

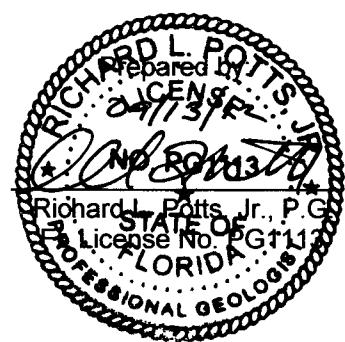
SUMTER COUNTY
(CLOSED) LANDFILL
QUARTERLY GROUNDWATER
MONITORING REPORT
Quarter III (August) 2012

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**



September 2012

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.

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

September 12, 2012

Mr. John Morris, P.G.
Florida Department of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, Florida 33637

Subj: **Quarter III (August) 2012 Groundwater Monitoring Report**
Sumter County Closed Class I Landfill
Sumter County, Florida
FDEP Permit No. 22926-003-SF

Dear Mr. Morris:

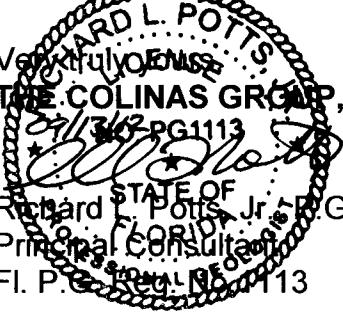
On behalf of Sumter County Board of County Commissioners, The Colinas Group, Inc. (TCG) herewith submits one Electronic Data Deliverable and one (1) bound paper copy of the report prepared by TCG entitled:

**Sumter County (Closed) Landfill Quarterly Groundwater Monitoring Report,
Quarter III (August) 2012**

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.
Richard L. Potts, Jr., P.G.
Principal Consultant
FL. P.G. Reg. No. 113



cc: Mr. Jackey Jackson (Sumter County)
Ms. Denise Warnock (Sumter County)

**SUMTER COUNTY (CLOSED) LANDFILL
GROUNDWATER MONITORING REPORT
SUMTER COUNTY, FLORIDA
Quarter III (August) 2012**

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**Sumter County (Closed) Landfill
Quarterly Groundwater Monitoring Report
Quarter III (August) 2012**

INTRODUCTION

The Colinas Group, Inc. (TCG) has reviewed the groundwater monitoring well sampling and analytical results for the Quarter III (August) 2012 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 III 2012 sampling event at the Sumter County Landfill was completed during the period August 14 - 15, 2012. 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 August 15, 2012. 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 III 2012 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 9.05 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 6.75 to 7.78 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 24.43 C to 27.25 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 115 umhos/cm to 904 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 III 2012 sample set is presented in Table III. As shown, six (6) parameters were reported for certain monitoring wells at concentrations that exceed applicable regulatory levels. Exceeding parameters were aluminum, gross alpha, iron, manganese, nitrate nitrogen and total dissolved solids (TDS).

Aluminum

Aluminum was measured in water samples from four (4) of the nine (9) monitoring wells (45%) at concentrations 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 810 ug/l. Aluminum was nominally above the MCL at well **MW-11** at 210 ug/l.

Gross Alpha (Radionuclide)

Gross alpha was reported by the laboratory at 17.8 ± 2.5 pCi (15.3 pCi - 20.3 pCi) in the groundwater sample from well **MW-10**. The FPDWS MCL for gross alpha emission is 15 pCi. Gross alpha was reported at values below the MCL at wells **MW-9A** and **MW-11**, assuming the positive error correction, but somewhat elevated compared to the six (6) remaining monitoring wells.

Iron

Dissolved iron was detected in two (2) monitoring wells at concentrations above the FSDWS MCL of 300 ug/l. Iron was reported at 1,200 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 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 97 ug/l. Manganese was detected at six (6) of the remaining monitoring wells at concentrations less than 50 ug/l.

Nitrate Nitrogen

Nitrate was reported above the FPDWS MCL (10 mg/l) at monitoring well **MW-4A** at 12 mg/l. Remaining wells reported nitrate values ranging from 0.38 mg/l (**MW-9A**) to 5.9 mg/l. Background Well **MW-6A** reported an elevated nitrate concentration of 5.8 mg/l.

Total Dissolved Solids (TDS)

TDS concentration was reported nominally above the 500 mg/l FSDWS MCL at monitoring well **MW-10** at 590 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

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** (16 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 - 38 mg/l) as compared to background and other downgradient monitoring wells. The PDWS MCL for sodium is 160 mg/l.

SAMPLING EVENT SUMMARY

Chemical characteristics of groundwater monitored at the Sumter County Closed Landfill are reported for the Quarter III (August) 2012 sampling event. Exceedances of specific 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)**.

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 above the FSDWS MCL at four 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.

Gross alpha was reported nominally above the Florida Primary Drinking Water Standards MCL at Detection Well **MW-10** at 15.3 pCi (using the negative laboratory uncertainty value). The MCL for gross alpha emission is 15 pCi.

Dissolved **iron** above the FSDWS MCL was reported for 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 12 mg/l. The MCL for nitrate in groundwater is 10 mg/l. Consistently elevated sub-MCL

nitrate levels continue at Background Well **MW-6A**. A background-equivalent nitrate result was reported for Compliance Well **MW-4**.

TDS was reported slightly above the FSDWS provisional MCL (500 mg/l) at well **MW-10** at 590 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 III (August) 2012

Sampling Point	Temp. (C)	Dissolved Oxygen (mg/l)	pH	Specific Conductance (umhos/cm)	Turbidity (NTU)
MW-2	26.93	5.61	6.75	282	1.20
MW-4	27.25	0.42	7.28	542	3.13
MW-4A	26.35	0.65	7.19	620	2.63
MW-4B	25.99	6.08	9.05	115	11.7
MW-6A	24.97	6.68	7.78	271	16.5
MW-8	24.43	3.98	7.41	338	0.53
MW-9A	25.18	0.23	6.46	904	6.39
MW-10	25.90	0.29	6.90	629	8.04
MW-11	26.26	1.55	6.20	327	3.64

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 III (August) 2012**

Well No.	MP Elev. ^{1/} (ft. +NGVD)	Depth to Water ^{2/} (ft. - MP)	Groundwater Elevation (ft. +NGVD)
MW-1	70.10	24.11	45.99
MW-2	68.96	22.70	46.26
MW-2A	71.98	25.80	46.18
MW-4	70.33	24.24	46.09
MW-4A	75.49	29.45	46.04
MW-4B	73.49	27.53	45.96
MW-4C	70.88	24.92	45.96
MW-4D	73.35	27.32	46.03
MW-6A	77.48	31.00	46.48
MW-7	72.93	26.84	46.09
MW-8	68.63	21.75	46.88
MW-9	72.62	26.44	46.18
MW-9A	75.14	28.90	46.24
MW-10	68.14	21.87	46.27
MW-11	70.02	24.00	46.02

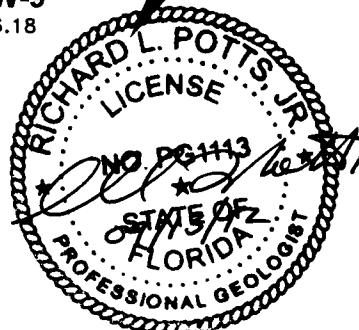
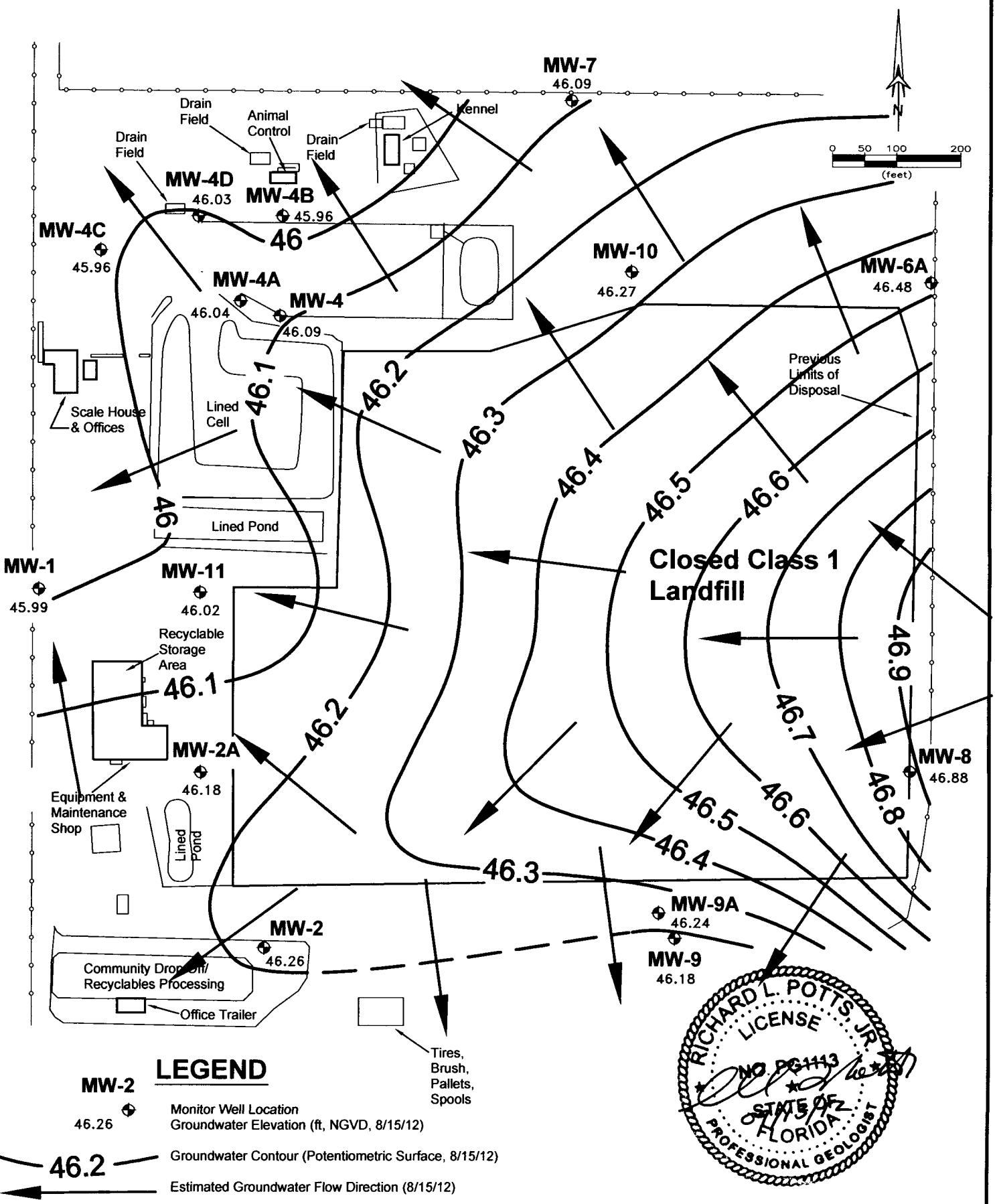
Notes: 1/ Measuring Point is top of PVC well casing.

