

SUMTER COUNTY
(CLOSED) LANDFILL
QUARTERLY GROUNDWATER
MONITORING REPORT
Quarter III (August) 2010

Prepared for:

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

Prepared by:

THE COLINAS GROUP, INC.
509 N. Virginia Avenue
Winter Park, Florida 32789

September 2010

THE COLINAS GROUP, INC.
HYDROGEOLOGISTS & ENGINEERS

September 20, 2010

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

Subj: **Quarter III 2010 Groundwater Monitoring Report
Sumter County Closed Class I Landfill
Sumter County, Florida
FDEP Permit No. 22926-003-SF**

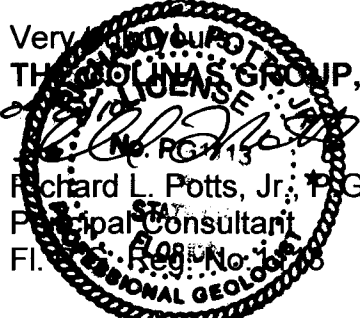
Dear Mr. Morris:

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

**Sumter County (Closed) Landfill Quarterly Groundwater Monitoring Report,
Quarter III (August) 2010**

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. REG. NO. 113

cc: Ms. Denise Warnock (Sumter County)
Mr. Jimmy Wise (Sumter County)

**SUMTER COUNTY (CLOSED) LANDFILL
GROUNDWATER MONITORING REPORT,
SUMTER COUNTY, FLORIDA
Quarter III (August) 2010**

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**Sumter County (Closed) Landfill
Quarterly Groundwater Monitoring Report
Quarter III (August) 2010**

INTRODUCTION

The Colinas Group, Inc. (TCG) has reviewed the groundwater monitoring well sampling and analytical results for the Quarter III 2010 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 Long -Term Care Permit #22926-003-SF.

The Groundwater Monitoring Plan for the closed landfill was amended in 2004 to replace three (3) existing monitoring wells deemed unsuitably located with respect to closed solid waste disposal areas. Existing wells MW-1, MW-7 and MW-9 were replaced by installation of new wells MW-11, MW-10 and MW-9A, respectively. The existing wells continue to be used as water level measuring points (piezometers).

New monitoring wells MW-4A and MW-4B, installed as part of a Preliminary Contamination Assessment completed at the landfill in January 2006, were added by the Florida Department of Environmental Protection (FDEP) to the facility groundwater monitoring network in May 2006. Groundwater sample analytical results for these new wells are included in this report. The current array of groundwater monitoring wells and piezometers at the facility is shown on Figure 1 (Attachment 1).

In accordance with Specific Condition 16d of the facility Long-Term Care Permit, sampling and analytical chemical parameters for this sampling event included the normal list of quarterly monitoring parameters. The Long-Term Care Permit requires an expanded parameter list, to include 40 CFR Appendix II parameters, during Quarter IV of each year.

SAMPLING EVENT

The Quarter III 2010 sampling event at the Sumter County Landfill occurred on August 12 and 13, 2010. Sampling was performed by TCG personnel in accordance with the 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 on Groundwater Sampling Logs (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 13, 2010. These measurements were used to develop 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.

Decommissioned monitoring well **MW-9**, currently used only for water level measurements, was found to be damaged. The well has apparently been struck by a large moving object, most likely a grass mower, and partially pulled from the ground. The well is filled or plugged with soil and a water level measurement was not possible.

RESULTS

Field Tested Parameters

Results of field testing completed at groundwater monitoring wells for the August 2010 sampling event are summarized in Table I. Field tests were completed by TCG sampling personnel in strict accordance with the FDEP SOP requirements using properly calibrated field instruments (see Attachment 5).

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 eight (8) 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 water with a pH above the upper FDEP range at **8.63** pH units. This well has consistently produced pH values above 8.5 since sampling of the well began in Quarter II of 2006.

