A**, appear consistent between individual wells and typical for natural shallow groundwaters in Florida. Chloride concentrations at monitoring wells **MW-4**, **MW-4A** and **MW-9A** (13 mg/l - 22 mg/l) appear slightly elevated as compared to the other wells. The SDWS MCL for chloride in groundwater is 250 mg/l.

**Sodium** also appears slightly higher at monitoring wells **MW-4**, **MW-4A** and **MW-9A** (21 mg/l - 32 mg/l) as compared to background and other downgradient monitoring wells. The PDWS MCL for sodium is 160 mg/l. Laboratory results for sodium analyses are flagged for evidence of internal laboratory contamination.

### **SAMPLING EVENT SUMMARY**

Chemical characteristics of groundwater monitored at the Sumter County Closed Landfill are reported for the Quarter I (February) 2013 sampling event. Exceedances of constituent regulatory maximum concentration levels (MCLs) are reported at specific monitoring wells for the Florida Secondary Drinking Water Standards (FSDWS) parameters: **Aluminum, iron, manganese and total dissolved solids (TDS)**. One well reported an exceedance of the Florida Primary Drinking Water Standards MCL for **nitrate nitrogen** in groundwater,

Elevated **dissolved oxygen (DO)** levels were measured in four of the eleven groundwater monitoring wells, including background monitoring well **MW-6A** and up-gradient well **MW-8**. These wells routinely produce groundwater with elevated DO levels. An elevated (alkaline) groundwater **pH** continues to be reported at well **MW-4B**.

**Aluminum** was reported by the laboratory at concentrations slightly above the FSDWS MCL at two monitoring wells. The highest aluminum value is reported well **MW-4B**. Aluminum has routinely been reported above the MCL in monitoring wells at the landfill, including background well **MW-6A**. The most likely source of dissolved aluminum in groundwater is naturally-occurring aluminum-silicate clay minerals occurring near the top of rock throughout the landfill property.

Dissolved **iron** above the FSDWS MCL was reported at detection monitoring wells **MW-9A** and **MW-10**. **Manganese** was also reported above the FSDWS MCL at **MW-9A**. Both iron and manganese occur naturally in sediments and carbonate rocks penetrated by the monitoring wells.



**Nitrate nitrogen** was reported slightly above the(FPDWS) MCL at monitoring well **MW-4A** at 13 mg/l. The MCL for nitrate in groundwater is 10 mg/l. Well **MW-4A** was installed as part of prior Contamination Assessment actions to delineate the lateral extent of exceeding nitrate levels beyond the landfill's zone of discharge boundary near the location of Compliance Well **MW-4**. Well **MW-4** continues to report nitrate below the MCL and consistent with background levels. Consistently elevated sub-MCL nitrate levels continue at Background Well **MW-6A**.

**TDS** was reported slightly above the FSDWS provisional MCL (500 mg/l) at well **MW-9A** at 520 mg/l. Past analytical data from the monitoring network indicates that dissolved calcium carbonate accounts for a large part of the TDS load in groundwater at the landfill.

\* \* \* \* \*

**TABLE I**  
**FIELD PARAMETER RESULTS SUMMARY**  
**SUMTER COUNTY (CLOSED) LANDFILL**  
**SUMTER COUNTY, FLORIDA**  
**Quarter I (February) 2013**

<b>Sampling Point</b>	<b>Temp. (C)</b>	<b>Dissolved Oxygen (mg/l)</b>	<b>pH</b>	<b>Specific Conductance (umhos/cm)</b>	<b>Turbidity (NTU)</b>
<b>MW-2</b>	26.76	<b>6.42</b>	7.03	259	3.33
<b>MW-4</b>	26.23	1.21	7.24	526	0.29
<b>MW-4A</b>	26.31	0.49	6.93	624	2.32
<b>MW-4B</b>	25.62	<b>6.00</b>	<b>8.93</b>	119	4.70
<b>MW-6A</b>	24.70	<b>7.32</b>	7.73	255	10.6
<b>MW-8</b>	24.01	<b>4.55</b>	7.28	342	0.24
<b>MW-9A</b>	25.49	0.41	<b>6.48</b>	927	13.0
<b>MW-10</b>	25.04	0.62	6.88	642	6.55
<b>MW-11</b>	25.00	1.15	<b>6.22</b>	334	5.42

Notes: **Bold lettering indicates:** Exceedance of FDEP 20% saturation dissolved oxygen limit  
Exceedance of secondary standards pH range (6.5 - 8.5)  
Exceedance of FDEP-recommended turbidity (20 NTU)

**TABLE II**

**SUMMARY OF GROUNDWATER LEVELS  
SUMTER COUNTY (CLOSED) LANDFILL  
SUMTER COUNTY, FLORIDA  
Quarter I (February) 2013**

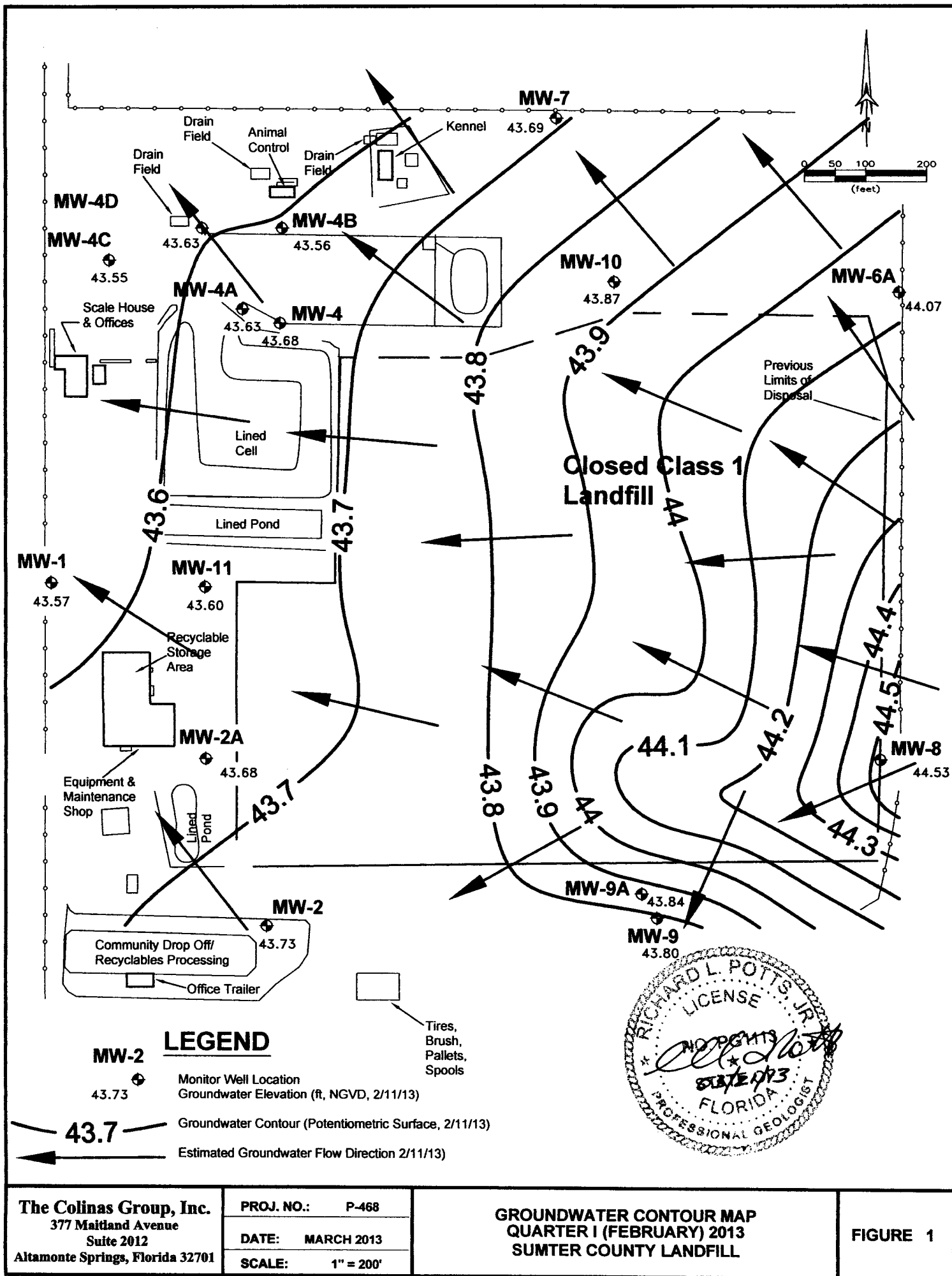
<b>Well No.</b>	<b>MP Elev. <u>1/</u> (ft. +NGVD)</b>	<b>Depth to Water <u>2/</u> (ft. - MP)</b>	<b>Groundwater Elevation (ft. +NGVD)</b>
<b>MW-1</b>	70.10	26.53	43.57
<b>MW-2</b>	68.96	25.23	43.73
<b>MW-2A</b>	71.98	28.30	43.68
<b>MW-4</b>	70.33	26.65	43.68
<b>MW-4A</b>	75.49	31.86	43.63
<b>MW-4B</b>	73.49	29.93	43.56
<b>MW-4C</b>	70.88	27.33	43.55
<b>MW-4D</b>	73.35	29.72	43.63
<b>MW-6A</b>	77.48	33.41	44.07
<b>MW-7</b>	72.93	29.24	43.69
<b>MW-8</b>	68.63	24.10	44.53
<b>MW-9</b>	72.62	28.82	43.80
<b>MW-9A</b>	75.14	31.30	43.84
<b>MW-10</b>	68.14	24.27	43.87
<b>MW-11</b>	70.02	26.42	43.60

Notes: 1/ Measuring Point is top of PVC well casing.  
2/ Water levels recorded on February 11, 2013