2/ Water levels recorded on August 15, 2012

TABLE II
SUMMARY OF LABORATORY RESULTS
SUMTER COUNTY (CLOSED) LANDFILL
QUARTER III (August) 2012

Parameter	units	MW-2	MW-4	MW-4A	MW-4B	MW-6A	MW-8	MW-9A	MW-10	MW-11	MCL
Ammonia	mg/l	0.32	0.64	1.0	1.1	0.75	0.73	1.3	0.67	0.61	2.8
Aluminum	ug/l	BDL	68	BDL	810	BDL	BDL	420	360	210	200
Antimony	ug/l	1.1	0.23	0.41	0.29	0.17	0.14	0.16	0.29	0.10	6
Cadmium	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	0.92	0.50	1.9	5
Chloride	mg/l	5.9	16	25	5.5	9.4	9.1	22	8.8	5.2	250
Chromium	ug/l	0.67	1.4	1.5	3.3	5.7	3.4	4.4	1.1	2.4	100
Fluoride	mg/l	BDL	0.14	BDL	BDL	BDL	BDL	BDL	0.14	0.16	4
Gross Alpha	pCi/l	2.2 ± 0.8	7.0 ± 1.7	5.3 ± 1.5	1.6 ± 0.7	1.3 ± 0.7	1.2 ± 0.8	12.2 ± 2.5	17.8 ± 2.5	10.6 ± 1.7	15
Iron	ug/l	BDL	BDL	BDL	41	BDL	BDL	1,200	430	BDL	300
Lead	ug/l	BDL	BDL	BDL	0.34	BDL	BDL	0.29	0.15	0.11	15
Manganese	ug/l	1.4	5.9	1.7	BDL	0.76	BDL	97	21	2.5	50
Mercury	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	0.059	BDL	0.041	2
Nitrate, as N	mg/l	2.1	5.6	12	2.5	5.9	2.1	0.38	1.7	5.2	10
Radium 226	pCi/l	< 0.8 ± 0.5	2.3 ± 0.8	1.7 ± 0.7	< 0.7 ± 0.3	< 0.6 ± 0.5	< 0.6 ± 0.5	4.7 ± 1.2	2.7 ± 0.9	4.1 ± 1.0	---
Radium 228	pCi/l	< 1.0 ± 0.6	< 1.0 ± 0.7	< 1.0 ± 0.7	< 1.0 ± 0.6	< 1.0 ± 0.6	< 1.0 ± 0.7	< 1.0 ± 0.7	< 1.0 ± 0.9	1.1 ± 0.9	---
Silver	ug/l	0.15	BDL	0.063	BDL	0.064	BDL	0.063	BDL	BDL	100
Sodium	mg/l	2.7	38	24	8.9	3.1	5.1	21	8.1	8.0	160
TDS	mg/l	250	500	340	120	120	360	490	590	310	500
Thallium	ug/l	BDL	BDL	BDL	2						

Notes: 1). BDL means below laboratory method detection limit 2). **Bold lettering** indicates result exceeds MCL/Guidance concentration





**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: A1206835 Sumter Co Landfill

Lab ID:	A1206835001	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-2	Date Collected:	08/14/12 14:32		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance								
Conductance	282	umhos/cm		1			8/14/2012 14:16	A^
Dissolved Oxygen	5.61	mg/L		1			8/14/2012 14:16	A^
Groundwater Elevation	46.47	feet		1			8/14/2012 14:16	A^
Temperature	26.93	°C		1			8/14/2012 14:16	A^
Turbidity	1.2	NTU		1			8/14/2012 14:16	A^
pH	6.75	pH unit		1			8/14/2012 14:16	A^
METALS								
Analysis Desc: Tot Dissolved Solids,SM2540C								
Total Dissolved Solids	250	mg/L		1		10	10	8/19/2012 13:30
Analysis Desc: SW846 6010B								
Analysis,Water								
Aluminum	61	ug/L	U	1	200	61	8/22/2012 15:24	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 15:24	J
Chromium	0.67	ug/L	I	1	4.0	0.50	8/22/2012 15:24	J
Iron	38	ug/L	U	1	200	38	8/22/2012 15:24	J
Manganese	1.4	ug/L		1	1.0	0.24	8/22/2012 15:24	J
Sodium	2.7	mg/L		1	0.20	0.026	8/22/2012 15:24	J
Analysis Desc: SW846 6020B								
Analysis,Total								
Antimony	1.1	ug/L		1	0.60	0.073	8/21/2012 17:35	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/21/2012 17:35	J
Silver	0.15	ug/L	I	1	0.30	0.059	8/21/2012 17:35	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 17:35	J
Analysis Desc: SW846 7470A								
Analysis,Water								
Mercury	0.014	ug/L	U	1	0.10	0.014	8/22/2012 14:09	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water								
Chloride	5.9	mg/L		1	5.0	0.50	8/16/2012 11:36	A
Fluoride	0.12	mg/L	U	1	0.50	0.12	8/16/2012 11:36	A

Report ID: 225605 - 785407

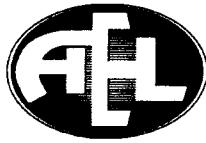
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CERTIFICATE OF ANALYSIS

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Altamonte Springs, FL 32701
Phone: (407)937-1594
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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID:	A1206835001	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-2	Date Collected:	08/14/12 14:32		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Nitrate	2.1	mg/L		1	0.50	0.053	8/16/2012 11:36	A
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.32	mg/L		1	0.10	0.02	8/24/2012 09:43	T

Lab ID:	A1206835002	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-4	Date Collected:	08/14/12 12:00		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	542	umhos/cm		1			8/14/2012 11:41	A^
Dissolved Oxygen	0.42	mg/L		1			8/14/2012 11:41	A^
Groundwater Elevation	46.13	feet		1			8/14/2012 11:41	A^
Temperature	27.25	°C		1			8/14/2012 11:41	A^
Turbidity	3.13	NTU		1			8/14/2012 11:41	A^
pH	7.28	pH unit		1			8/14/2012 11:41	A^

METALS

Analysis Desc: SW846 6010B	Preparation Method: SW-846 3010A
Analysis,Water	Analytical Method: SW-846 6010

Aluminum	68	ug/L	I	1	200	61	8/22/2012 15:48	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 15:48	J
Chromium	1.4	ug/L	I	1	4.0	0.50	8/22/2012 15:48	J
Iron	38	ug/L	U	1	200	38	8/22/2012 15:48	J
Manganese	5.9	ug/L	I	1	1.0	0.24	8/22/2012 15:48	J
Sodium	38	mg/L		1	0.20	0.026	8/22/2012 15:48	J

Analysis Desc: SW846 6020B	Preparation Method: SW-846 3010A
Analysis,Total	Analytical Method: SW-846 6020

Antimony	0.23	ug/L	I	1	0.60	0.073	8/21/2012 19:36	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/21/2012 19:36	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/21/2012 19:36	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 19:36	J

Report ID: 225605 - 785407

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID:	A1206835002	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-4	Date Collected:	08/14/12 12:00		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 7470A								
Analysis, Water								
Mercury	0.014	ug/L	U	1	0.10	0.014	8/22/2012 13:56	J

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water	Analytical Method: EPA 300.0
Chloride	16 mg/L
Fluoride	0.14 mg/L
Nitrate	5.6 mg/L
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1
Ammonia (N)	0.64 mg/L
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540C
Total Dissolved Solids	500 mg/L

Lab ID:	A1206835003	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-4A	Date Collected:	08/15/12 12:43		

Sample Description:	Location:
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Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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FIELD PARAMETERS

Analysis Desc: FIELD - Conductance	Analytical Method: DISRES
Conductance	620 umhos/cm
Dissolved Oxygen	0.65 mg/L
Groundwater Elevation	46.28 feet
Temperature	26.35 °C
Turbidity	2.63 NTU
pH	7.19 pH unit

METALS

Analysis Desc: SW846 6010B	Preparation Method: SW-846 3010A
Analysis, Water	Analytical Method: SW-846 6010
Aluminum	61 ug/L

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Phone: (407)937-1594
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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID: **A1206835003**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-4A**