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 ranged from a low of 24.80 C at well **MW-8** to 27.44 C at **MW-2**.

Dissolved Oxygen

Dissolved oxygen (DO) exceeded the FDEP sampling guidance level of 20% saturation at five (5) of the nine (9) monitoring wells sampled, including the facility background monitoring well **MW-6A**. These wells consistently produce groundwater with elevated DO concentrations.

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 130 umhos/cm to 883 umhos/cm. Lowest specific conductance was measured at well **MW-4B**. Highest specific conductance was measured at detection well **MW-9A**.

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 at all wells had measured turbidity values less than 20 NTUs. Fluid turbidity at all wells was less than 10 NTUs.

Regulatory Exceedances

A summary of groundwater laboratory analytical results for the August 2010 sample set is presented in Table III. As shown, six (6) analytical parameters were reported for certain monitoring wells at concentrations that exceed applicable regulatory levels. Exceeded parameters were aluminum, iron, manganese, nitrate nitrogen, radionuclides and total dissolved solids.

Aluminum

Aluminum was detected at concentrations above the Florida Secondary Drinking Water Standards (FSDWS) MCL (200 ug/l) in samples from four (4) monitoring wells: **MW-4B** (450 ug/l), **MW-9A** (420 ug/l), **MW-10** (540 ug/l), and **MW-11** (840 ug/l). Aluminum was detected by the laboratory at concentrations below the MCL at the 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 620 ug/l at well **MW-9A** and 630 ug/l at **MW-10**. Iron was detected at concentrations less than 300 ug/l at three (3) other wells, and was below the laboratory MDL at the remaining monitoring wells.

Manganese

Manganese was reported above the FSDWS MCL of 50 ug/l in monitoring well **MW-9A** at 75 ug/l. Manganese was detected in all other wells at concentrations below the MCL 50 ug/l.

Nitrate Nitrogen

Nitrate was reported slightly above the 10 mg/l FPDWS MCL at monitoring well **MW-4A** at 11 mg/l. Elevated nitrate levels less than the MCL are noted in well **MW-4** at 8.1 mg/l and the facility background monitoring well **MW-6A** at 6.5 mg/l. Nitrate was reported at significantly lesser values in the remaining monitoring wells.

Radionuclides

The sum of gross alpha plus radium 226/228 (corrected for the negative error range) reported for **MW-11** (16.1 pCi/l) slightly exceeded the drinking water standard MCL of 15 pCi/l.

Total Dissolved Solids (TDS)

TDS is reported at **MW-9A** just above the 500 mg/l MCL at 520 mg/l. TDS in other wells ranged from 88 mg/l to 440 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 Detected Parameters

Ammonia was detected in groundwater samples from two (2) monitoring wells (**MW-9A** and **MW-10**) at concentrations less than the FPDWS MCL of 2.8 mg/l. Ammonia was reported below the laboratory MDL in the remaining wells.

Antimony was detected in groundwater samples from seven (7) monitoring wells at concentrations ranging from 0.12 ug/l to 0.54 ug/l, well below the FPDWS MCL of 6 ug/l. Antimony was reported below the laboratory MDL in remaining monitoring wells.

Cadmium was detected in groundwater samples from two (2) monitoring wells (**MW-9A** and **MW-11**) at concentrations less than the FPDWS MCL. Cadmium was reported below the laboratory MDL in remaining monitoring wells.

Chloride was detected in groundwater samples from all monitoring wells at levels well below the FPDWS MCL of 250 mg/l. Chloride ranged from 1.7 mg/l to 25 mg/l.

Chromium was detected at all wells, including the facility background well (MW-6A), at low concentrations below the MCL (100 ug/l) for this constituent.

Lead was detected in seven (7) monitoring wells at levels well below the FPDWS MCL of 15 ug/l. Lead in these wells ranged from 0.15 ug/l to 0.68 ug/l. Lead was reported below the laboratory MDL in remaining monitoring wells.