**TABLE III**  
**SUMMARY OF LABORATORY RESULTS**  
**SUMTER COUNTY (CLOSED) LANDFILL**  
**QUARTER I (February) 2013**

Parameter	units	MW-2	MW-4	MW-4A	MW-4B	MW-6A	MW-8	MW-9A	MW-10	MW-11	MCL
Ammonia	mg/l	0.083	0.084	0.066	0.072	0.081	0.067	0.636	0.115	0.089	2.8
Aluminum	ug/l	BDL	BDL	BDL	260	BDL	BDL	210	170	BDL	200
Antimony	ug/l	2.3 V	1.9 V	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V	2.6 V	4.1 V	6
Cadmium	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	0.81	0.53	1.9	5
Chloride	mg/l	4.4	13	23	4.1	8.2	8.5	23	7.1	4.2	250
Chromium	ug/l	0.63	1.1	1.2	2.5	3.3	3.1	5.9	0.74	1.5	100
Fluoride	mg/l	BDL	0.16	BDL	0.13	BDL	0.16	0.19	0.17	0.19	4
Gross Alpha	pCi/l	1.2 ± 0.7	5.9 ± 1.5	3.1 ± 1.3	< 0.9 ± 0.7	< 0.9 ± 0.6	< 1.1 ± 0.8	12.8 ± 2.1	14.3 ± 2.3	6.1 ± 1.4	15
Iron	ug/l	BDL	57	BDL	BDL	BDL	BDL	1,700	430	BDL	300
Lead	ug/l	0.13	0.12	0.11	0.19	0.12	0.085	0.41	0.47	0.31	15
Manganese	ug/l	1.4	5.8	1.8	BDL	BDL	BDL	96	22	2.1	50
Mercury	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	0.071	BDL	0.032	2
Nitrate, as N	mg/l	1.5	5.2	13	2.0	5.4	1.9	0.34	1.2	4.8	10
Ra226+Ra228	pCi/l	< 1.7 ± 0.8	2.8 ± 0.8	3.2 ± 0.9	2.1 ± 0.8	< 1.7 ± 0.8	< 1.6 ± 0.9	4.6 ± 0.9	3.6 ± 0.8	4.6 ± 1.0	5
Silver	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	100
Sodium	mg/l	3.0 V	32 V	23 V	8.5 V	3.1 V	5.2 V	21 V	8.1 V	8.6 V	160
TDS	mg/l	130	270	340	70	140	190	520	370	190	500
Thallium	ug/l	0.16	0.19	0.30	0.10	0.14	0.12	0.28	0.27	0.26	2

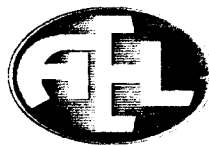
Notes: 1). BDL means below laboratory method detection limit 2). **Bold lettering** indicates result exceeds MCL / 62-777,F.A.C. GCTL 3). V indicates laboratory contamination



**The Colinas Group, Inc.**  
377 Maitland Avenue  
Suite 2012  
Altamonte Springs, Florida 32701

PROJ. NO.: P-468  
DATE: MARCH 2013  
SCALE: 1" = 200'

**GROUNDWATER CONTOUR MAP  
QUARTER I (FEBRUARY) 2013  
SUMTER COUNTY LANDFILL**



## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338001**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-10**

Date Collected: 02/12/13 10:47

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	642	umhos/cm		1			2/12/2013 10:36	A^
Dissolved Oxygen	0.62	mg/L		1			2/12/2013 10:36	A^
Groundwater Elevation	43.99	feet		1			2/12/2013 10:36	A^
Temperature	25.04	°C		1			2/12/2013 10:36	A^
Turbidity	6.55	NTU		1			2/12/2013 10:36	A^
pH	6.88	pH unit		1			2/12/2013 10:36	A^

### METALS

Analysis Desc: SW846 6010B

Preparation Method: SW-846 3010A

Analysis, Water

Analytical Method: SW-846 6010

Aluminum	170	ug/L	I	1	200	61	2/20/2013 18:17	J
Barium	14	ug/L		1	2.0	0.28	2/20/2013 18:17	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:17	J
Cadmium	0.53	ug/L	I	1	0.60	0.32	2/20/2013 18:17	J
Chromium	0.74	ug/L	I	1	4.0	0.50	2/20/2013 18:17	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:17	J
Iron	430	ug/L		1	200	38	2/22/2013 18:22	J
Manganese	22	ug/L		1	1.0	0.24	2/20/2013 18:17	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:17	J
Sodium	8.1	mg/L	V	1	0.20	0.026	2/20/2013 18:17	J
Vanadium	11	ug/L		1	1.5	0.18	2/20/2013 18:17	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:17	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	2.6	ug/L	V	1	0.60	0.073	2/26/2013 01:34	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 01:34	J
Copper	0.10	ug/L	U	1	7.0	0.10	2/26/2013 01:34	J
Lead	0.47	ug/L	I	1	0.70	0.076	2/26/2013 01:34	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 01:34	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 01:34	J
Thallium	0.27	ug/L		1	0.20	0.067	2/26/2013 01:34	J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis, Water

Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:18	J
---------	-------	------	---	---	------	-------	-----------------	---

Report ID: 251332 - 159667

Page 3 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





Advanced  
Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc.

528 S. North Lake Blvd, Suite 1016

Altamonte Springs, FL 32701

Phone: (407)937-1594

Fax: (407)937-1597

## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: A1301338001

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: MW-10

Date Collected: 02/12/13 10:47

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	7.1	mg/L	I	1	7.5	0.78	2/13/2013 18:23	A
Fluoride	0.17	mg/L	I	1	0.50	0.075	2/13/2013 18:23	A
Nitrate	1.2	mg/L		1	0.50	0.051	2/13/2013 18:23	A
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.115	mg/L		1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540C					
Total Dissolved Solids	370	mg/L		1	10	10	2/15/2013 15:30	A

Lab ID: A1301338002

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: MW-11

Date Collected: 02/12/13 09:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	334	umhos/cm		1			2/12/2013 09:17	A^
Dissolved Oxygen	1.15	mg/L		1			2/12/2013 09:17	A^
Groundwater Elevation	43.76	feet		1			2/12/2013 09:17	A^
Temperature	25	°C		1			2/12/2013 09:17	A^
Turbidity	5.42	NTU		1			2/12/2013 09:17	A^
pH	6.22	pH unit		1			2/12/2013 09:17	A^

### METALS

Analysis Desc: SW846 6010B

Preparation Method: SW-846 3010A

Analysis,Water

Analytical Method: SW-846 6010

Aluminum	67	ug/L	I	1	200	61	2/20/2013 18:41	J
Barium	5.0	ug/L		1	2.0	0.28	2/20/2013 18:41	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:41	J
Cadmium	1.9	ug/L		1	0.60	0.32	2/20/2013 18:41	J
Chromium	1.5	ug/L	I	1	4.0	0.50	2/20/2013 18:41	J

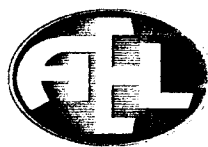
Report ID: 251332 - 159667

Page 4 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338002**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-11**

Date Collected: 02/12/13 09:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:41	J
Iron	38	ug/L	U	1	200	38	2/22/2013 18:36	J
Manganese	2.1	ug/L		1	1.0	0.24	2/20/2013 18:41	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:41	J
Sodium	8.6	mg/L	V	1	0.20	0.026	2/20/2013 18:41	J
Vanadium	8.2	ug/L		1	1.5	0.18	2/20/2013 18:41	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:41	J

Analysis Desc: SW846 6020B  
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	4.1	ug/L	V	1	0.60	0.073	2/26/2013 20:34	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 20:34	J
Copper	1.2	ug/L	I	1	7.0	0.10	2/26/2013 20:34	J
Lead	0.31	ug/L	I	1	0.70	0.076	2/26/2013 20:34	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 20:34	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 20:34	J
Thallium	0.26	ug/L		1	0.20	0.067	2/26/2013 20:34	J

Analysis Desc: SW846 7470A  
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.032	ug/L	I	1	0.10	0.014	2/22/2013 11:37	J
---------	-------	------	---	---	------	-------	-----------------	---

### WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	4.2	mg/L	I	1	7.5	0.78	2/13/2013 18:48	A
Fluoride	0.19	mg/L	I	1	0.50	0.075	2/13/2013 18:48	A
Nitrate	4.8	mg/L		1	0.50	0.051	2/13/2013 18:48	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.089	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
-------------	-------	------	---	---	------	-------	-----------------	---

Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	190	mg/L		1	10	10	2/15/2013 15:30	A
------------------------	-----	------	--	---	----	----	-----------------	---

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.







## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338003**  
Sample ID: **MW-2**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/12/13 11:35

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	259	umhos/cm		1			2/12/2013 11:18	A^
Dissolved Oxygen	6.42	mg/L		1			2/12/2013 11:18	A^
Groundwater Elevation	43.88	feet		1			2/12/2013 11:18	A^
Temperature	26.76	°C		1			2/12/2013 11:18	A^
Turbidity	3.33	NTU		1			2/12/2013 11:18	A^
pH	7.03	pH unit		1			2/12/2013 11:18	A^

### METALS

Analysis Desc: SW846 6010B  
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Aluminum	61	ug/L	U	1	200	61	2/20/2013 18:47	J
Barium	13	ug/L		1	2.0	0.28	2/20/2013 18:47	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:47	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 18:47	J
Chromium	0.63	ug/L	I	1	4.0	0.50	2/20/2013 18:47	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:47	J
Iron	38	ug/L	U	1	200	38	2/20/2013 18:41	J
Manganese	1.4	ug/L		1	1.0	0.24	2/20/2013 18:47	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:47	J
Sodium	3.0	mg/L	V	1	0.20	0.026	2/20/2013 18:47	J
Vanadium	1.1	ug/L	I	1	1.5	0.18	2/20/2013 18:47	J
Zinc	11	ug/L		1	10	2.0	2/20/2013 18:47	J

Analysis Desc: SW846 6020B  
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	2.3	ug/L	V	1	0.60	0.073	2/26/2013 20:43	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 20:43	J
Copper	0.48	ug/L	I	1	7.0	0.10	2/26/2013 20:43	J
Lead	0.13	ug/L	I	1	0.70	0.076	2/26/2013 20:43	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 20:43	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 20:43	J
Thallium	0.16	ug/L	I	1	0.20	0.067	2/26/2013 20:43	J

Analysis Desc: SW846 7470A  
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:39	J
---------	-------	------	---	---	------	-------	-----------------	---

Report ID: 251332 - 159667

Page 6 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338003**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-2**

Date Collected: 02/12/13 11:35

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	4.4	mg/L	I	1	7.5	0.78	2/13/2013 19:14	A
Fluoride	0.075	mg/L	U	1	0.50	0.075	2/13/2013 19:14	A
Nitrate	1.5	mg/L		1	0.50	0.051	2/13/2013 19:14	A
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.083	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	130	mg/L		1	10	10	2/15/2013 15:30	A