Date Collected: 08/15/12 12:43

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 15:53	J
Chromium	1.6	ug/L	I	1	4.0	0.50	8/22/2012 15:53	J
Iron	38	ug/L	U	1	200	38	8/22/2012 15:53	J
Manganese	1.7	ug/L		1	1.0	0.24	8/22/2012 15:53	J
Sodium	24	mg/L		1	0.20	0.026	8/22/2012 15:53	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony

0.41 ug/L

I

1

0.60

0.073

8/21/2012 20:04

J

Lead

0.076 ug/L

U

1

0.70

0.076

8/21/2012 20:04

J

Silver

0.063 ug/L

I

1

0.30

0.059

8/21/2012 20:04

J

Thallium

0.067 ug/L

U

1

0.20

0.067

8/21/2012 20:04

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

8/22/2012 14:12

J

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride

25 mg/L

2

10

1.0

8/16/2012 16:38

A

Fluoride

0.24 mg/L

U

2

1.0

0.24

8/16/2012 16:38

A

Nitrate

12 mg/L

2

1.0

0.11

8/16/2012 16:38

A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)

1.0 mg/L

1

0.10

0.02

8/24/2012 09:43

T

Analysis Desc: Tot Dissolved Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids

340 mg/L

1

10

10

8/21/2012 17:30

A

Lab ID: **A1206835004**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-4B**

Date Collected: 08/15/12 11:52

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		
FIELD PARAMETERS								

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID: **A1206835004**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-4B**

Date Collected: 08/15/12 11:52

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: FIELD - Conductance Analytical Method: DISRES								
Conductance	115	umhos/cm		1			8/15/2012 11:40	A^
Dissolved Oxygen	6.08	mg/L		1			8/15/2012 11:40	A^
Groundwater Elevation	46.3	feet		1			8/15/2012 11:40	A^
Temperature	25.99	°C		1			8/15/2012 11:40	A^
Turbidity	11.7	NTU		1			8/15/2012 11:40	A^
pH	9.05	pH unit		1			8/15/2012 11:40	A^

METALS

Analysis Desc: SW846 6010B
Analysis,Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Aluminum	810	ug/L		1	200	61	8/22/2012 15:57	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 15:57	J
Chromium	3.3	ug/L	I	1	4.0	0.50	8/22/2012 15:57	J
Iron	41	ug/L	I	1	200	38	8/22/2012 15:57	J
Manganese	0.24	ug/L	U	1	1.0	0.24	8/22/2012 15:57	J
Sodium	8.9	mg/L		1	0.20	0.026	8/22/2012 15:57	J

Analysis Desc: SW846 6020B
Analysis,Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.29	ug/L	I	1	0.60	0.073	8/21/2012 20:13	J
Lead	0.34	ug/L	I	1	0.70	0.076	8/21/2012 20:13	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/21/2012 20:13	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 20:13	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	8/22/2012 14:19	J
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WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	5.5	mg/L		1	5.0	0.50	8/16/2012 13:54	A
Fluoride	0.12	mg/L	U	1	0.50	0.12	8/16/2012 13:54	A
Nitrate	2.5	mg/L		1	0.50	0.053	8/16/2012 13:54	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	1.1	mg/L		1	0.10	0.02	8/24/2012 09:43	T
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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID:	A1206835004	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-4B	Date Collected:	08/15/12 11:52		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540C							
Total Dissolved Solids	120	mg/L	Q	1	10	10	8/23/2012 15:00	A

Lab ID:	A1206835005	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-6A	Date Collected:	08/15/12 14:25		

Sample Description:	Location:
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Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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FIELD PARAMETERS

Analysis Desc: FIELD - Conductance	Analytical Method: DISRES
------------------------------------	---------------------------

Conductance	271	umhos/cm	1		8/15/2012 14:12	A^
Dissolved Oxygen	6.68	mg/L	1		8/15/2012 14:12	A^
Groundwater Elevation	46.54	feet	1		8/15/2012 14:12	A^
Temperature	24.97	°C	1		8/15/2012 14:12	A^
Turbidity	16.5	NTU	1		8/15/2012 14:12	A^
pH	7.78	pH unit	1		8/15/2012 14:12	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	8/22/2012 16:02	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 16:02	J
Chromium	5.7	ug/L		1	4.0	0.50	8/22/2012 16:02	J
Iron	38	ug/L	U	1	200	38	8/22/2012 16:02	J
Manganese	0.76	ug/L	I	1	1.0	0.24	8/22/2012 16:02	J
Sodium	3.1	mg/L		1	0.20	0.026	8/22/2012 16:02	J

Analysis Desc: SW846 6020B	Preparation Method: SW-846 3010A
----------------------------	----------------------------------

Analysis, Total

Analytical Method: SW-846 6020

Antimony	0.17	ug/L	I	1	0.60	0.073	8/21/2012 20:22	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/21/2012 20:22	J
Silver	0.064	ug/L	I	1	0.30	0.059	8/21/2012 20:22	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 20:22	J

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID: A1206835005 Date Received: 08/15/12 15:58 Matrix: Water
Sample ID: MW-6A Date Collected: 08/15/12 14:25

Sample Description: Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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	8/22/2012 14:22	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water	Analytical Method: EPA 300.0							
Chloride	9.4	mg/L		1	5.0	0.50	8/16/2012 14:21	A
Fluoride	0.12	mg/L	U	1	0.50	0.12	8/16/2012 14:21	A
Nitrate	5.9	mg/L		1	0.50	0.053	8/16/2012 14:21	A
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	0.75	mg/L		1	0.10	0.02	8/24/2012 09:43	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540C							
Total Dissolved Solids	120	mg/L		1	10	10	8/21/2012 17:30	A

Lab ID: A1206835006 **Date Received:** 08/15/12 15:58 **Matrix:** Water
Sample ID: MW-8 **Date Collected:** 08/14/12 13:30

Sample Description: Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	338	umhos/cm		1			8/14/2012 13:13	A^
Dissolved Oxygen	3.98	mg/L		1			8/14/2012 13:13	A^
Groundwater Elevation	47.54	feet		1			8/14/2012 13:13	A^
Temperature	24.43	°C		1			8/14/2012 13:13	A^
Turbidity	0.53	NTU		1			8/14/2012 13:13	A^
pH	7.41	pH unit		1			8/14/2012 13:13	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 8/22/2012 16:07 J

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID: **A1206835006**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-8**

Date Collected: 08/14/12 13:30

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 16:07	J
Chromium	3.4	ug/L	I	1	4.0	0.50	8/22/2012 16:07	J
Iron	38	ug/L	U	1	200	38	8/22/2012 16:07	J
Manganese	0.24	ug/L	U	1	1.0	0.24	8/22/2012 16:07	J
Sodium	5.1	mg/L		1	0.20	0.026	8/22/2012 16:07	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony

0.14 ug/L

I

1

0.60

0.073

8/21/2012 20:32

J

Lead

0.076 ug/L

U

1

0.70

0.076

8/21/2012 20:32

J

Silver

0.059 ug/L

U

1

0.30

0.059

8/21/2012 20:32

J

Thallium

0.067 ug/L

U

1

0.20

0.067

8/21/2012 20:32

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

8/22/2012 14:24

J

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride

9.1 mg/L

1

5.0

0.50

8/16/2012 11:09

A

Fluoride

0.12 mg/L

U

1

0.50

0.12

8/16/2012 11:09

A

Nitrate

2.1 mg/L

1

0.50

0.053

8/16/2012 11:09

A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)

0.73 mg/L

1

0.10

0.02

8/24/2012 09:43

T

Analysis Desc: Tot Dissolved Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids

360 mg/L

1

10

10

8/19/2012 13:30

A

Lab ID: **A1206835007**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-9A**

Date Collected: 08/15/12 10:46

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		

FIELD PARAMETERS

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID: **A1206835007**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-9A**

Date Collected: 08/15/12 10:46

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: FIELD - Conductance Analytical Method: DISRES								
Conductance	904	umhos/cm		1			8/15/2012 10:35	A^
Dissolved Oxygen	0.23	mg/L		1			8/15/2012 10:35	A^
Groundwater Elevation	45.36	feet		1			8/15/2012 10:35	A^
Temperature	25.18	°C		1			8/15/2012 10:35	A^
Turbidity	6.39	NTU		1			8/15/2012 10:35	A^
pH	6.46	pH unit		1			8/15/2012 10:35	A^
METALS								
Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A								
Analysis,Water Analytical Method: SW-846 6010								
Aluminum	420	ug/L		1	200	61	8/22/2012 16:31	J
Cadmium	0.92	ug/L		1	0.60	0.32	8/22/2012 16:31	J
Chromium	4.4	ug/L		1	4.0	0.50	8/22/2012 16:31	J
Iron	1200	ug/L		1	200	38	8/22/2012 16:31	J
Manganese	97	ug/L		1	1.0	0.24	8/22/2012 16:31	J
Sodium	21	mg/L		1	0.20	0.026	8/22/2012 16:31	J
Analysis Desc: SW846 6020B Preparation Method: SW-846 3010A								
Analysis,Total Analytical Method: SW-846 6020								
Antimony	0.16	ug/L	I	1	0.60	0.073	8/21/2012 20:41	J
Lead	0.29	ug/L	I	1	0.70	0.076	8/21/2012 20:41	J
Silver	0.063	ug/L	I	1	0.30	0.059	8/21/2012 20:41	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 20:41	J
Analysis Desc: SW846 7470A Preparation Method: SW-846 7470A								
Analysis,Water Analytical Method: SW-846 7470A								
Mercury	0.059	ug/L	I	1	0.10	0.014	8/22/2012 14:26	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	22	mg/L		1	5.0	0.50	8/16/2012 14:48	A
Fluoride	0.12	mg/L	U	1	0.50	0.12	8/16/2012 14:48	A
Nitrate	0.38	mg/L	I	1	0.50	0.053	8/16/2012 14:48	A
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	1.3	mg/L		1	0.10	0.02	8/24/2012 09:43	T