Mercury was detected at 0.55 ug/l in monitoring well **MW-9A** and at 0.040 ug/l in **MW-11**, well below the FPDWS MCL of 2 ug/l, and was less than the laboratory method detection limit in samples from remaining wells.

Sodium and **chloride** concentrations reported for seven (7) of the nine (9) monitoring wells appear consistent between individual wells and typical for natural shallow groundwaters in Florida. Although significantly below respective regulatory MCLs, sodium/chloride concentrations at monitoring wells **MW-4**, **MW-4A**, and **MW-9A** are somewhat elevated above concentrations measured in samples from other monitoring wells.

Thallium was reported at low concentrations in three wells: **MW-4** (0.11 ug/l), **MW-4A** (0.27 ug/l) and **MW-9A** (0.20 ug/l). The FPDWS MCL for thallium is 2 ug/l. All other wells were reported below the laboratory MDL.

SUMMARY

Chemical characteristics of groundwater monitored at the Sumter County Landfill are reported for the Quarter III 2010 sampling event. Exceedances of specific constituent regulatory levels and MCLs are reported at specific monitoring wells for **aluminum, iron, manganese, nitrate nitrogen, radionuclides** and **TDS**.

Elevated **dissolved oxygen (DO)** levels were measured in five of the nine groundwater monitoring wells, including the facility background monitoring well. Prior sampling data indicate that elevated DO levels occur frequently and in many of the same monitoring

wells, suggesting that high DO in groundwater at these locations is likely a natural condition.

Aluminum was detected in samples from four wells (**MW-4B**, **MW-9A**, **MW-10**, and **MW-11**) at concentrations above the FSDWS MCL of 200 ug/l. Aluminum was detected below the MCL in remaining monitoring wells, including the facility background well **MW-6A**. The most likely source of aluminum measured in groundwater samples is natural deposits of aluminum-silicate clay minerals within and near the groundwater monitoring zone tapped by wells at the landfill.

Gross alpha radioactivity, including the sum of radium 226/228, exceeded the 15 pCi/l MCL in a groundwater sample from well **MW-11**, reported at a range of 16.1 - 22.5 pCi/l. Gross alpha individually is reported to range from 13.1 - 17.7 pCi/l in the groundwater sample.

Manganese was reported above the FSDWS MCL in the sample from **MW-9A**, one of the more recently-constructed monitoring wells. **Iron** was detected slightly above the FSDWS MCL in wells **MW-9A** and **MW-10**. Both of these elements occur naturally in sediments and carbonate rocks penetrated by the monitoring wells.

Nitrate nitrogen dissolved in groundwater was reported above the FPDWS MCL of 10 mg/l at well **MW-4A** (11 mg/l). As shown on the groundwater contour map for the May 2010 sampling event (Figure 1) well **MW-4A** was upgradient of well **MW-4** and the closed landfill waste disposal areas. Elevated concentrations of nitrate nitrogen were also reported at background well **MW-6A** and at all but one of the remaining monitoring wells at levels considered above naturally-occurring nitrate concentrations typically found in groundwater in Florida.

* * * * *

TABLE I
FIELD PARAMETER RESULTS SUMMARY,
SUMTER COUNTY (CLOSED) LANDFILL
SUMTER COUNTY, FLORIDA
Quarter III (August) 2010

Sampling Point	Temp. (C)	Dissolved Oxygen (mg/l)	pH	Specific Conductance (umhos/cm)	Turbidity (NTU)
MW-2	27.44	6.23	6.97	203	0.91
MW-4	26.37	0.96	7.19	591	3.90
MW-4A	26.71	0.22	7.04	650	2.52
MW-4B	27.32	5.84	8.63	130	3.38
MW-6A	25.37	7.99	7.63	250	7.84
MW-8	24.80	3.90	7.24	389	4.99
MW-9A	25.39	0.10	6.75	883	8.05
MW-10	25.35	1.23	7.15	562	9.29
MW-11	25.53	1.92	6.69	502	8.81