Lab ID: **A1301338004**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-4**

Date Collected: 02/12/13 13:00

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	526	umhos/cm		1			2/12/2013 12:39	A^
Dissolved Oxygen	1.21	mg/L		1			2/12/2013 12:39	A^
Groundwater Elevation	43.68	feet		1			2/12/2013 12:39	A^
Temperature	26.23	°C		1			2/12/2013 12:39	A^
Turbidity	0.29	NTU		1			2/12/2013 12:39	A^
pH	7.24	pH unit		1			2/12/2013 12:39	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis,Water		Analytical Method: SW-846 6010						
Aluminum	61	ug/L	U	1	200	61	2/20/2013 18:52	J
Barium	7.2	ug/L		1	2.0	0.28	2/20/2013 18:52	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:52	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 18:52	J
Chromium	1.1	ug/L	I	1	4.0	0.50	2/20/2013 18:52	J

Report ID: 251332 - 159667

Page 7 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338004**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-4**

Date Collected: 02/12/13 13:00

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:52	J
Iron	57	ug/L	I	1	200	38	2/22/2013 18:46	J
Manganese	5.8	ug/L		1	1.0	0.24	2/20/2013 18:52	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:52	J
Sodium	32	mg/L	V	1	0.20	0.026	2/20/2013 18:52	J
Vanadium	12	ug/L		1	1.5	0.18	2/20/2013 18:52	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:52	J
Analysis Desc: SW846 6020B					Preparation Method: SW-846 3010A			
Analysis, Total					Analytical Method: SW-846 6020			
Antimony	1.9	ug/L	V	1	0.60	0.073	2/26/2013 20:52	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 20:52	J
Copper	1.2	ug/L	I	1	7.0	0.10	2/26/2013 20:52	J
Lead	0.12	ug/L	I	1	0.70	0.076	2/26/2013 20:52	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 20:52	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 20:52	J
Thallium	0.19	ug/L	I	1	0.20	0.067	2/26/2013 20:52	J
Analysis Desc: SW846 7470A					Preparation Method: SW-846 7470A			
Analysis, Water					Analytical Method: SW-846 7470A			
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:41	J
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water					Analytical Method: EPA 300.0			
Chloride	13	mg/L		1	7.5	0.78	2/13/2013 19:39	A
Fluoride	0.16	mg/L	I	1	0.50	0.075	2/13/2013 19:39	A
Nitrate	5.2	mg/L		1	0.50	0.051	2/13/2013 19:39	A
Analysis Desc: Ammonia,E350.1,Water					Analytical Method: EPA 350.1			
Ammonia (N)	0.084	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C					Analytical Method: SM 2540C			
Total Dissolved Solids	270	mg/L		1	10	10	2/15/2013 15:30	A

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338005**  
Sample ID: **MW-4A**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 09:11

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	624	umhos/cm		1			2/13/2013 08:58	A^
Dissolved Oxygen	0.49	mg/L		1			2/13/2013 08:58	A^
Groundwater Elevation	43.82	feet		1			2/13/2013 08:58	A^
Temperature	26.31	°C		1			2/13/2013 08:58	A^
Turbidity	2.32	NTU		1			2/13/2013 08:58	A^
pH	6.93	pH unit		1			2/13/2013 08:58	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 18:57	J
Barium	12	ug/L		1	2.0	0.28	2/20/2013 18:57	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:57	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 18:57	J
Chromium	1.2	ug/L	I	1	4.0	0.50	2/20/2013 18:57	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:57	J
Iron	38	ug/L	U	1	200	38	2/22/2013 18:51	J
Manganese	1.8	ug/L		1	1.0	0.24	2/20/2013 18:57	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:57	J
Sodium	23	mg/L	V	1	0.20	0.026	2/20/2013 18:57	J
Vanadium	5.7	ug/L		1	1.5	0.18	2/20/2013 18:57	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:57	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	1.6	ug/L	V	1	0.60	0.073	2/26/2013 21:01	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:01	J
Copper	0.30	ug/L	I	1	7.0	0.10	2/26/2013 21:01	J
Lead	0.11	ug/L	I	1	0.70	0.076	2/26/2013 21:01	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:01	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:01	J
Thallium	0.30	ug/L		1	0.20	0.067	2/26/2013 21:01	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:44	J

Report ID: 251332 - 159667

Page 9 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338005**  
Sample ID: **MW-4A**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 09:11

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	23	mg/L		1	7.5	0.78	2/13/2013 20:30	A
Fluoride	0.075	mg/L	U	1	0.50	0.075	2/13/2013 20:30	A
Nitrate	13	mg/L		2	1.0	0.10	2/14/2013 10:04	A
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.066	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540C					
Total Dissolved Solids	340	mg/L		1	10	10	2/15/2013 15:30	A

Lab ID: **A1301338006**  
Sample ID: **MW-4B**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 09:53

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	119	umhos/cm		1			2/13/2013 09:40	A^
Dissolved Oxygen	6	mg/L		1			2/13/2013 09:40	A^
Groundwater Elevation	43.86	feet		1			2/13/2013 09:40	A^
Temperature	25.62	°C		1			2/13/2013 09:40	A^
Turbidity	4.7	NTU		1			2/13/2013 09:40	A^
pH	8.93	pH unit		1			2/13/2013 09:40	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Aluminum	260	ug/L		1	200	61	2/20/2013 19:23	J
Barium	3.4	ug/L		1	2.0	0.28	2/20/2013 19:23	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:23	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:23	J
Chromium	2.5	ug/L	I	1	4.0	0.50	2/20/2013 19:23	J

Report ID: 251332 - 159667

Page 10 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338006**  
Sample ID: **MW-4B**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 09:53

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:23	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:15	J
Manganese	0.24	ug/L	U	1	1.0	0.24	2/20/2013 19:23	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:23	J
Sodium	8.5	mg/L	V	1	0.20	0.026	2/20/2013 19:23	J
Vanadium	15	ug/L		1	1.5	0.18	2/20/2013 19:23	J
Zinc	10	ug/L		1	10	2.0	2/20/2013 19:23	J
Analysis Desc: SW846 6020B Analysis, Total					Preparation Method: SW-846 3010A Analytical Method: SW-846 6020			
Antimony	1.6	ug/L	V	1	0.60	0.073	2/26/2013 21:11	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:11	J
Copper	0.25	ug/L	I	1	7.0	0.10	2/26/2013 21:11	J
Lead	0.19	ug/L	I	1	0.70	0.076	2/26/2013 21:11	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:11	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:11	J
Thallium	0.10	ug/L	I	1	0.20	0.067	2/26/2013 21:11	J
Analysis Desc: SW846 7470A Analysis, Water					Preparation Method: SW-846 7470A Analytical Method: SW-846 7470A			
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:46	J
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water					Analytical Method: EPA 300.0			
Chloride	4.1	mg/L	I	1	7.5	0.78	2/13/2013 20:55	A
Fluoride	0.13	mg/L	I	1	0.50	0.075	2/13/2013 20:55	A
Nitrate	2.0	mg/L		1	0.50	0.051	2/13/2013 20:55	A
Analysis Desc: Ammonia,E350.1,Water					Analytical Method: EPA 350.1			
Ammonia (N)	0.072	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C					Analytical Method: SM 2540C			
Total Dissolved Solids	70	mg/L		1	10	10	2/15/2013 15:30	A

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338007**

Date Received: 02/13/13 13:57

Matrix: Water

Sample ID: **MW-6A**

Date Collected: 02/13/13 12:03

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	255	umhos/cm		1			2/13/2013 11:50	A^
Dissolved Oxygen	7.32	mg/L		1			2/13/2013 11:50	A^
Groundwater Elevation	44.09	feet		1			2/13/2013 11:50	A^
Temperature	24.7	°C		1			2/13/2013 11:50	A^
Turbidity	10.6	NTU		1			2/13/2013 11:50	A^
pH	7.73	pH unit		1			2/13/2013 11:50	A^

### METALS

Analysis Desc: SW846 6010B

Preparation Method: SW-846 3010A

Analysis, Water

Analytical Method: SW-846 6010

Aluminum	61	ug/L	U	1	200	61	2/20/2013 19:28	J
Barium	2.2	ug/L		1	2.0	0.28	2/20/2013 19:28	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:28	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:28	J
Chromium	3.3	ug/L	I	1	4.0	0.50	2/20/2013 19:28	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:28	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:19	J
Manganese	0.24	ug/L	U	1	1.0	0.24	2/20/2013 19:28	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:28	J
Sodium	3.1	mg/L	V	1	0.20	0.026	2/20/2013 19:28	J
Vanadium	7.6	ug/L		1	1.5	0.18	2/20/2013 19:28	J
Zinc	10	ug/L		1	10	2.0	2/20/2013 19:28	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	1.5	ug/L	V	1	0.60	0.073	2/26/2013 21:20	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:20	J
Copper	0.16	ug/L	I	1	7.0	0.10	2/26/2013 21:20	J
Lead	0.12	ug/L	I	1	0.70	0.076	2/26/2013 21:20	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:20	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:20	J
Thallium	0.14	ug/L	I	1	0.20	0.067	2/26/2013 21:20	J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis, Water

Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:48	J
---------	-------	------	---	---	------	-------	-----------------	---

Report ID: 251332 - 159667

Page 12 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338007**  
Sample ID: **MW-6A**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 12:03

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	8.2	mg/L		1	7.5	0.78	2/13/2013 21:21	A
Fluoride	0.075	mg/L	U	1	0.50	0.075	2/13/2013 21:21	A
Nitrate	5.4	mg/L		1	0.50	0.051	2/13/2013 21:21	A
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.081	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540C					
Total Dissolved Solids	140	mg/L		1	10	10	2/15/2013 15:30	A

Lab ID: **A1301338008**  
Sample ID: **MW-8**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/12/13 10:10

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	342	umhos/cm		1			2/12/2013 09:53	A^
Dissolved Oxygen	4.55	mg/L		1			2/12/2013 09:53	A^
Groundwater Elevation	45.14	feet		1			2/12/2013 09:53	A^
Temperature	24.01	°C		1			2/12/2013 09:53	A^
Turbidity	0.24	NTU		1			2/12/2013 09:53	A^
pH	7.28	pH unit		1			2/12/2013 09:53	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 19:33	J
Barium	3.6	ug/L		1	2.0	0.28	2/20/2013 19:33	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:33	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:33	J
Chromium	3.1	ug/L	I	1	4.0	0.50	2/20/2013 19:33	J

Report ID: 251332 - 159667

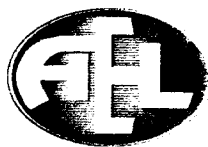
Page 13 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.







## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338008**

Date Received: 02/13/13 13:57 Matrix: Water

Sample ID: **MW-8**

Date Collected: 02/12/13 10:10

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:33	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:24	J
Manganese	0.24	ug/L	U	1	1.0	0.24	2/20/2013 19:33	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:33	J
Sodium	5.2	mg/L	V	1	0.20	0.026	2/20/2013 19:33	J
Vanadium	8.2	ug/L		1	1.5	0.18	2/20/2013 19:33	J
Zinc	11	ug/L		1	10	2.0	2/20/2013 19:33	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	1.5	ug/L	V	1	0.60	0.073	2/26/2013 21:29	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:29	J
Copper	0.10	ug/L	U	1	7.0	0.10	2/26/2013 21:29	J
Lead	0.085	ug/L	I	1	0.70	0.076	2/26/2013 21:29	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:29	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:29	J
Thallium	0.12	ug/L	I	1	0.20	0.067	2/26/2013 21:29	J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis, Water

Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:50	J
---------	-------	------	---	---	------	-------	-----------------	---

### WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	8.5	mg/L		1	7.5	0.78	2/13/2013 20:04	A
Fluoride	0.16	mg/L	I	1	0.50	0.075	2/13/2013 20:04	A
Nitrate	1.9	mg/L		1	0.50	0.051	2/13/2013 20:04	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.067	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
-------------	-------	------	---	---	------	-------	-----------------	---

Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	190	mg/L		1	10	10	2/15/2013 15:30	A
------------------------	-----	------	--	---	----	----	-----------------	---

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338009**  
Sample ID: **MW-9A**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 10:55

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	927	umhos/cm		1			2/13/2013 10:42	A^
Dissolved Oxygen	0.41	mg/L		1			2/13/2013 10:42	A^
Groundwater Elevation	42.91	feet		1			2/13/2013 10:42	A^
Temperature	25.49	°C		1			2/13/2013 10:42	A^
Turbidity	13	NTU		1			2/13/2013 10:42	A^
pH	6.48	pH unit		1			2/13/2013 10:42	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Aluminum	210	ug/L		1	200	61	2/20/2013 19:39	J
Barium	12	ug/L		1	2.0	0.28	2/20/2013 19:39	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:39	J
Cadmium	0.81	ug/L		1	0.60	0.32	2/20/2013 19:39	J
Chromium	5.9	ug/L		1	4.0	0.50	2/20/2013 19:39	J
Cobalt	18	ug/L		1	4.0	0.60	2/20/2013 19:39	J
Iron	1700	ug/L		1	200	38	2/22/2013 19:29	J
Manganese	96	ug/L		1	1.0	0.24	2/20/2013 19:39	J
Nickel	11	ug/L		1	6.5	1.1	2/20/2013 19:39	J
Sodium	21	mg/L	V	1	0.20	0.026	2/20/2013 19:39	J
Vanadium	2.2	ug/L		1	1.5	0.18	2/20/2013 19:39	J
Zinc	16	ug/L		1	10	2.0	2/20/2013 19:39	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	1.5	ug/L	V	1	0.60	0.073	2/26/2013 21:38	J
Arsenic	0.78	ug/L	I	1	1.0	0.36	2/26/2013 21:38	J
Copper	1.6	ug/L	I	1	7.0	0.10	2/26/2013 21:38	J
Lead	0.41	ug/L	I	1	0.70	0.076	2/26/2013 21:38	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:38	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:38	J
Thallium	0.28	ug/L		1	0.20	0.067	2/26/2013 21:38	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.071	ug/L	I	1	0.10	0.014	2/22/2013 11:58	J

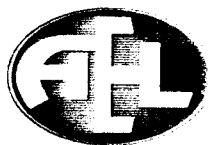
Report ID: 251332 - 159667

Page 15 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338009**  
Sample ID: **MW-9A**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 10:55

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	23	mg/L		1	7.5	0.78	2/13/2013 21:46	A
Fluoride	0.19	mg/L	I	1	0.50	0.075	2/13/2013 21:46	A
Nitrate	0.34	mg/L	I	1	0.50	0.051	2/13/2013 21:46	A
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.636	mg/L		1	0.10	0.025	2/19/2013 15:29	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540C					
Total Dissolved Solids	520	mg/L		1	10	10	2/15/2013 15:30	A

Lab ID: **A1301338010**  
Sample ID: **EQ BLANK**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 08:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>METALS</b>								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 19:44	J
Barium	0.28	ug/L	U	1	2.0	0.28	2/20/2013 19:44	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:44	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:44	J
Chromium	0.50	ug/L	U	1	4.0	0.50	2/20/2013 19:44	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:44	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:34	J
Manganese	0.26	ug/L	I	1	1.0	0.24	2/20/2013 19:44	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:44	J
Sodium	0.24	mg/L	V	1	0.20	0.026	2/20/2013 19:44	J
Vanadium	0.18	ug/L	U	1	1.5	0.18	2/20/2013 19:44	J
Zinc	11	ug/L		1	10	2.0	2/20/2013 19:44	J

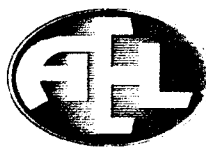
Report ID: 251332 - 159667

Page 16 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338010**  
Sample ID: **EQ BLANK**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/13/13 08:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>Analysis Desc: SW846 6020B</b>		<b>Preparation Method: SW-846 3010A</b>						
<b>Analysis, Total</b>		<b>Analytical Method: SW-846 6020</b>						
Antimony	1.4	ug/L	V	1	0.60	0.073	2/26/2013 21:47	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:47	J
Copper	0.10	ug/L	U	1	7.0	0.10	2/26/2013 21:47	J
Lead	0.088	ug/L	I	1	0.70	0.076	2/26/2013 21:47	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:47	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:47	J
Thallium	0.092	ug/L	I	1	0.20	0.067	2/26/2013 21:47	J
<b>Analysis Desc: SW846 7470A</b>		<b>Preparation Method: SW-846 7470A</b>						
<b>Analysis, Water</b>		<b>Analytical Method: SW-846 7470A</b>						
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 12:00	J
<b>WET CHEMISTRY</b>								
<b>Analysis Desc: IC,E300.0,Water</b>		<b>Analytical Method: EPA 300.0</b>						
Chloride	0.78	mg/L	U	1	7.5	0.78	2/13/2013 22:12	A
Fluoride	0.075	mg/L	U	1	0.50	0.075	2/13/2013 22:12	A
Nitrate	0.051	mg/L	U	1	0.50	0.051	2/13/2013 22:12	A
<b>Analysis Desc: Ammonia,E350.1,Water</b>		<b>Analytical Method: EPA 350.1</b>						
Ammonia (N)	0.061	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
<b>Analysis Desc: Tot Dissolved Solids,SM2540C</b>		<b>Analytical Method: SM 2540C</b>						
Total Dissolved Solids	10	mg/L	U	1	10	10	2/15/2013 15:30	A

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





LABORATORY SERVICES  
2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338003  
MW-2  
Sample Collection: 02-12-13/1135  
Lab ID No: 13.1040  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

**CERTIFICATE OF ANALYSIS**

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	1.2 ± 0.7	02-25-13/0800	EPA 900.0	0.9
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.7 U ± 0.8	Calc	Calc	N/A
Radium-226	pCi/l	0.7 U ± 0.6	02-22-13/1100	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.8	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.

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

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES  
2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338004  
MW-4  
Sample Collection: 02-12-13/1300  
Lab ID No: 13.1041  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

**CERTIFICATE OF ANALYSIS**

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	5.9 ± 1.5	02-25-13/0800	EPA 900.0	1.4
Combined Radium (Radium-226 + Radium 228)	pCi/l	2.8 ± 0.8	Calc	Calc	1.0
Radium-226	pCi/l	1.8 ± 0.8	02-22-13/1100	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.8	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.

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

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338005  
MW-4A  
Sample Collection: 02-13-13/0911  
Lab ID No: 13.1042  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

**CERTIFICATE OF ANALYSIS**

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	3.1 ± 1.3	02-25-13/0800	EPA 900.0	1.5
Combined Radium (Radium-226 + Radium 228)	pCi/l	3.2 ± 0.9	Calc	Calc	1.0
Radium-226	pCi/l	2.2 ± 0.9	02-22-13/1100	EPA 903.0	0.8
Radium-228	pCi/l	1.0 U ± 0.7	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES  
2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338006  
MW-4B  
Sample Collection: 02-13-13/0953  
Lab ID No: 13.1043  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	0.9 U $\pm$ 0.7	02-25-13/0800	EPA 900.0	0.9
Combined Radium (Radium-226 + Radium 228)	pCi/l	2.1 $\pm$ 0.8	Calc	Calc	1.0
Radium-226	pCi/l	1.1 I $\pm$ 0.6	02-22-13/1100	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U $\pm$ 0.8	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1





LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338007  
MW-6A  
Sample Collection: 02-13-13/1203  
Lab ID No: 13.1044  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

**CERTIFICATE OF ANALYSIS**

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	0.9 U ± 0.6	02-25-13/0800	EPA 900.0	0.9
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.7 U ± 0.8	Calc	Calc	N/A
Radium-226	pCi/l	0.7 U ± 0.5	02-22-13/1100	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.8	02-24-13/1310	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338008  
MW-8  
Sample Collection: 02-12-13/1010  
Lab ID No: 13.1045  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	1.1 U $\pm$ 0.8	02-25-13/0800	EPA 900.0	1.1
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.6 U $\pm$ 0.9	Calc	Calc	N/A
Radium-226	pCi/l	0.6 U $\pm$ 0.5	02-22-13/1100	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U $\pm$ 0.9	02-24-13/1310	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338009  
MW-9A  
Sample Collection: 02-13-13/1055  
Lab ID No: 13.1046  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	12.8 ± 2.1	02-25-13/0800	EPA 900.0	1.4
Combined Radium (Radium-226 + Radium 228)	pCi/l	4.6 ± 0.9	Calc	Calc	1.0
Radium-226	pCi/l	3.6 ± 0.9	02-22-13/1100	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U ± 0.9	02-24-13/1310	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338001  
MW-10  
Sample Collection: 02-12-13/1047  
Lab ID No: 13.1038  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

**CERTIFICATE OF ANALYSIS**

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	14.3 ± 2.3	02-25-13/0800	EPA 900.0	1.4
Combined Radium (Radium-226 + Radium 228)	pCi/l	3.6 ± 0.8	Calc	Calc	1.0
Radium-226	pCi/l	2.6 ± 0.8	02-22-13/1010	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.7	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: TR-230

U = indicates that the compound was analyzed for but not detected.