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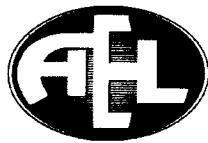
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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID:	A1206835007	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-9A	Date Collected:	08/15/12 10:46		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540C							
Total Dissolved Solids	490	mg/L		1	10	10	8/21/2012 17:30	A

Lab ID:	A1206835008	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-10	Date Collected:	08/14/12 12:45		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
------------	---------	-------	------	----	--------------	--------------	----------	-----

FIELD PARAMETERS

Analysis Desc: FIELD - Conductance	Analytical Method: DISRES
------------------------------------	---------------------------

Conductance	629	umhos/cm	1				8/14/2012 12:36	A^
Dissolved Oxygen	0.29	mg/L	1				8/14/2012 12:36	A^
Groundwater Elevation	46.44	feet	1				8/14/2012 12:36	A^
Temperature	25.9	°C	1				8/14/2012 12:36	A^
Turbidity	8.04	NTU	1				8/14/2012 12:36	A^
pH	6.9	pH unit	1				8/14/2012 12:36	A^

METALS

Analysis Desc: SW846 6010B	Preparation Method: SW-846 3010A
----------------------------	----------------------------------

Analysis,Water

Analytical Method: SW-846 6010

Aluminum	360	ug/L	1	200	61	8/22/2012 16:36	J
Cadmium	0.50	ug/L	1	0.60	0.32	8/22/2012 16:36	J
Chromium	1.1	ug/L	1	4.0	0.50	8/22/2012 16:36	J
Iron	430	ug/L	1	200	38	8/22/2012 16:36	J
Manganese	21	ug/L	1	1.0	0.24	8/22/2012 16:36	J
Sodium	8.1	mg/L	1	0.20	0.026	8/22/2012 16:36	J

Analysis Desc: SW846 6020B	Preparation Method: SW-846 3010A
----------------------------	----------------------------------

Analysis,Total

Analytical Method: SW-846 6020

Antimony	0.29	ug/L	I	1	0.60	0.073	8/21/2012 20:50	J
Lead	0.15	ug/L	I	1	0.70	0.076	8/21/2012 20:50	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/21/2012 20:50	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 20:50	J

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ANALYTICAL RESULTS

Workorder: A1206835 Sumter Co Landfill

Lab ID:	A1206835008	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-10	Date Collected:	08/14/12 12:45		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 7470A								
Analysis, Water								
Mercury	0.014	ug/L	U	1	0.10	0.014	8/22/2012 14:29	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water								
Chloride	8.8	mg/L		1	5.0	0.50	8/16/2012 10:41	A
Fluoride	0.14	mg/L	I	1	0.50	0.12	8/16/2012 10:41	A
Nitrate	1.7	mg/L		1	0.50	0.053	8/16/2012 10:41	A
Analysis Desc: Ammonia,E350.1,Water								
Ammonia (N)	0.67	mg/L		1	0.10	0.02	8/24/2012 09:43	T
Analysis Desc: Tot Dissolved Solids,SM2540C								
Total Dissolved Solids	590	mg/L		1	10	10	8/19/2012 13:30	A

Lab ID:	A1206835009	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	MW-11	Date Collected:	08/14/12 11:07		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance								
Conductance	327	umhos/cm		1			8/14/2012 10:46	A^
Dissolved Oxygen	1.55	mg/L		1			8/14/2012 10:46	A^
Groundwater Elevation	46.24	feet		1			8/14/2012 10:46	A^
Temperature	26.26	°C		1			8/14/2012 10:46	A^
Turbidity	3.64	NTU		1			8/14/2012 10:46	A^
pH	6.2	pH unit		1			8/14/2012 10:46	A^
METALS								
Analysis Desc: SW846 6010B								
Analysis, Water								
Aluminum	210	ug/L		1	200	61	8/22/2012 16:40	J

Report ID: 225605 - 785407

AMENDED

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CERTIFICATE OF ANALYSIS

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**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: A1206835 Sumter Co Landfill

Lab ID: **A1206835009**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **MW-11**

Date Collected: 08/14/12 11:07

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		
Cadmium	1.9	ug/L		1	0.60	0.32	8/22/2012 16:40	J
Chromium	2.4	ug/L	I	1	4.0	0.50	8/22/2012 16:40	J
Iron	38	ug/L	U	1	200	38	8/22/2012 16:40	J
Manganese	2.5	ug/L		1	1.0	0.24	8/22/2012 16:40	J
Sodium	8.0	mg/L		1	0.20	0.026	8/22/2012 16:40	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis,Total

Analytical Method: SW-846 6020

Antimony

0.10 ug/L I 1 0.60 0.073 8/21/2012 21:00 J

Lead

0.11 ug/L I 1 0.70 0.076 8/21/2012 21:00 J

Silver

0.059 ug/L U 1 0.30 0.059 8/21/2012 21:00 J

Thallium

0.067 ug/L U 1 0.20 0.067 8/21/2012 21:00 J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis,Water

Analytical Method: SW-846 7470A

Mercury

0.041 ug/L I 1 0.10 0.014 8/22/2012 14:31 J

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride

5.2 mg/L 1 5.0 0.50 8/16/2012 09:47 A

Fluoride

0.16 mg/L I 1 0.50 0.12 8/16/2012 09:47 A

Nitrate

5.2 mg/L 1 0.50 0.053 8/16/2012 09:47 A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)

0.61 mg/L 1 0.10 0.02 8/24/2012 09:43 T

Analysis Desc: Tot Dissolved Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids

310 mg/L 1 10 10 8/19/2012 13:30 A

Lab ID: **A1206835010**

Date Received: 08/15/12 15:58 Matrix: Water

Sample ID: **EQ BLANK**

Date Collected: 08/15/12 09:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted	Adjusted	Analyzed	Lab
					PQL	MDL		
METALS								

Report ID: 225605 - 785407

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Report Date: August 27, 2012

2742 N. Florida Ave.

P.O. Box 1833

Tampa, Florida 33601

(813) 229-2879

Fax (813) 229-0002

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

Attn: Myrna Santiago

Field Custody:

Client/Field ID:

Client

A1206835001

MW-2

Sample Collection:

08-14-12/1432

Lab ID No:

12.6923

Lab Custody Date:

08-17-12/1325

Sample description:

WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	2.2 ± 0.8	08-22-12/0800	EPA 900.0	0.9
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.8 U ± 0.6	Calc	Calc	1.0
Radium-226	pCi/l	0.8 U ± 0.5	08-24-12/1145	EPA 903.0	0.8
Radium-228	pCi/l	1.0 U ± 0.6	08-24-12/0955	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.

A handwritten signature in black ink that reads "James W. Hayes".

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.



Report Date: August 24, 2012

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835002
MW-4
Sample Collection: 08-14-12/1200
Lab ID No: 12.6924
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	7.0 ± 1.7	08-22-12/0800	EPA 900.0	1.5
Combined Radium (Radium-226 + Radium 228)	pCi/l	3.3 ± 0.8	Calc	Calc	1.0
Radium-226	pCi/l	2.3 ± 0.8	08-24-12/1145	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U ± 0.7	08-24-12/0955	EPA Ra-05	1.0
Alpha Standard: Th-230					

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Laboratory Manager

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835003
MW-4A
Sample Collection: 08-15-12/1243
Lab ID No: 12.6925
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	5.3 ± 1.7	08-22-12/0800	EPA 900.0	1.8
Combined Radium (Radium-226 + Radium 228)	pCi/l	2.7 ± 0.7	Calc	Calc	1.0
Radium-226	pCi/l	1.7 ± 0.7	08-24-12/1145	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.7	08-24-12/0955	EPA Ra-05	1.0
Alpha Standard: Th-230					

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Report Date: August 27, 2012

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835004
MW-4B
Sample Collection: 08-15-12/1152
Lab ID No: 12.6926
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	1.6 ± 0.7	08-22-12/0800	EPA 900.0	0.9
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.7 U ± 0.7	Calc	Calc	1.0
Radium-226	pCi/l	0.7 U ± 0.3	08-24-12/1145	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.7	08-24-12/0955	EPA Ra-05	1.0
Alpha Standard:	Th-230				

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James W. Hayes
Laboratory Manager

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835005
MW-6A
Sample Collection: 08-15-12/1425
Lab ID No: 12.6927
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	1.3 ± 0.7	08-22-12/0800	EPA 900.0	1.0
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.6 U ± 0.6	Calc	Calc	1.0
Radium-226	pCi/l	0.6 U ± 0.5	08-24-12/1145	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U ± 0.6	08-24-12/0955	EPA Ra-05	1.0

Alpha Standard: Th-230

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James W. Hayes
Laboratory Manager

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Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835006
MW-8
Sample Collection: 08-14-12/1330
Lab ID No: 12.6928
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	1.2 ± 0.8	08-22-12/0800	EPA 900.0	1.2
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.6 U ± 0.7	Calc	Calc	1.0
Radium-226	pCi/l	0.6 U ± 0.5	08-24-12/1145	EPA 903.0	0.6
Radium-228	pCi/l	1.0 U ± 0.7	08-24-12/0955	EPA Ra-05	1.0

Alpha Standard: Th-230

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James W. Hayes
Laboratory Manager

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Report Date: August 24, 2012

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835007
MW-9A
Sample Collection: 08-15-12/1046
Lab ID No: 12.6929
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	12.2 ± 2.5	08-22-12/0800	EPA 900.0	2.0
Combined Radium (Radium-226 + Radium 228)	pCi/l	5.7 ± 1.2	Calc	Calc	1.0
Radium-226	pCi/l	4.7 ± 1.2	08-24-12/1145	EPA 903.0	0.7
Radium-228	pCi/l	1.0 U ± 0.7	08-24-12/0955	EPA Ra-05	1.0