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

TABLE II

QUARTER III 2010

SUMMARY OF GROUNDWATER LEVELS

SUMTER COUNTY (CLOSED) LANDFILL

SUMTER COUNTY, FLORIDA

(August 13, 2010)

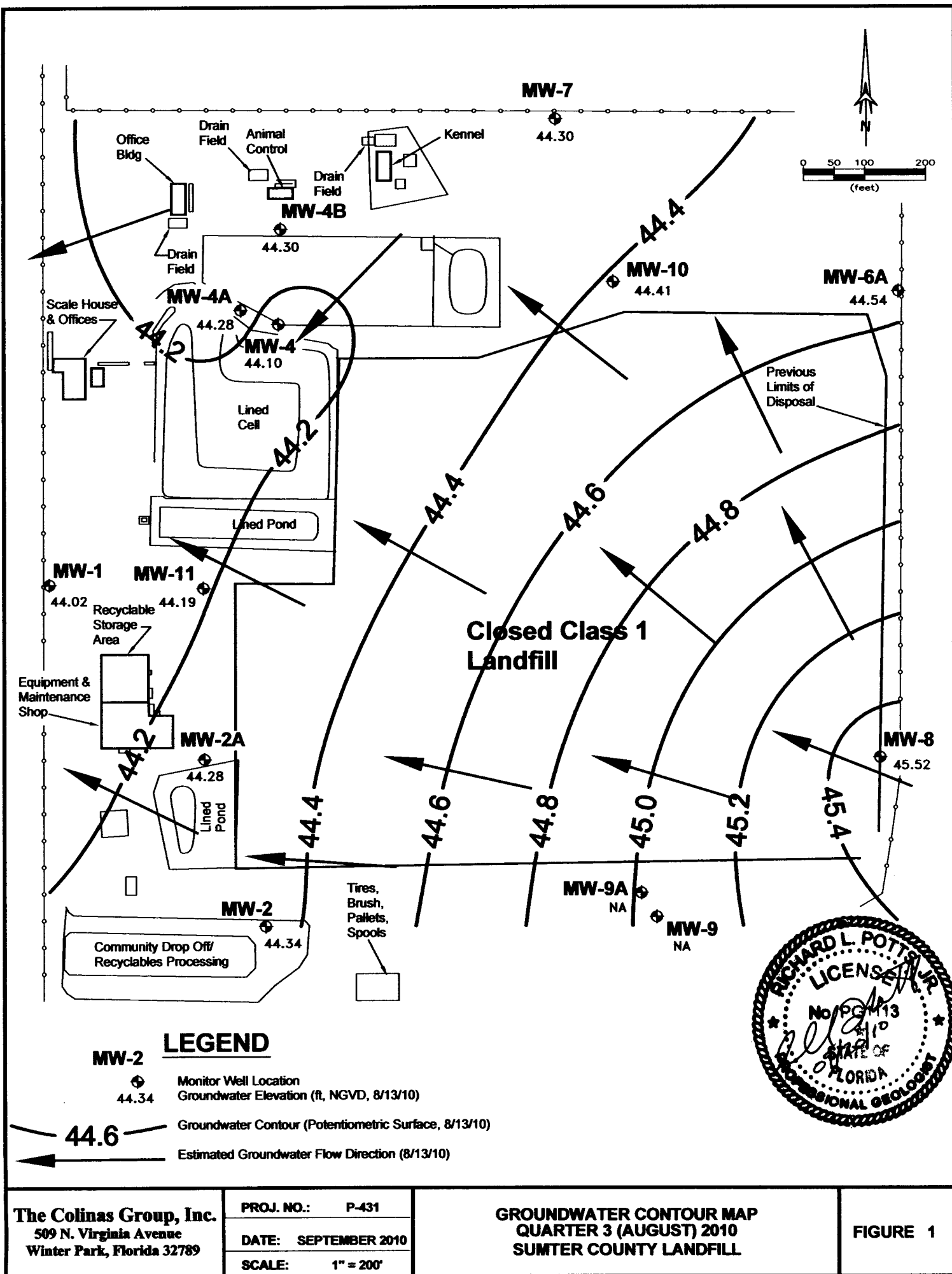
Well No.	Measuring Point Elevation (ft. +NGVD)	Depth to Water (ft. - MP)	Groundwater Elevation (ft. +NGVD)
MW-1	70.17	26.15	44.02
MW-2	69.13	24.79	44.34
MW-2A	72.11	27.83	44.28
MW-4	70.36	26.26	44.10
MW-4A	75.73	31.45	44.28
MW-4B	73.83	29.53	44.30
MW-6A	77.54	33.00	44.54
MW-7	73.14	28.84	44.30
MW-8	69.26	23.74	45.52
MW-9	Destroyed	NA	NA
MW-9A	74.26	30.88	43.38
MW-10	68.28	23.87	44.41
MW-11	70.21	26.02	44.19