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

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES

2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338002  
MW-11  
Sample Collection: 02-12-13/0940  
Lab ID No: 13.1039  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	6.1 ± 1.4	02-25-13/0800	EPA 900.0	1.2
Combined Radium (Radium-226 + Radium 228)	pCi/l	4.6 ± 1.0	Calc	Calc	1.0
Radium-226	pCi/l	3.6 ± 1.0	02-22-13/1100	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.7	02-24-13/0940	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
I = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1



LABORATORY SERVICES  
2742 N. Florida Ave.  
P.O. Box 1833  
Tampa, Florida 33601  
(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

Advanced Environmental Labs  
528 S. North Lake Blvd. Suite 1016  
Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client  
Client/Field ID: A1301338010  
EQ BLANK  
Sample Collection: 02-13-13/0840  
Lab ID No: 13.1047  
Lab Custody Date: 02-19-13/1210  
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	0.8 U ± 0.5	02-25-13/0800	EPA 900.0	0.8
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.5 U ± 0.8	Calc	Calc	N/A
Radium-226	pCi/l	0.5 U ± 0.4	02-22-13/1100	EPA 903.0	0.5
Radium-228	pCi/l	1.0 U ± 0.8	02-24-13/1310	EPA Ra-05	1.0

Alpha Standard: Th-230

U = indicates that the compound was analyzed for but not detected.  
± = the reported value is between the laboratory detection limit and the laboratory practical quantitation limit.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of NELAC standards. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1

## Well Water Levels

NAME: Dale Clayton

DATE: 2/11/13

PROJECT LOCATION: Southernville, FL

TIME	COMMENTS
Well	WL
#	(ft. below)
MW-1	26.53'
MW-2	25.23'
MW-2A	28.30'
MW-4	26.65'
MW-4A	31.86'
MW-4B	29.93'
MW-4C	27.33'
MW-4D	29.72'
MW-6A	33.41'
MW-7	29.24'
MW-8	24.10'
MW-9	28.22'
MW-9A	31.30'
MW-10	24.27'
MW-11	26.42'

## PURGING DATA

## SAMPLING DATA

REMARKS:	Nitrate, TDS	AP
1059: Set dedicated 1/4" PE tubing at <sup>~27</sup> 27' btoe and started pump at .1 gpm.		
1110: WL 25.44' at .1 gpm, GW is clear.		
1112: WL 25.43' at .1 gpm, drawdown is stable. DO is high at 6.56 mg/L, but is typical for this well. Will use optional stabilization criteria below for DO.		

Notes: 1. The above do not constitute all the information required by Chapter 62-160, F.A.C.  
2. **STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H:**  $\pm 0.2$  units; Temperature:  $\pm 0.2$  degrees C; Specific Conductance:  $\pm 5\%$ ; Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2), optionally,  $\pm .02$  mg/L or  $\pm 10\%$  (whichever is greater); Turbidity: all readings  $\leq 20$  NTU, optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)



## GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-4</b>	SAMPLE ID: <b>MW-4</b>	DATE: <b>2/12/13</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL	STATIC DEPTH <b>26.68'</b>	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: <b>ESP PP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
<b>1 Well Vol</b> = ( <b>36.35'</b> feet - <b>26.68'</b> feet ) X <b>.16</b> gallons/foot = <b>1.5472</b> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
<b>1 Equip Vol</b> = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>feet</b> ) + <b>.125</b> gallons = <b>gallons</b>											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~28.5'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~28.5'</b>	PURGING INITIATED AT: <b>1203</b>	PURGING ENDED AT: <b>1239</b>	TOTAL VOLUME PURGED (gallons): <b>1.80</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>1235</b>	<b>1.60</b>	<b>1.60</b>	<b>.05</b>	<b>26.83</b>	<b>7.23</b>	<b>26.27</b>	<b>525</b>	<b>1.10</b>	<b>0.26</b>	<b>Clear</b>	<b>None</b>
<b>1237</b>	<b>.1</b>	<b>1.70</b>	<b>.05</b>	<b>26.83</b>	<b>7.23</b>	<b>26.23</b>	<b>526</b>	<b>1.11</b>	<b>0.28</b>	<b>Clear</b>	<b>None</b>
<b>1239</b>	<b>.1</b>	<b>1.80</b>	<b>.05</b>	<b>26.83</b>	<b>7.24</b>	<b>26.23</b>	<b>526</b>	<b>1.21</b>	<b>0.29</b>	<b>Clear</b>	<b>None</b>
<b>No screen</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>1240</b>	SAMPLING ENDED AT: <b>1300</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~28.5'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y (N)</b>		FILTER SIZE: <b>µm</b>				
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: <b>Y (N)</b>				
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
<b>MW-4</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>GrossAlpha, RA226RA228</b>	<b>APP-ESP-a</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2SO4</b>	<b>None</b>	<b>---</b>	<b>Ammonia</b>	<b>APP-ESP-a</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>Metals</b>	<b>APP-ESP-a</b>
"	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>---</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>APP-ESP-a</b>

## REMARKS:

**1203:** Set dedicated 1/4" PE tubing at ~28.5' btoC and started pump at .05 gpm.

**1218:** WL 26.83' at .05 gpm, GW is clear.

**1234:** WL 26.83' at .05 gpm, drawdown is stable. All parameters are stable or in range.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

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

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

## GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-4A</b>	SAMPLE ID: <b>MW-4A</b>	DATE: <b>2/13/12</b>	

## PURGING DATA

WELL 2" PVC	TUBING 3/8"	WELL SCREEN INTERVAL	STATIC DEPTH TO WATER (feet): <b>31.91</b>	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
= ( <b>45.23'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = .02 gallons + ( .006 gallons/foot X <b>45'</b> feet ) + .125 gallons = <b>1.415</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	PURGING INITIATED AT: <b>0844</b>	PURGING ENDED AT: <b>0858</b>	TOTAL VOLUME PURGED (gallons): <b>3.50</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>0854</b>	<b>2.50</b>	<b>2.50</b>	<b>.25</b>	<b>32.12</b>	<b>6.85</b>	<b>26.30</b>	<b>624</b>	<b>0.51</b>	<b>5.04</b>	<b>Clear</b>	<b>Slight</b>
<b>0856</b>	<b>.5</b>	<b>3.00</b>	<b>.25</b>	<b>32.12</b>	<b>6.82</b>	<b>26.30</b>	<b>624</b>	<b>0.50</b>	<b>3.36</b>	<b>Clear</b>	<b>Same</b>
<b>0858</b>	<b>.5</b>	<b>3.50</b>	<b>.25</b>	<b>32.12</b>	<b>6.93</b>	<b>26.31</b>	<b>624</b>	<b>0.49</b>	<b>2.30</b>	<b>Clear</b>	<b>Same</b>
									<b>No stream</b>		
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>0859</b>	SAMPLING ENDED AT: <b>0911</b>
PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>(Y) N</b> FILTER SIZE: <b>µm</b>		DUPLICATE: <b>(Y) (N)</b>	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)
<b>MW-4A</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2SO4</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>
				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
				<b>GrossAlpha, RA226RA228</b>	<b>ESP</b>
				<b>Total Ammonia</b>	<b>ESP</b>
				<b>Metals</b>	<b>ESP</b>
				<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>ESP</b>

## REMARKS:

**0844:** Set ~~date~~ Inserted SS ESP and dedicated 3/8" PE tubing to ~40' b/c and started pump at .25 gpm.

**0848:** GW is turbid at 70 NTUs, but is typical for this well. Will over purge to clear it up. Typically requires high flow rate to clean up. WL 32.12' at .25 gpm.

**0852:** Turbidity has dropped to 13 NTUs, WL is stable at 32.12' at .25 gpm. All other parameters are stable or in range.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

SAMPLING/PURGING: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

EQUIPMENT CODES: RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H:  $\pm 0.2$  units; Temperature:  $\pm 0.2$  degrees C; Specific Conductance:  $\pm 5\%$ ; Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2), optionally,  $\pm .02$  mg/L or  $\pm 10\%$  (whichever is greater); Turbidity: all readings  $\leq 20$  NTU, optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

# GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-4B</b>	SAMPLE ID: <b>MW-4B</b>	DATE: <b>2/13/18</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH <b>27.97</b> TO WATER (feet):	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
= ( <b>38.49'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME <b>x3 = 1.119</b> (only fill out if applicable)											
1 Equip Vol = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>38'</b> feet ) + <b>.125</b> gallons = <b>.373</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>	PURGING INITIATED AT: <b>0926</b>	PURGING ENDED AT: <b>0940</b>	TOTAL VOLUME PURGED (gallons): <b>3.50</b>							
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)
<b>0936</b>	<b>2.50</b>	<b>2.50</b>	<b>.25</b>	<b>30.22</b>	<b>8.92</b>	<b>25.61</b>	<b>118</b>	<b>6.16</b>	<b>5.84</b>	<b>Clear</b>	<b>None</b>
<b>0938</b>	<b>.5</b>	<b>3.00</b>	<b>.25</b>	<b>30.22</b>	<b>8.93</b>	<b>25.63</b>	<b>119</b>	<b>6.05</b>	<b>4.83</b>	<b>Clear</b>	<b>None</b>
<b>0940</b>	<b>.5</b>	<b>3.50</b>	<b>.25</b>	<b>30.23</b>	<b>8.93</b>	<b>25.62</b>	<b>119</b>	<b>6.00</b>	<b>4.70</b>	<b>Clear</b>	<b>None</b>
<b>No Screen</b>											
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; 6" = 1.02; 8" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>0941</b>	SAMPLING ENDED AT: <b>0953</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y (N)</b> FILTER SIZE: _____ µm		DUPLICATE: <b>Y (N)</b>				
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
<b>MW-4B</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Gross Alpha, RA226RA228</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>—</b>	<b>Total Ammonia</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Metals</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>—</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>ESP</b>

### REMARKS:

**0926:** Inserted SS ESP and dedicated 3/8" PE tubing to ~32' Gloc and started pump at .25 gpm.

**0931:** WL 30.23' at .25 gpm, GW is clear. DO is high at 6.41 mg/L, but is typical for this well. Will use optional stabilization criteria below for DO. pH is also high at 8.90, but again, is typical for this well.