Alpha Standard: Th-230

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

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James W. Hayes
Laboratory Manager

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Report Date: August 24, 2012

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835008
MW-10
Sample Collection: 08-14-12/1245
Lab ID No: 12.6930
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	17.8 ± 2.5	08-22-12/0800	EPA 900.0	1.4
Combined Radium (Radium-226 + Radium 228)	pCi/l	3.7 ± 0.9	Calc	Calc	1.0
Radium-226	pCi/l	2.7 ± 0.9	08-24-12/1145	EPA 903.0	0.7
Radium-228 Alpha Standard: Th-230	pCi/l	1.0 U ± 0.9	08-24-12/0955	EPA Ra-05	1.0

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

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James W. Hayes
Laboratory Manager

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Altamonte Springs, FL 32701

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835009
MW-11
Sample Collection: 08-14-12/1107
Lab ID No: 12.6931
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	10.6 ± 1.7	08-22-12/0800	EPA 900.0	1.1
Combined Radium (Radium-226 + Radium 228)	pCi/l	5.2 ± 1.0	Calc	Calc	1.0
Radium-226	pCi/l	4.1 ± 1.0	08-24-12/1145	EPA 903.0	0.6
Radium-228	pCi/l	1.1 I ± 0.9	08-24-12/1140	EPA Ra-05	1.0
Alpha Standard: Th-230					

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

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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.

FIELD LOG

FIELD LOG
Well Water Levels

PROJ # P-468

NAME: Dale Clayton

PROJECT

NAME: Sunter Co. Landfill

PROJECT

LOCATION: Sainterville, FL

DATE:

8/15/12

TIME	COMMENTS
Well #	(JK FF, Gloc)
MW-1	24.11'
MW-2	22.70'
MW-3A	25.80'
MW-4	24.24'
MW-4A	29.45'
MW-4B	27.53'
MW-4C	24.92'
MW-4D	22.32'
MW-6A	31.00'
MW-7	26.84'
MW-8	21.75'
MW-9	26.44'
MW-9A	28.90'
MW-10	21.82'
MW-11	24.00'

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill			SITE LOCATION: Sumterville, FL								
WELL NO: MW-2		SAMPLE ID: MW-2		DATE: 8/14/12							
PURGING DATA											
WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
1 Well Vol = (31.92' feet - 22.66' feet) x .16 gallons/foot = 1,481.6 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 feet) + .125 gallons = gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):		FINAL PUMP OR TUBING DEPTH IN WELL (feet):		PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (μS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14/12	1.50	1.50	.1	22.86'	6.86	22.04	303	5.69	1.19	Clear	None
14/14	1.70	1.70	.1	22.76	6.90	26.92	294	5.75	1.17	Clear	None
14/16	1.90	1.90	.1	22.86	6.75	26.93	282	5.61	1.20	Clear	None
No shear											
WELL CAPACITY (Gallons Per Foot): 0.76" = 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: Dale Claytor, Colinas Group, Inc.		SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1417	SAMPLING ENDED AT: 1432				
PUMP OR TUBING DEPTH IN WELL (feet):		SAMPLE PUMP FLOW RATE (ml per minute): < 250 mL	TUBING MATERIAL CODE: PE					
FIELD DECONTAMINATION: (Y) <i>Wl prose</i> N <i>Only</i>		FIELD-FILTERED: Y <i>N</i> FILTER SIZE: _____ μm Filtration Equipment Type: _____	DUPLICATE: Y <i>N</i>					
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE		
SAMPLE ID CODE	CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED			TOTAL VOL ADDED IN FIELD (mL)	FINAL pH
MW-2	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	APP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	APP
"	1	PE	250 mL	HN03	None	—	Metals	APP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	APP
REMARKS:								

REMARKS:

1357: Set dedicated 1/4" PE tubing at n24° 6loc and started pump at .1 gpm.

1404: WL 22-86' at .1 gpm, GW is clear.

1411: WL 22-86' at -1 9pm, drawdown is stable. All parameters are stable or in range except for DO, but is typical for this well. Will use optional stabilization criteria below for DO.

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: $\pm 5\%$; 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 ≤ 20 NTU, optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-4	SAMPLE ID: MW-4

DATE: 8/14/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING .3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH 24.23 TO WATER (feet):	PURGE PUMP TYPE OR BAILER: ESP & PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
= (36.35' feet - 24.23 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)	0.025	0.0026	X 3 = .6558								
1 Equip Vol	= .025 gallons + (.0006 gallons/foot X 36' feet) + .125 gallons = .2186 gallons										
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~31'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~31'	PURGING INITIATED AT: 1123	PURGING ENDED AT: 1141	TOTAL VOLUME PURGED (gallons): 1.08							
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)
1137	.84	.84	.06	24.37	7.30	27.37	54.4	0.43	5.66	Clear	None
1139	.12	.96	.06	24.37	7.29	27.35	54.3	8.42	3.04	Clear	None
1141	.12	1.08	.06	24.37	7.28	27.25	54.2	8.42	3.13	Clear	None
					No shear						

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-4A	SAMPLE ID: MW-4A

DATE: 8/15/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: ESP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
= (45.23' 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 45' feet) + .125 gallons = .415 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~40'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~40'	PURGING INITIATED AT: 1209	PURGING ENDED AT: 1232	TOTAL VOLUME PURGED (gallons): 8.5							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1208	7.5	7.5	.25	29.64	7.25	26.37	622	0.62	4.65	Clear	None
1230	.5	8.0	.25	29.64	7.18	26.37	621	0.62	3.62	Clear	None
1232	.5	8.5	.25	29.64	7.19	26.35	620	0.62	3.63	Clear	None
No Show											

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: Dale Claytor, Colinas Group, Inc.	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1233	SAMPLING ENDED AT: 1243					
PUMP OR TUBING DEPTH IN WELL (feet): ~40'	SAMPLE PUMP FLOW RATE (mL per minute): < 250 mL	TUBING MATERIAL CODE: PE						
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N Filtration Equipment Type: <i>O</i>	FILTER SIZE: <i>0</i> µm	DUPLICATE: Y <i>N</i>					
SAMPLE CONTAINER SPECIFICATION								
SAMPLE ID CODE	# CONTAINERS	MATERI AL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-4A	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	ESP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	ESP

REMARKS:

1209: Set dedicated 3/8" PE tubing and 55 ESP at ~40' stat and started pump at .5 gpm. GW is extremely turbid in this well at beginning of purge requiring a high rate of flow to clean it up.

1230: Reduced flow to .25 gpm, turbidity is at 19 NTUs.

1235: WL 29.64' at .25 gpm, turbidity is at 13 NTUs. All other parameters are stable or in range.

1237: WL 29.64' at .25 gpm, 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: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-4B	SAMPLE ID: MW-4B

DATE: 8/15/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 27.53	PURGE PUMP TYPE OR BAILER: ESP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$16 \text{ gal/ft} / 0.75 \text{ ft} = (38.49' \text{ feet} - 27.53' \text{ feet}) \times 1.6 \text{ gallons/foot} = 1.7536 \text{ gallons}$$

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

$$1 \text{ Equip Vol} = .02 \text{ gallons} + (.006 \text{ gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
29.5	29.5	1116	1150	6.0
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)
1136	5.0	5.0	.25	27.68
1138	.5	5.5	.25	27.68
1140	.5	6.0	.25	27.68
				NO shear

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: Dale Claytor, Colinas Group, Inc.	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1141	SAMPLING ENDED AT: 1152					
PUMP OR TUBING DEPTH IN WELL (feet):	WIRE BUMP	TUBING						
	FLOW RATE (mL per minute): < 250 mL	MATERIAL CODE: PE						
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	FILTER SIZE: μm	DUPPLICATE: Y N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION						
SAMPLE ID CODE	# CONTAINERS	MATERI AL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-4B	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	ESP
"	1	PE	250 mL	H2SO4	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	ESP

REMARKS:

1116: Set dedicated 3/8" PE tubing and 55 ESP at ~29.5' bdc and started pump at .25 gpm.

1130: WL 27.71' at .25 gpm. GW is clear. DO is high, but is typical for this well, will purge until stable and use optional stabilization criteria below for DO.

1132: Turbidity is at 24 NTU, continuing purge until it drops. WL 27.68' at .25 gpm.

1134: Turbidity is at 18 NTU, DO is high at 6.63. All other parameters are stable or in range. WL 27.68' (over)

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: $\pm 5\%$; Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2), optionally, $\pm .02 \text{ mg/L}$ or $\pm 10\%$ (whichever is greater); Turbidity: all readings $\leq 20 \text{ NTU}$, optionally $\pm 5 \text{ NTU}$ or $\pm 10\%$ (whichever is greater)

MW-4B (cont.)

at .25 ppm. pH is high at 9.00 s/u, but stable and is typical for this well.

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill	SITE LOCATION: Sumterville, FL	
WELL NO: MW-6A	SAMPLE ID: MW-6A	DATE: 8/05/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 31.00	PURGE PUMP TYPE OR BAILER: ESP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= (50.84' 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 50' feet) + .125 gallons = .445 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~45'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~45'	PURGING INITIATED AT: 1345	PURGING ENDED AT: 1412	TOTAL VOLUME PURGED (gallons): 16.8							
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)
1408	15.2	15.2	.4	31.04	7.79	24.91	621	6.21	19.6	Clear	None
1410	16.0	16.0	.4	31.04	7.78	24.93	621	6.25	12.4	Clear	None
1412	16.8	16.8	.4	31.04	7.78	24.93	621	6.68	16.5	Clear	None
No change											

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: Dale Claytor, Colinas Group, Inc.	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1413	SAMPLING ENDED AT: 1425					
PUMP OR TUBING DEPTH IN WELL (feet): ~45	SAMPLE PUMP FLOW RATE (mL per minute): < 250 mL	TUBING MATERIAL CODE: PE						
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPPLICATE: Y N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION						
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-6A	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	ESP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	ESP

REMARKS:

1345: Set dedicated 3/8" PE tubing and 35 ESP at ~45' seconds. Started pump at 130pm. This well is extremely turbid at beginning of purge requiring a high flow rate to clean it up.
 1355: Turbidity is at 29 NTUs, reduced flow to 4 gpm.
 1405: Turbidity is at 18 NTUs. WL 31.04' at 4 gpm. DO is high at 6.86 mg/L, but is typical for this well. Will use optional stabilization criteria below for DO. All other parameters are stable or in range.
 1407: WL 31.04' at 4 gpm, 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: RFFF = 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: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-8	SAMPLE ID: MW-8

DATE: 8/14/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: ESP-OC PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= (43.24' feet - static depth to water) 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	= .026 gallons + (.0026 gallons/foot X 43' feet) + .125 gallons										
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~38'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~38'	PURGING INITIATED AT: 1301	PURGING ENDED AT: 1313	TOTAL VOLUME PURGED (gallons): 1.20							
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)
1307	.80	.80	.1	21.76	7.40	24.73	338	3.99	0.51	Clear	Air
1308	1.00	1.00	.1	21.76	7.39	24.52	339	4.04	0.44	Clear	Air
1313	1.20	1.20	.1	21.76	7.41	24.43	338	3.98	0.53	Clear	Air
<i>No change</i>											
WELL CAPACITY (Gallons Per Foot): 0.76" = 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: Dale Claytor, Colinas Group, Inc.	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1314	SAMPLING ENDED AT: 1330					
PUMP OR TUBING DEPTH IN WELL (feet): ~38'	SAMPLE PUMP FLOW RATE (mL per minute): < 250 mL	TUBING MATERIAL CODE: PE						
FIELD DECONTAMINATION: Y N <i>Only</i>	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: _____ µm	DUPLICATE: Y N					
SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-8	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	OC-ESP APP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	OC-ESP APP
"	1	PE	250 mL	HN03	None	—	Metals	OC-ESP APP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	OC-ESP APP

REMARKS:

1301: Set dedicated 1/4" PE tubing at ~38' static and started pump at .1 gpm.

1306: WL 21.76' at .1 gpm, GW is clear.

1308: WL 21.76' at .1 gpm, drawdown is stable. DO is high at 3.98 mg/L, but is typical for this well. Will use optional stabilization criteria below for DO. 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 = 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: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-9A	SAMPLE ID: MW-9A

DATE: 8/15/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAIRER: ESP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
= (50.17' 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 50' feet) + .125 gallons = .14615 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):							
~45	~45	0953	1035	.210							
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)
1031	19.0	19.0	.5	32.86	6.45	25.19	907	0.30	10.7	Clear	None
1033	1	20.0	.5	32.86	6.44	25.17	905	0.26	7.20	Clear	None
1035	1	21.0	.5	32.86	6.44	25.18	904	0.23	6.39	Clear	None
<i>No change</i>											

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: Dale Claytor, Colinas Group, Inc.	SAMPLER/POSITION/SIGNATURES: 	SAMPLING INITIATED AT: 1036	SAMPLING ENDED AT: 1046					
PUMP OR TUBING DEPTH IN WELL (feet):	~45	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE: PE					
FIELD DECONTAMINATION: <input checked="" type="radio"/> N	FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N	FILTER SIZE: _____ µm Filtration Equipment Type:	DUPLICATE: <input checked="" type="radio"/> Y <input type="radio"/> N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE		
SAMPLE ID CODE	# CONTAINERS	MATERI AL CODE	VOLUME	PRESERVATIVE USED			TOTAL VOL ADDED IN FIELD (mL)	FINAL pH
MW-9A	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	ESP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	600 mL	None	None	—	Chloride,Fluoride, Nitrate, TDS	ESP

REMARKS:

9953: set dedicated 3/8" PE tubing at ~45' 6ftoc and started pump at .5 3pm.

1003: GW is turbid at 81 NTUs, but is typical for this well. Will over purge to clean it up.

1013: Turbidity is at 54 NTUs, continuing purge at .5 gpm.

1023: Turbidity is at 23 NTUs, continuing purge @ 32.86 ft .5 gpm.

1029: Turbidity is at 18 NTUs, all other parameters are stable.

Notes: 1) Used a graduated 5 gallon bucket and timed to measure purge volumes or in range. WL 32.86' and 57.66'.

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: RFP = 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: Sumter County Landfill			SITE LOCATION: Sumterville, FL								
WELL NO: MW-10	SAMPLE ID: MW-10	DATE: 8/14/12									
PURGING DATA											
WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: ESP APP PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= (45.35' feet - .00066 feet) X .125 gallons/foot = .242 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 = .020 gallons + (.00066 gallons/foot X 45' feet) + .125 gallons = .242 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):							
~40'	~40'	1225	1235	1-10							
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)
1232	.70	.70	.1	22.31'	6.86	25.89	644	0.40	6.63	Clear	None
1233	.98	.98	.1	22.31'	6.82	25.77	636	0.33	8.00	Clear	None
1236	1.10	1.10	.1	22.31'	6.90	25.70	629	0.29	8.04	Clear	None
No sheen											

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: Dale Claytor, Colinas Group, Inc.		SAMPLE(S) SIGNATURES: <i>Dale Claytor</i>		SAMPLING INITIATED AT: 1237	SAMPLING ENDED AT: 1245			
PUMP OR TUBING DEPTH IN WELL (feet): ~40'		SAMPLE PUMP FLOW RATE (ml. per minute): < 250 mL		TUBING MATERIAL CODE: PE				
FIELD DECONTAMINATION: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <i>W.L. Rose</i>		FIELD-FILTERED: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N FILTER SIZE: _____ μm Filtration Equipment Type: _____		DUPLICATE: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N				
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-10	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	DC-ESP APP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	DC-ESP APP
"	1	PE	250 mL	HN03	None	—	Metals	DC-ESP APP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	DC-ESP APP

REMARKS:
 1225: Set dedicated 1/4" PE tubing at ~40' 6ftoc and started pump at .1 gpm.
 1229: WL 22.31' at .1 gpm. GW is clear.
 1231: WL 22.31' at .1 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: RFFF = 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: Sumter County Landfill	SITE LOCATION: Sumterville, FL
WELL NO: MW-11	SAMPLE ID: MW-11

DATE: 8/14/12

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 397	PURGE PUMP TYPE OR BAILER: ESP & PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
= (40.15' 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 = .82 gallons + (.00008 gallons/foot X 40' feet) + .125 gallons = .229 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~35'	PURGING INITIATED AT: 1011	PURGING ENDED AT: 1046	TOTAL VOLUME PURGED (gallons): 3.45							
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)
1042	2.17	2.17	.03	24.03	6.18	20.26	317	1.58	2.9	Clear	None
1044	.14	2.31	.03	24.03	6.19	20.26	321	1.56	3.28	Clear	None
1046	.14	2.45	.07	24.02	6.20	20.26	327	1.55	3.64	Clear	None
<i>No shear</i>											
<i>Note: Checked ppt meter, calibrated to 100% standard 2.00, reading 6.99 sl/t.</i>											

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: Dale Claytor, Colinas Group, Inc.	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 1047	SAMPLING ENDED AT: 1107
PUMP OR TUBING DEPTH IN WELL (feet): ~35'	SAMPLE PUMP FLOW RATE (mL per minute): < 250 mL	TUBING	MATERIAL CODE: PE
FIELD DECONTAMINATION: <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Y <i>probe only</i>	FIELD-FILTERED: <input checked="" type="checkbox"/> N <i>Filtration Equipment Type</i>	FILTER SIZE: _____ µm	DUPLICATE: Y <input checked="" type="checkbox"/> N
SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE

SAMPLE ID CODE	# CONTAINERS	MATERI AL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-11	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226, RA228	<input checked="" type="checkbox"/> ESP <input checked="" type="checkbox"/> APP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	<input checked="" type="checkbox"/> ESP <input checked="" type="checkbox"/> APP
"	1	PE	250 mL	HN03	None	—	Metals	<input checked="" type="checkbox"/> ESP <input checked="" type="checkbox"/> APP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	<input checked="" type="checkbox"/> ESP <input checked="" type="checkbox"/> APP

REMARKS:

1011: Inserted new 1/4" PE tubing to ~35' boc and started pump at .07 gpm.

1017: WL 24.03' at .07 gpm, GW is clear. DO is high at 2.60 mg/L. Will over purge and see if it comes down.

1027: DO is still high at 1.90 mg/L, continuing purge. All other parameters are stable or in range. WL 24.03' at .07 gpm, 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

(over)

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 = Baile; BP = Bladder Pump; E = Electric Submersible Pump; PP = Peristaltic Pump EQUIPMENT CODES: RFP = 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 62-180, 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)

MW-11 (Cont.)

(040): DO has dropped to 160 mg/l, pH is lower than normal at 6.17 s/u. All other parameters are stable or in range. WL 24.03' and is stable.