**0934:** WL 30.22' at .25 gpm, all parameters are stable or in range. Drawdown is stable.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

Notes: 1. The above do not constitute all the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

## GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-6A</b>	SAMPLE ID: <b>MW-6A</b>	DATE: <b>2/13/13</b>	

## PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH <b>33.45</b> TO WATER (feet):	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
= ( <b>50.84'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>50'</b> feet ) + <b>.125</b> gallons = <b>.445</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	PURGING INITIATED AT: <b>1120</b>	PURGING ENDED AT: <b>1150</b>	TOTAL VOLUME PURGED (gallons): <b>7.50</b>							
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)
<b>1146</b>	<b>6.50</b>	<b>6.50</b>	<b>.25</b>	<b>33.50</b>	<b>7.72</b>	<b>24.72</b>	<b>255</b>	<b>7.32</b>	<b>15.2</b>	<b>Clear</b>	<b>None</b>
<b>1148</b>	<b>.5</b>	<b>7.00</b>	<b>.25</b>	<b>33.50</b>	<b>7.72</b>	<b>24.71</b>	<b>255</b>	<b>7.34</b>	<b>12.5</b>	<b>Clear</b>	<b>None</b>
<b>1150</b>	<b>.5</b>	<b>7.50</b>	<b>.25</b>	<b>33.50</b>	<b>7.73</b>	<b>24.70</b>	<b>255</b>	<b>7.32</b>	<b>10.6</b>	<b>Clear</b>	<b>None</b>
									<b>No stream</b>		
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>1151</b>	SAMPLING ENDED AT: <b>1203</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>		SAMPLE PUMP FLOW RATE (ml per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y (N)</b> FILTER SIZE: _____ µm		DUPLICATE: <b>Y (N)</b>				
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
<b>MW-6A</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Gross Alpha, RA226RA228</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>—</b>	<b>Total Ammonia</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Metals</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>—</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>ESP</b>

## REMARKS:

**1120:** Inserted 55 ESP and dedicated 3/8" PE tubing to ~45' bta and started pump at 125 gpm.

**1126:** WL 33.50' at ~25 gpm, GW is turbid, but typical for this well. Will over purge to clear it up.

**1136:** Turbidity is at 44 NTUs. DO is high at 250 mg/L, but is typical for this well. Continuing purge. Will use optional stabilization criteria for DO if necessary.

**1144:** Turbidity has dropped to 18 NTUs, DO is high at 7.36 mg/L. All other parameters are stable in range. Drawdown is stable at 33.50' bta.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

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

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

## GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-8</b>	SAMPLE ID: <b>MW-8</b>	DATE: <b>2/12/13</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL	STATIC DEPTH <b>24.12</b>	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= ( <b>43.24'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
1 Equip Vol = <b>0.0026</b> gallons + ( <b>0.0026</b> gallons/foot X <b>43'</b> ) + <b>.125</b> gallons = <b>0.2368</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~ 38'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~ 38'</b>	PURGING INITIATED AT: <b>0942</b>	PURGING ENDED AT: <b>0953</b>	TOTAL VOLUME PURGED (gallons): <b>1.10</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>0949</b>	<b>.20</b>	<b>.20</b>	<b>.1</b>	<b>24.15</b>	<b>7.23</b>	<b>23.96</b>	<b>341</b>	<b>4.60</b>	<b>0.168</b>	<b>clear</b>	<b>None</b>
<b>0951</b>	<b>.2</b>	<b>.40</b>	<b>.1</b>	<b>24.15</b>	<b>7.27</b>	<b>23.96</b>	<b>341</b>	<b>4.57</b>	<b>0.22</b>	<b>clear</b>	<b>None</b>
<b>0953</b>	<b>.2</b>	<b>.60</b>	<b>.1</b>	<b>24.15</b>	<b>7.28</b>	<b>24.01</b>	<b>342</b>	<b>4.55</b>	<b>0.27</b>	<b>clear</b>	<b>None</b>
<b>No S. L. or</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Clayton, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>0954</b>	SAMPLING ENDED AT: <b>1010</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~ 38'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y)</b> <i>N</i>		FIELD-FILTERED: <b>Y</b> <i>N</i> FILTER SIZE: <b>μm</b>		DUPLICATE: <b>Y</b> <i>N</i>				
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD				
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
<b>MW-8</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Gross Alpha, RA226RA228</b>	<b>APP-ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>—</b>	<b>Total Ammonia</b>	<b>APP-ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Metals</b>	<b>APP-ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>—</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>APP-ESP</b>

## REMARKS:

**0942:** Set dedicated 1/4" PE tubing at ~ 38' b/c and started pump at .1 gpm.

**0946:** WL 24.15' at .1 gpm, GW is clear. DO is high at 4.67 mg/L, but is typical for this well. Will use optional stabilization criteria below for DO. All other parameters are stable or in range.

**0948:** WL 24.15' at .1 gpm, WL is stable.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

Notes: 1. The above do not constitute all the information required by Chapter 62-160, F.A.C.  
2. **STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H:**  $\pm 0.2$  units; Temperature:  $\pm 0.2$  degrees C; Specific Conductance:  $\pm 5\%$ ; Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2), optionally,  $\pm .02$  mg/L or  $\pm 10\%$  (whichever is greater); Turbidity: all readings  $\leq 20$  NTU, optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

# GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-10</b>	SAMPLE ID: <b>MW-10</b>	DATE: <b>2/12/13</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL	STATIC DEPTH <b>24.07</b>	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: <b>ESPA PP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= ( <b>45.35'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
1 Equip Vol = <b>0.0026</b> gallons + ( <b>0.006</b> gallons/foot X <b>4.5'</b> feet ) + <b>.125</b> gallons = <b>0.0276</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	PURGING INITIATED AT: <b>1024</b>	PURGING ENDED AT: <b>1036</b>	TOTAL VOLUME PURGED (gallons): <b>1.20</b>							
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)
1032	.80	.80	.1	24.83'	6.89	24.98	652	0.77	6.47	Clear	Sulfur
1034	.2	1.00	.1	24.83'	6.89	25.03	647	0.71	7.28	Clear	Same
1036	.2	1.20	.1	24.83'	6.88	25.04	642	0.62	6.55	Clear	Same
No Screen											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER SIGNATURES:		SAMPLING INITIATED AT: <b>1037</b>	SAMPLING ENDED AT: <b>1047</b>
PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y (N)</b>		FILTER SIZE: _____ µm	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)
MW-10	2	PE	1 Ltr	HN03	None
"	1	PE	250 mL	H2S04	None
"	1	PE	250 mL	HN03	None
"	1	PE	500 mL	None	None
REMARKS:					

1024: Set dedicated 1/4" PE tubing at ~40' bbl and started pump at .1 gpm.

1029: WL 24.82' at .1 gpm, GW is clear.

1031: WL 24.83' at .1 gpm, all parameters are stable or in range. Drawdown is stable.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

SAMPLING/PURGING: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

# GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-11</b>	SAMPLE ID: <b>MW-11</b>	DATE: <b>2/12/13</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL	STATIC DEPTH <b>26.45</b>	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= ( <b>40.15'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
1 Equip Vol = <b>0</b> gallons + ( <b>0.002</b> gallons/foot X <b>40'</b> ) + <b>.125</b> gallons = <b>0.082</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>	PURGING INITIATED AT: <b>0902</b>	PURGING ENDED AT: <b>0917</b>	TOTAL VOLUME PURGED (gallons): <b>1.05</b>							
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)
<b>0913</b>	<b>.77</b>	<b>.77</b>	<b>.07</b>	<b>26.50</b>	<b>6.21</b>	<b>24.95</b>	<b>326</b>	<b>1.32</b>	<b>11.8</b>	<b>Clear</b>	<b>None</b>
<b>0915</b>	<b>.14</b>	<b>.91</b>	<b>.07</b>	<b>26.50</b>	<b>6.22</b>	<b>24.95</b>	<b>331</b>	<b>1.20</b>	<b>7.29</b>	<b>Clear</b>	<b>None</b>
<b>0917</b>	<b>.14</b>	<b>1.05</b>	<b>.07</b>	<b>26.50</b>	<b>6.22</b>	<b>25.00</b>	<b>334</b>	<b>1.15</b>	<b>5.42</b>	<b>Clear</b>	<b>None</b>
<b>No stream</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>0918</b>	SAMPLING ENDED AT: <b>0940</b>
PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(Y) N Probe only</b>		FIELD-FILTERED: <b>(Y) N</b> FILTER SIZE: <b>µm</b>		DUPLICATE: <b>Y (N)</b>	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)
<b>MW-11</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2SO4</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>
				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
				<b>Gross Alpha, RA226, RA228</b>	<b>APP ESP</b>
				<b>Total Ammonia</b>	<b>APP ESP</b>
				<b>Metals</b>	<b>APP ESP</b>
				<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>APP ESP</b>

### REMARKS:

0902: Set dedicated 1/4" PE tubing at ~35' b/c and started pump at 0902pm.  
0906: WL 26.50' at .07 gpm, turbidity is high at 28 NTUs, but is typical for this well. Will over purge to clear it up.  
0912: Turbidity is at 17 NTUs, all other parameters are stable or in range. WL is stable at 26.50' at .07 gpm.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Peaked samples on ice immediately upon collection

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

Notes: 1. The above do not constitute all the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H: ± 0.2 units; Temperature: ± 0.2

degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)



## PURGING DATA

## SAMPLING DATA

REMARKS:

Field decontaminated SS ESP and WL probe IAW DEP-SOP-001/01, FC 1000. Inserted ESP and WL probe into 1 gallon of DI water and circulated DI water through pump and over WL probe for several minutes before collecting samples.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes  
2) Packed samples on ice immediately upon collection

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

**SAMPLING/PURGING EQUIPMENT CODES:** APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump  
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

Notes: 1. The above do not constitute all the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR CANALS

2. **STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)H:**  $\pm 0.2$  units; Temperature:  $\pm 0.2$  degrees C; Specific Conductance:  $\pm 5\%$ ; Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2), optionally,  $\pm .02$  mg/L or  $\pm 10\%$  (whichever is greater); Turbidity: all readings  $\leq 20$  NTU, optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)



Advanced  
Environmental Laboratories, Inc.