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL									
WELL NO: NA	SAMPLE ID: EQB	DATE: 8/15/10									
PURGING DATA											
WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)		PURGE PUMP TYPE OR BAILER: ESP									
		= (feet - feet) X gallons/foot = gallons									
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
		= gallons + (gallons/foot X feet) + gallons = gallons									
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): NA	FINAL PUMP OR TUBING DEPTH IN WELL (feet): NA	PURGING INITIATED AT: NA	PURGING ENDED AT: NA								
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)
<i>[Handwritten signature over the table]</i>											
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: Dale Clayton, Colinas Group, Inc.			SAMPLER(S) SIGNATURES: <i>[Signature]</i>			SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0940	
PUMP OR TUBING DEPTH IN WELL (feet): NA			SAMPLE PUMP: <i>[Signature]</i>	FLOW RATE (mL per minute): < 250 mL	TUBING MATERIAL CODE: PE			
FIELD DECONTAMINATION: Y N			FIELD-FILTERED: Y N FILTER SIZE: _____ μm Filtration Equipment Type: _____			DUPLICATE: Y N		
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL PH		
EQB	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228	ESP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	ESP
"	Various	Various	Various	Various	None	—	Appendix I Parameters	ESP

REMARKS:

*Field cleaned a 5 gal PE bucket, SS ESP and w/ probe
 FAW DEP-SOP-001/01, FC 1000. Poured 1 gallon of DI water
 into bucket, started pump and circulated DI water
 inserted
 through pump and over w/ probe for several minutes, then
 collected 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 = Bailer;	BP = Bladder Pump;	ESP = Electric Submersible Pump;	PP = Peristaltic Pump	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): ± 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)

Field Instrument Calibration Records

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

PARAMETERS:

TEMPERATURE CONDUCTIVITY SALINITY pH ORP
 TURBIDITY RESIDUAL CL DO 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: 8/2013

Standard B Oakton pH Standard 7.00 Units Exp: 9/2013

Standard C Oakton Conductivity Standard 1500 uS/cm Exp: 2/2013

Standard D Hanna 0.1 NTU Standard Exp: 4/2013

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
8/14/12	0940	A	4.01	4.01		Yes	IC	JK
		B	7.00	7.00				pH
		C	1500	1500				Cond
		--	--	2.86				DO
		--	--	22.75				Temp
		D	0.1	0.1				Turb
		E	15	15.0				Turb
8/14/12	1000	A	4.01	4.00		Yes	ICV	JK
		B	7.00	7.00				pH
		C	1500	1499				Cond
		--	--	2.82				DO
		--	--	27.71				Temp
		D	0.1	0.05				Turb
		E	15	14.9				Turb
8/14/12	1450	A	4.01	4.05		Yes	CC	JK
		B	7.00	7.00				pH
		C	1500	1493				Cond
		--	--	2.88				DO
		--	--	28.02				Temp
		D	0.1	0.07				Turb
		E	15	15.0				Turb

Field Instrument Calibration Records

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

PARAMETERS:

TEMPERATURE CONDUCTIVITY SALINITY pH ORP
 TURBIDITY RESIDUAL CL DO 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: 8/2013

Standard B Oakton pH Standard 7.00 Units Exp: 19/2013

Standard C Oakton Conductivity Standard 1500 uS/cm Exp: 2/2013

Standard D Hanna 0.1 NTU Standard Exp: 4/2013

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
8/15/12 0850		A	4.01	4.01		Yes	IC	JKO
		B	7.00	7.00				pH
		C	1500	1500				Cond
		--	--	8.11				DO
		--	--	26.04				Temp
		D	0.1	0.1				Turb
		E	15	15.0				Turb
8/15/12 0910		A	4.01	4.00		Yes	ICV	JKO
		B	7.00	6.99				pH
		C	1500	1500				Cond
		--	--	8.06				DO
		--	--	26.39				Temp
		D	0.1	0.06				Turb
		E	15	15.0				Turb
8/15/12 1435		A	4.01	4.00		Yes	CC	JKO
		B	7.00	7.00				pH
		C	1500	1496				Cond
		--	--	7.99				DO
		--	--	27.06				Temp
		D	0.1	0.06				Turb
		E	15	15.0				Turb



**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: A1206835 Sumter Co Landfill

Lab ID:	A1206835010	Date Received:	08/15/12 15:58	Matrix:	Water
Sample ID:	EQ BLANK	Date Collected:	08/15/12 09:40		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B								
Analysis, Water								
Preparation Method: SW-846 3010A								
Aluminum	61	ug/L	U	1	200	61	8/22/2012 16:45	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/22/2012 16:45	J
Chromium	0.50	ug/L	U	1	4.0	0.50	8/22/2012 16:45	J
Iron	38	ug/L	U	1	200	38	8/22/2012 16:45	J
Manganese	0.37	ug/L	I	1	1.0	0.24	8/22/2012 16:45	J
Sodium	0.071	mg/L	I	1	0.20	0.026	8/22/2012 16:45	J
Analysis Desc: SW846 6020B								
Analysis, Total								
Preparation Method: SW-846 3010A								
Analytical Method: SW-846 6020								
Antimony	0.073	ug/L	U	1	0.60	0.073	8/21/2012 21:09	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/21/2012 21:09	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/21/2012 21:09	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/21/2012 21:09	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	8/22/2012 14:33	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water								
Analytical Method: EPA 300.0								
Chloride	0.50	mg/L	U	1	5.0	0.50	8/16/2012 15:16	A
Fluoride	0.12	mg/L	U	1	0.50	0.12	8/16/2012 15:16	A
Nitrate	0.053	mg/L	U	1	0.50	0.053	8/16/2012 15:16	A
Analysis Desc: Ammonia,E350.1,Water								
Analytical Method: EPA 350.1								
Ammonia (N)	0.57	mg/L		1	0.10	0.02	8/24/2012 09:43	T
Analysis Desc: Tot Dissolved Solids,SM2540C								
Analytical Method: SM 2540C								
Total Dissolved Solids	10	mg/L	U	1	10	10	8/21/2012 17:30	A

Report ID: 225605 - 785407

AMENDED

Page 15 of 37

CERTIFICATE OF ANALYSIS

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without the written consent of Advanced Environmental Laboratories, Inc.





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

Report Date: August 27, 2012

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

Attn: Myrna Santiago

Field Custody: Client
Client/Field ID: A1206835010
EQ BLANK
Sample Collection: 08-15-12/0940
Lab ID No: 12.6932
Lab Custody Date: 08-17-12/1325
Sample description: WATER

CERTIFICATE OF ANALYSIS

Parameter	Units	Results	Analysis Date	Method	Detection Limit
Gross Alpha	pCi/l	0.0 ± 0.3	08-22-12/0800	EPA 900.0	0.8
Combined Radium (Radium-226 + Radium 228)	pCi/l	1.5 U ± 0.8	Calc	Calc	1.0
Radium-226	pCi/l	0.5 U ± 0.2	08-24-12/1145	EPA 903.0	0.5
Radium-228	pCi/l	1.0 U ± 0.8	08-24-12/1140	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.

A handwritten signature in black ink that reads "James W. Hayes".

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.



**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

Workorder: A1206835 Sumter Co Landfill

QC Batch:	DGMj/1985	Analysis Method:	SW-846 6020
QC Batch Method:	SW-846 3010A	Prepared:	08/20/2012 09:45
Associated Lab Samples:	A1206835001, A1206835002, A1206835003, A1206835004, A1206835005, A1206835006, A1206835007,		

METHOD BLANK: 1032905

Parameter	Units	Blank Result	Reporting Limit Qualifiers	
			Qualifiers	Comments
METALS				
Copper	ug/L	0.19	0.10 L	
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	0.073	0.073 U	
Thallium	ug/L	0.067	0.067 U	
Lead	ug/L	0.076	0.076 U	

LABORATORY CONTROL SAMPLE & LCSD: 1032906 1032907

Parameter	Units	Spike Conc.	LCS Result	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
				Result	% Rec	% Rec	Limit			
METALS										
Copper	ug/L	100	96	94	96	94	80-120	2	20	
Arsenic	ug/L	100	110	110	112	109	80-120	3	20	
Selenium	ug/L	100	110	110	108	107	80-120	1	20	
Silver	ug/L	100	100	100	101	101	80-120	1	20	
Antimony	ug/L	100	110	110	111	112	80-120	1	20	
Thallium	ug/L	100	100	100	102	103	80-120	1	20	
Lead	ug/L	100	110	110	106	107	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1032908 1032909 Original: A1206835001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Max RPD	Qualifiers
		Result	Conc.	Result	Result	Limit	Limit	RPD			
METALS											
Copper	ug/L	0.94	100	95	94	94	93	75-125	1	20	
Arsenic	ug/L	-0.22	100	110	110	113	111	75-125	2	20	
Selenium	ug/L	0.17	100	110	110	108	106	75-125	1	20	
Silver	ug/L	0.15	100	99	100	99	101	75-125	2	20	
Antimony	ug/L	1.1	100	110	110	112	112	75-125	0	20	
Thallium	ug/L	-0.069	100	100	110	102	106	75-125	4	20	
Lead	ug/L	-0.049	100	100	110	102	108	75-125	5	20	

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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

QC Batch: DGMj/1989 Analysis Method: SW-846 6010

QC Batch Method: SW-846 3010A Prepared: 08/21/2012 03:30

Associated Lab Samples: A1206835001, A1206835002, A1206835003, A1206835004, A1206835005, A1206835006, A1206835007,

METHOD BLANK: 1033474

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

LABORATORY CONTROL SAMPLE & LCSD: 1033475 1033476

Parameter	Units	Spike Conc.	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max
			Result	Result	% Rec	% Rec	Limit		RPD Qualifiers
METALS									
Aluminum	ug/L	25000	25000	25000	98	97	80-120	1	20
Barium	ug/L	400	360	370	91	92	80-120	1	20
Beryllium	ug/L	400	390	390	99	99	80-120	0	20
Cadmium	ug/L	400	380	380	94	95	80-120	1	20
Cobalt	ug/L	400	360	360	89	90	80-120	1	20
Chromium	ug/L	400	380	380	95	96	80-120	1	20
Iron	ug/L	25000	25000	25000	99	98	80-120	1	20
Manganese	ug/L	400	370	380	93	94	80-120	1	20
Sodium	mg/L	50	50	50	100	99	80-120	1	20
Nickel	ug/L	400	360	360	89	89	80-120	1	20
Vanadium	ug/L	400	400	400	100	101	80-120	1	20
Zinc	ug/L	400	390	390	97	97	80-120	0	20

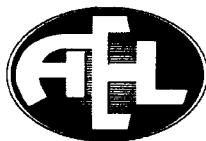
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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1033477 1033478 Original: A1206835001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD Qualifiers
METALS										
Aluminum	ug/L	17	25000	25000	25000	97	97	75-125	0	20
Barium	ug/L	15	400	380	370	91	90	75-125	1	20
Beryllium	ug/L	0.01	400	400	400	99	99	75-125	0	20
Cadmium	ug/L	0.026	400	380	370	94	93	75-125	1	20
Cobalt	ug/L	0.005	400	360	360	90	90	75-125	0	20
Chromium	ug/L	0.67	400	380	380	96	95	75-125	1	20
Iron	ug/L	8.1	25000	25000	25000	98	97	75-125	1	20
Manganese	ug/L	1.4	400	380	370	94	93	75-125	1	20
Sodium	mg/L	2.7	50	53	52	99	98	75-125	1	20
Nickel	ug/L	-0.28	400	360	360	90	90	75-125	0	20
Vanadium	ug/L	0.99	400	410	400	101	100	75-125	1	20
Zinc	ug/L	8.5	400	380	380	94	93	75-125	1	20

QC Batch: DGMj/1998 Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A Prepared: 08/22/2012 09:15

Associated Lab Samples: A1206835001, A1206835002, A1206835003, A1206835004, A1206835005, A1206835006, A1206835007,

METHOD BLANK: 1034603

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

LABORATORY CONTROL SAMPLE & LCSD: 1034604 1034605

Parameter	Units	Spike Conc.	LCS Result	LCSD % Rec	LCS % Rec	LCSD % Rec	% Rec Limit	Max RPD	Max RPD Qualifiers
METALS									
Mercury	ug/L	2	2.1	2.1	106	105	80-120	0	20

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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1034606 1034607 Original: A1206835002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
METALS										
Mercury	ug/L	0.0009	2	2.0	2.1	101	103	80-120	3	20

QC Batch: WCAa/1916 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Prepared:

Associated Lab Samples: A1206835001, A1206835002, A1206835006, A1206835008, A1206835009

METHOD BLANK: 1035544

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

LABORATORY CONTROL SAMPLE: 1035545

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L		630		

SAMPLE DUPLICATE: 1035546 Original: A1206835001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	250	290	16	5

SAMPLE DUPLICATE: 1035547 Original: A1206820003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	200	210	3	5

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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

QC Batch: WCAa/1923 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Prepared:
Associated Lab Samples: A1206835003, A1206835005, A1206835007, A1206835010

METHOD BLANK: 1035628

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

LABORATORY CONTROL SAMPLE: 1035629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L		650		

SAMPLE DUPLICATE: 1035630 Original: A1206828006

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	120	170	34	5

SAMPLE DUPLICATE: 1035631 Original: A1206835007

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	490	500	2	5

QC Batch: WCAt/5303 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Prepared:

Associated Lab Samples: A1206835001, A1206835002, A1206835003, A1206835004, A1206835005, A1206835006, A1206835007,

METHOD BLANK: 1035830

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

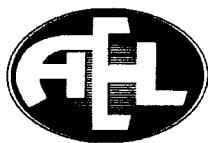
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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

LABORATORY CONTROL SAMPLE: 1035831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Ammonia (N)	mg/L	3	3.1	103	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1035832 1035833 Original: A1206835001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD Qualifiers
WET CHEMISTRY										
Ammonia (N)	mg/L	0.32	3	3.2	3.1	96	92	90-110	3	10

QC Batch: WCAa/1925 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Prepared:

Associated Lab Samples: A1206835001, A1206835002, A1206835003, A1206835004, A1206835005, A1206835006, A1206835007,

METHOD BLANK: 1036644

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Fluoride	mg/L	0.12	0.12 U
Chloride	mg/L	0.50	0.50 U
Nitrate	mg/L	0.053	0.053 U

LABORATORY CONTROL SAMPLE: 1036645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Fluoride	mg/L	3	4.8	161	90-110 J3
Chloride	mg/L	30	98	328	90-110 J3
Nitrate	mg/L		4.8		

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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1036646 1036647 Original: A1206835003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD Qualifiers
WET CHEMISTRY										
Chloride	mg/L	0	10	46	46	456	458	90-110	0	10 J4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1036648 1036649 Original: A1206835007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD Qualifiers
WET CHEMISTRY										
Fluoride	mg/L	0.12	3	2.6	2.6	85	88	90-110	4	10
Nitrate	mg/L			2.7	2.7				0	10

QC Batch: WCAa/1938 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Prepared:

Associated Lab Samples: A1206835004

METHOD BLANK: 1038965

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

LABORATORY CONTROL SAMPLE: 1038966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L		640		

SAMPLE DUPLICATE: 1038967 Original: A1207011002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	370	390	6	5

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QUALITY CONTROL DATA

Workorder: A1206835 Sumter Co Landfill

SAMPLE DUPLICATE: 1038989 Original: A1207055003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	1100	1100	6	5

QUALITY CONTROL DATA QUALIFIERS

Workorder: A1206835 Sumter Co Landfill

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.
- J3 Lab QC Failure
- J4 Estimated Result
- V Method Blank Contamination

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1206835 Sumter Co Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1206835001	MW-2	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835002	MW-4	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835003	MW-4A	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835004	MW-4B	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835005	MW-6A	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835006	MW-8	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835007	MW-9A	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835008	MW-10	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835009	MW-11	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835010	EQ BLANK	SW-846 3010A	DGMj/1985	SW-846 6020	ICMj/1221
A1206835001	MW-2	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835002	MW-4	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835003	MW-4A	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835004	MW-4B	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835005	MW-6A	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835006	MW-8	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835007	MW-9A	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835008	MW-10	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835009	MW-11	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835010	EQ BLANK	SW-846 3010A	DGMj/1989	SW-846 6010	ICPj/1619
A1206835001	MW-2	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835002	MW-4	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835003	MW-4A	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835004	MW-4B	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835005	MW-6A	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835006	MW-8	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835007	MW-9A	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835008	MW-10	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835009	MW-11	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835010	EQ BLANK	SW-846 7470A	DGMj/1998	SW-846 7470A	CVAj/1185
A1206835001	MW-2			SM 2540C	WCAs/1916

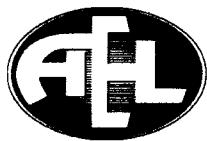
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1206835 Sumter Co Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1206835002	MW-4			SM 2540C	WCAa/1916
A1206835006	MW-8			SM 2540C	WCAa/1916
A1206835008	MW-10			SM 2540C	WCAa/1916
A1206835009	MW-11			SM 2540C	WCAa/1916
A1206835003	MW-4A			SM 2540C	WCAa/1923
A1206835005	MW-6A			SM 2540C	WCAa/1923
A1206835007	MW-9A			SM 2540C	WCAa/1923
A1206835010	EQ BLANK			SM 2540C	WCAa/1923
A1206835001	MW-2			EPA 350.1	WCAt/5303
A1206835002	MW-4			EPA 350.1	WCAt/5303
A1206835003	MW-4A			EPA 350.1	WCAt/5303
A1206835004	MW-4B			EPA 350.1	WCAt/5303
A1206835005	MW-6A			EPA 350.1	WCAt/5303
A1206835006	MW-8			EPA 350.1	WCAt/5303
A1206835007	MW-9A			EPA 350.1	WCAt/5303
A1206835008	MW-10			EPA 350.1	WCAt/5303
A1206835009	MW-11			EPA 350.1	WCAt/5303
A1206835010	EQ BLANK			EPA 350.1	WCAt/5303
A1206835001	MW-2			EPA 300.0	WCAa/1925
A1206835002	MW-4			EPA 300.0	WCAa/1925
A1206835003	MW-4A			EPA 300.0	WCAa/1925
A1206835004	MW-4B			EPA 300.0	WCAa/1925
A1206835005	MW-6A			EPA 300.0	WCAa/1925
A1206835006	MW-8			EPA 300.0	WCAa/1925
A1206835007	MW-9A			EPA 300.0	WCAa/1925
A1206835008	MW-10			EPA 300.0	WCAa/1925
A1206835009	MW-11			EPA 300.0	WCAa/1925
A1206835010	EQ BLANK			EPA 300.0	WCAa/1925
A1206835004	MW-4B			SM 2540C	WCAa/1938

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1206835 Sumter Co Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1206835001	MW-2	DISRES	FLDa/	DISRES	FLDa/
A1206835002	MW-4	DISRES	FLDa/	DISRES	FLDa/
A1206835003	MW-4A	DISRES	FLDa/	DISRES	FLDa/
A1206835004	MW-4B	DISRES	FLDa/	DISRES	FLDa/
A1206835005	MW-6A	DISRES	FLDa/	DISRES	FLDa/
A1206835006	MW-8	DISRES	FLDa/	DISRES	FLDa/
A1206835007	MW-9A	DISRES	FLDa/	DISRES	FLDa/
A1206835008	MW-10	DISRES	FLDa/	DISRES	FLDa/
A1206835009	MW-11	DISRES	FLDa/	DISRES	FLDa/

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