Page 1

8801 Southwest Pkwy. • Jacksonville, FL 32216 • 904.303.8300 • Fax 904.303.8354 • E82574  
8810 Phloxess Point Ave. • Tampa, FL 33619 • 813.630.0916 • Fax 813.630.4327 • E84568  
8815 SW Archer Road • Gainesville, FL 32608 • 352.377.2348 • Fax 352.348.6638 • E82001  
528 S. North Lake Blvd., Ste. 1018 • Altamonte Springs, FL 32701 • 407.877.1984 • Fax 407.877.1987 • E83078

A1301338

CLIENT NAME	The Cofinas Group, Inc.																			
ADDRESS	377 Mainland Ave Suite 2012 Altamonte Springs, Florida 32701																			
PHONE	407-622-8176																			
FAX	407-622-8196																			
CONTACT	Dale Clayton																			
SAMPLED BY	Dale Clayton																			
TURN AROUND TIME	RUSH <input type="checkbox"/>																			
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	ANALYSIS REQUIRED	BOTTLE SIZE & TYPE	Z	Cross Alpha	Z	Ra 226 + Ra 228	Sb, Al, Cd, Cr, Fe, Pb, Mn, Hg, Ag, Na, Ti, Ba, As, Be, Co, Cu, Ni, Se, V, Zn	TDS	Ammonia	F, Cl, NO3	3.40 ml	3.40 ml	3.40 ml	LABORATORY I.D. NUMBER
			DATE	TIME																
MW-10			2/12/13	1057	W	12			X	X	X	X	X	X	X	X	X	X	8011 EDB / DBCP	01
MW-11			2/12/13	0948	W	12			X	X	X	X	X	X	X	X	X	X	8280 App 1 VOC's	02
MW-2			2/12/13	1135	W	12			X	X	X	X	X	X	X	X	X	X		03
MW-4			2/12/13	1300	W	12			X	X	X	X	X	X	X	X	X	X		04
MW-4A			2/12/13	0911	W	12			X	X	X	X	X	X	X	X	X	X		05
MW-4B			2/12/13	0933	W	12			X	X	X	X	X	X	X	X	X	X		06
MW-8A			2/12/13	1203	W	12			X	X	X	X	X	X	X	X	X	X		07
MW-8			2/12/13	1010	W	12			X	X	X	X	X	X	X	X	X	X		08
MW-9A			2/12/13	0855	W	12			X	X	X	X	X	X	X	X	X	X		09
EQUIPMENT BLANK			2/12/13	0840	W	12			X	X	X	X	X	X	X	X	X	X		10
TRIP BLANK 1 - 2/13			2/12/13	-	DI	1														
TRIP BLANK 2 - 2/13			2/12/13	-	DI	1														

Received on ice ☒ Yes ☐ No ☐ Temp taken from sample ☐ Temp from temp blank ☐ Where required, pH checked ☐ Temperature when received 7 (in degrees Celsius)

Form revised 2/03

Device used for measuring Temp by unique identifier (circle RT temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A

FOR DRINKING WATER USE:  
(When PWS information not otherwise supplied) PWS ID: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_

Received by: S.T. Brandy Date: 2/13/13 Time: 1:51

---

Results Requested By 2/24/2013

**KNL Laboratory Services, Inc.**  
2742 North Florida Avenue  
Tampa, FL 33602  
Phone  
Fax

Myma Santiago Advanced Environmental Laboratories, Inc. 528 S. North Lake Blvd, Suite 1016 Altamonte Springs, FL 32701 Phone (407)937-1594 Fax (407)937-1597		KNL-FL KNL Laboratory Services, Inc. 2742 North Florida Avenue Tampa, FL 33602 Phone Fax		EPA 900.1		EPA 816-05		EPA 900		LAB USE ONLY	
2	MW-11	2/12/2013 09:40	A1301338002	Water							
3	MW-5	2/12/2013 09:53	A1301338005	Water							
4	MW-4	2/12/2013 13:00	A1301338004	Water							
5	MW-4A	2/12/2013 09:53	A1301338005	Water							
6	MW-4B	2/12/2013 09:53	A1301338008	Water							
7	MW-5A	2/12/2013 12:03	A1301338007	Water							
8	MW-6	2/12/2013 10:10	A1301338008	Water							
9	MW-6A	2/12/2013 10:55	A1301338009	Water							
10	EQ BLANK	2/12/2013 08:40	A1301338010	Water							

13.1038-47

# Chain of Custody

Document 5985 - HBN 4898

Workorder

Sumter Co Landfill 1st

Results Requested By 2/24/2013

Myma Santiago  
Advanced Environmental Laboratories, Inc.  
6681 Southpoint Parkway  
Jacksonville, FL 32216  
Phone (904)363-9350  
Fax (904)363-9354

KNL-FL  
KNL Laboratory Services, Inc.  
2742 North Florida Avenue  
Tampa, FL 33602  
Phone  
Fax

EPA 900.1  
EPA 900.5  
EPA 900

LAB USE ONLY

12

14

☐ Standard (Results only)

☐ Standard with Batch QC

☐ CLP

☐ Other

☐ SEDD Stage 2A

☐ SEDD Stage 2B

☐ SEDD Stage 3

☐ Other

~~13.108-55~~  
**13.1038-47**

Preservative  
HNC3 + HNC3

Date/Time

Received By

Date/Time

Released By

Transfers

1	<i>BS</i>			
2	<i>Stanley</i>			
3				
4				
5				

INSTRUMENT (MAKE/MODEL#) YSI 556/Hanna INSTRUMENT # \_\_\_\_\_

~~☒ TEMPERATURE~~  
~~☒ TURBIDITY~~

☒ CONDUCTIVITY  
☐ RESIDUAL CL

☐ SALINITY  
☒ DO

☒ pH      ☐ ORP  
☐ OTHER

**STANDARDS:** [Bracket calibrated meters pH 4.01 – 7 and Turbidity 0.1 – 15 NTU's],

Standard A Oakton pH Standard 4.01 Units Exp: 3/2014

Standard B Oakton pH Standard 7.00 Units Exp: 6/2014

Standard C Oakton Conductivity Standard 1500  $\mu$ S/cm Exp: 6/20/13

Standard D Hanna 0.1 NTU Standard Exp: 4/2013

Standard E Hanna 15 NTU Standard Exp: 4/20/13

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS	
2/12/13	0830	A	4.01	4.01		Yes	IC	<del>JE</del>	pH
		B	7.00	7.00					pH
		C	1500	1500					Cond
		--	--	9.16					DO
		--	--	19.63					Temp
		D	0.1	0.1					Turb
		E	15	15.0					Turb
2/12/13	0850	A	4.01	3.98		Yes	ICV	<del>JE</del>	pH
		B	7.00	7.02					pH
		C	1500	1502					Cond
		--	--	9.17					DO
		--	--	19.58					Temp
		D	0.1	0.08					Turb
		E	15	15.0					Turb
2/12/13	1400	A	4.01	4.02		Yes	CG	<del>JE</del>	pH
		B	7.00	7.03					pH
		C	1500	1499					Cond
		--	--	8.82					DO
		--	--	21.76					Temp
		D	0.1	0.08					Turb
		E	15	14.9					Turb

INSTRUMENT (MAKE/MODEL#) YSI 556/Hanna INSTRUMENT # \_\_\_\_\_

☒ TEMPERATURE      ☒ CONDUCTIVITY      ☐ SALINITY      ☒ pH      ☐ ORP  
☒ TURBIDITY      ☐ RESIDUAL CL      ☒ DO      ☐ OTHER \_\_\_\_\_

Standard A Oakton pH Standard 4.01 Units Exp: 3/2014

Standard B Oakton pH Standard 7.00 Units Exp: 6/20/14

Standard C Oakton Conductivity Standard 1500  $\mu\text{S}/\text{cm}$  Exp: 6/2013

Standard D Hanna 0.1 NTU Standard Exp: 4/20/13

Standard E Hanna 15 NTU Standard Exp: 4/2013

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS	
2/13/12	0800	A	4.01	4.01		Yes	IC	JR	pH
		B	7.00	7.00					pH
		C	1500	1500					Cond
		--	--	8.63					DO
		--	--	22.71					Temp
		D	0.1	0.1					Turb
		E	15	15.0					Turb
2/13/12	0820	A	4.01	4.00		Yes	IC	JR	pH
		B	7.00	7.05					pH
		C	1500	1498					Cond
		--	--	8.56					DO
		--	--	22.80					Temp
		D	0.1	0.08					Turb
		E	15	15.0					Turb
2/13/12	1300	A	4.01	4.00		Yes	CC	JR	pH
		B	7.00	7.00					pH
		C	1500	1500					Cond
		--	--	8.57					DO
		--	--	23.25					Temp
		D	0.1	0.09					Turb
		E	15	15.0					Turb



### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

QC Batch: WCA/1717 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Prepared:  
Associated Lab Samples: A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,

METHOD BLANK: 1159157

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>WET CHEMISTRY</b>			
Ammonia (N)	mg/L	0.025	0.025 U

LABORATORY CONTROL SAMPLE: 1159158

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>WET CHEMISTRY</b>					
Ammonia (N)	mg/L	3	2.77	92	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1159159 1159160 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
<b>WET CHEMISTRY</b>										
Ammonia (N)	mg/L	0.115	3	3.12	3.14	100	101	90-110	1 10	

QC Batch: DGMj/1178 Analysis Method: SW-846 6010  
QC Batch Method: SW-846 3010A Prepared: 02/20/2013 03:30  
Associated Lab Samples: A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,

METHOD BLANK: 1160012

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>METALS</b>			
Aluminum	ug/L	61	61 U
Barium	ug/L	0.28	0.28 U
Beryllium	ug/L	0.13	0.13 U
Cadmium	ug/L	0.32	0.32 U
Cobalt	ug/L	0.60	0.60 U
Chromium	ug/L	0.50	0.50 U
Iron	ug/L	38	38 U

Report ID: 251332 - 159667

Page 19 of 51

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Advanced Environmental Laboratories, Inc.





### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

METHOD BLANK: 1160012

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Manganese	ug/L	0.24	0.24 U
Sodium	mg/L	0.71	0.026
Nickel	ug/L	1.1	1.1 U
Vanadium	ug/L	0.18	0.18 U
Zinc	ug/L	2.0	2.0 U

LABORATORY CONTROL SAMPLE & LCSD: 1160013 1160014

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>METALS</b>										
Aluminum	ug/L	25000	25000	25000	97	97	80-120	1	20	
Barium	ug/L	400	370	370	92	93	80-120	0	20	
Beryllium	ug/L	400	400	400	100	99	80-120	1	20	
Cadmium	ug/L	400	380	380	95	96	80-120	1	20	
Cobalt	ug/L	400	350	360	88	89	80-120	1	20	
Chromium	ug/L	400	370	380	93	95	80-120	2	20	
Manganese	ug/L	400	360	370	91	92	80-120	1	20	
Sodium	mg/L	50	50	50	99	98	80-120	0	20	
Nickel	ug/L	400	350	360	88	89	80-120	1	20	
Vanadium	ug/L	400	390	390	97	98	80-120	1	20	
Zinc	ug/L	400	360	360	90	91	80-120	1	20	

LABORATORY CONTROL SAMPLE & LCSD: 1160013 1160014

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>METALS</b>										
Iron	ug/L	25000	25000	25000	100	99	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1160015 1160016 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
<b>METALS</b>										
Aluminum	ug/L	170	25000	25000	25000	98	99	75-125	1	20
Barium	ug/L	14	400	390	390	94	95	75-125	1	20
Beryllium	ug/L	0	400	410	410	103	103	75-125	1	20
Cadmium	ug/L	0.53	400	390	390	96	97	75-125	1	20

Report ID: 251332 - 159667

Page 20 of 51

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Advanced Environmental Laboratories, Inc.







### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1160015 1160016 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
Cobalt	ug/L	0.44	400	360	360	89	90	75-125	1	20	
Chromium	ug/L	0.74	400	380	390	95	97	75-125	1	20	
Manganese	ug/L	22	400	390	400	93	94	75-125	1	20	
Sodium	mg/L	8.1	50	59	60	101	102	75-125	1	20	
Nickel	ug/L	0.13	400	360	360	89	91	75-125	1	20	
Vanadium	ug/L	11	400	410	420	100	101	75-125	1	20	
Zinc	ug/L	12	400	380	390	93	93	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1160015 1160016 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
<b>METALS</b>											
Iron	ug/L	430	25000	27000	27000	103	104	75-125	1	20	

QC Batch: WCAa/1155

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Prepared:

Associated Lab Samples: A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,

METHOD BLANK: 1161114

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>WET CHEMISTRY</b>				
Total Dissolved Solids	mg/L	10	10 U	

LABORATORY CONTROL SAMPLE: 1161115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>WET CHEMISTRY</b>						
Total Dissolved Solids	mg/L	660	660	100	75-125	

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

SAMPLE DUPLICATE: 1161116

Original: A1301338002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	190	350	60	5
QC Batch:	DGMj/1190		Analysis Method:	SW-846 6020	
QC Batch Method:	SW-846 3010A		Prepared:	02/21/2013 03:30	
Associated Lab Samples:	A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,				

METHOD BLANK: 1161330

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>METALS</b>			
Copper	ug/L	0.10	0.10 U
Arsenic	ug/L	0.36	0.36 U
Selenium	ug/L	2.2	2.2 U
Silver	ug/L	0.059	0.059 U
Antimony	ug/L	0.51	0.073 I

LABORATORY CONTROL SAMPLE & LCSD: 1161331

1161332

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
<b>METALS</b>									
Selenium	ug/L	100	110	110	111	115	80-120	4	20
Silver	ug/L	100	86	86	86	86	80-120	1	20
Antimony	ug/L	100	110	100	105	100	80-120	5	20
Thallium	ug/L	100	98	97	98	97	80-120	1	20
Lead	ug/L	100	100	98	100	98	80-120	2	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1161333

1161334

Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
<b>METALS</b>										
Copper	ug/L	0	100	95	96	95	96	75-125	0	20
Arsenic	ug/L	0.0082	100	100	100	104	104	75-125	0	20
Selenium	ug/L	0	100	110	110	106	106	75-125	0	20
Silver	ug/L	0	100	87	93	87	93	75-125	6	20
Antimony	ug/L	2.6	100	110	100	104	100	75-125	4	20

Report ID: 251332 - 159667

Page 22 of 51

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1161333 1161334 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
Thallium	ug/L	0.27	100	100	100	101	101	75-125	0	20	
Lead	ug/L	0.47	100	100	100	103	103	75-125	0	20	

QC Batch: DGMj/1197

Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A

Prepared: 02/22/2013 07:15

Associated Lab Samples: A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,

METHOD BLANK: 1162241

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	ug/L	0.014	0.014	U

LABORATORY CONTROL SAMPLE & LCSD: 1162242 1162243

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Mercury	ug/L	2	2.0	2.0	99	99	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162244 1162245 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
METALS											
Mercury	ug/L	0.013	2	2.1	2.1	103	105	80-120	2	20	

QC Batch: WCAa/1178

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Prepared:

Associated Lab Samples: A1301338001, A1301338002, A1301338003, A1301338004, A1301338005, A1301338006, A1301338007,

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

METHOD BLANK: 1163435

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Fluoride	mg/L	0.075	0.075 U
Chloride	mg/L	0.78	0.78 U
Nitrate	mg/L	0.051	0.051 U

LABORATORY CONTROL SAMPLE: 1163436

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Fluoride	mg/L	5	5.1	102	90-110
Chloride	mg/L	50	48	96	90-110
Nitrate	mg/L		5.0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1163437 1163438 Original: A1301338001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
WET CHEMISTRY										
Chloride	mg/L	7.1	50	52	52	90	90	90-110	0 10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1163439 1163440 Original: A1301338009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
WET CHEMISTRY										
Fluoride	mg/L	0.19	2.5	2.9	2.9	109	109	90-110	0 10	
Nitrate	mg/L			2.9	2.9				0 10	

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Advanced Environmental Laboratories, Inc.





Advanced  
Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc  
528 S. North Lake Blvd, Suite 1016  
Altamonte Springs, FL 32701

Phone: (407)937-1594  
Fax: (407)937-1597

## QUALITY CONTROL DATA QUALIFIERS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

---

### QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- V Method Blank Contamination

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1301338001	MW-10			EPA 350.1	WCAI/1717
A1301338002	MW-11			EPA 350.1	WCAI/1717
A1301338003	MW-2			EPA 350.1	WCAI/1717
A1301338004	MW-4			EPA 350.1	WCAI/1717
A1301338005	MW-4A			EPA 350.1	WCAI/1717
A1301338006	MW-4B			EPA 350.1	WCAI/1717
A1301338007	MW-6A			EPA 350.1	WCAI/1717
A1301338008	MW-8			EPA 350.1	WCAI/1717
A1301338009	MW-9A			EPA 350.1	WCAI/1717
A1301338010	EQ BLANK			EPA 350.1	WCAI/1717
A1301338001	MW-10	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338002	MW-11	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338003	MW-2	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338004	MW-4	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338005	MW-4A	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338006	MW-4B	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338007	MW-6A	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338008	MW-8	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338009	MW-9A	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338010	EQ BLANK	SW-846 3010A	DGMj/1178	SW-846 6010	ICPj/1116
A1301338001	MW-10			SM 2540C	WCAa/1155
A1301338002	MW-11			SM 2540C	WCAa/1155
A1301338003	MW-2			SM 2540C	WCAa/1155
A1301338004	MW-4			SM 2540C	WCAa/1155
A1301338005	MW-4A			SM 2540C	WCAa/1155
A1301338006	MW-4B			SM 2540C	WCAa/1155
A1301338007	MW-6A			SM 2540C	WCAa/1155
A1301338008	MW-8			SM 2540C	WCAa/1155
A1301338009	MW-9A			SM 2540C	WCAa/1155
A1301338010	EQ BLANK			SM 2540C	WCAa/1155
A1301338001	MW-10	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030

Report ID: 251332 - 159667

Page 26 of 51

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1301338002	MW-11	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338003	MW-2	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338004	MW-4	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338005	MW-4A	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338006	MW-4B	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338007	MW-6A	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338008	MW-8	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338009	MW-9A	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338010	EQ BLANK	SW-846 3010A	DGMj/1190	SW-846 6020	ICMj/1030
A1301338001	MW-10	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338002	MW-11	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338003	MW-2	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338004	MW-4	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338005	MW-4A	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338006	MW-4B	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338007	MW-6A	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338008	MW-8	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338009	MW-9A	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338010	EQ BLANK	SW-846 7470A	DGMj/1197	SW-846 7470A	CVAj/1035
A1301338001	MW-10			EPA 300.0	WCAa/1178
A1301338002	MW-11			EPA 300.0	WCAa/1178
A1301338003	MW-2			EPA 300.0	WCAa/1178
A1301338004	MW-4			EPA 300.0	WCAa/1178
A1301338005	MW-4A			EPA 300.0	WCAa/1178
A1301338006	MW-4B			EPA 300.0	WCAa/1178
A1301338007	MW-6A			EPA 300.0	WCAa/1178
A1301338008	MW-8			EPA 300.0	WCAa/1178
A1301338009	MW-9A			EPA 300.0	WCAa/1178
A1301338010	EQ BLANK			EPA 300.0	WCAa/1178
A1301338001	MW-10			DISRES	FLDa/1004
A1301338002	MW-11			DISRES	FLDa/1004

Report ID: 251332 - 159667

Page 27 of 51

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.





## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1301338003	MW-2			DISRES	FLDa/1004
A1301338004	MW-4			DISRES	FLDa/1004
A1301338005	MW-4A			DISRES	FLDa/1004
A1301338006	MW-4B			DISRES	FLDa/1004
A1301338007	MW-6A			DISRES	FLDa/1004
A1301338008	MW-8			DISRES	FLDa/1004
A1301338009	MW-9A			DISRES	FLDa/1004
A1301338002	MW-11			DISRES	FLDa/1005
A1301338003	MW-2			DISRES	FLDa/1005
A1301338004	MW-4			DISRES	FLDa/1005
A1301338005	MW-4A			DISRES	FLDa/1005
A1301338006	MW-4B			DISRES	FLDa/1005
A1301338007	MW-6A			DISRES	FLDa/1005
A1301338008	MW-8			DISRES	FLDa/1005
A1301338009	MW-9A			DISRES	FLDa/1005
A1301338001	MW-10	DISRES	FLDa/	DISRES	FLDa/

### CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.