Notes: 1. Measuring Point is top of PVC well casing.
2. Water levels recorded on August 13, 2010.

TABLE III
SUMMARY OF LABORATORY RESULTS
SUMTER COUNTY (CLOSED) LANDFILL, QUARTER III (AUGUST) 2010

Parameter	units	MW-2	MW-4	MW-4A	MW-4B	MW-6A	MW-8	MW-9A	MW-10	MW-11	MCL
Ammonia	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	0.38	0.011	BDL	2.8
Aluminum	ug/l	61	160	61	450	130	190	420	540	840	200
Antimony	ug/l	0.54	0.21	BDL	0.12	BDL	0.39	0.23	0.26	0.13	6
Cadmium	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	1.6	BDL	2.3	5
Chloride	mg/l	4	22	25	2	6.7	8.3	19	5.8	1.7	250
Chromium	ug/l	0.82	7.2	1.4	3.3	8	4.2	3.5	16	9.6	100
Fluoride	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	4
Gross Alpha	pCi/l	$> 1.4 \pm 1.0$	6.6 ± 1.9	$> 2.4 \pm 1.6$	1.5 ± 1.0	$> 1.3 \pm 1.0$	$> 2.1 \pm 1.5$	8.4 ± 2.1	11.0 ± 2.1	15.4 ± 2.3	15
Iron	ug/l	BDL	43	BDL	BDL	BDL	220	620	630	150	300
Lead	ug/l	BDL	0.16	BDL	0.16	0.097	0.15	0.37	0.35	0.68	15
Manganese	ug/l	2.1	7.8	4.2	0.36	0.96	7.1	75	25	4	50
Mercury	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	0.55	BDL	0.040	2
Nitrate, as N	mg/l	2.5	8.1	11	3.4	6.5	2.4	0.11	1.5	3.4	10
Radium 226	pCi/l	0.4 ± 0.2	1.2 ± 0.3	1.4 ± 0.3	0.3 ± 0.2	0.4 ± 0.2	0.7 ± 0.2	2.7 ± 0.4	1.7 ± 0.3	3.0 ± 0.4	---
Radium 228	pCi/l	0.8 ± 0.5	$> 0.8 \pm 0.5$	$> 0.7 \pm 0.5$	$> 0.7 \pm 0.5$	$> 0.7 \pm 0.4$	$> 0.7 \pm 0.5$	1.1 ± 0.5	$> 0.2 \pm 0.5$	0.9 ± 0.5	---
Silver	ug/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	100
Sodium	mg/l	4.2	45	26	9.4	3.2	6.2	20	7.3	9.6	160
TDS	mg/l	130	390	440	88	200	240	520	330	300	500
Thallium	ug/l	BDL	0.11	0.27	BDL	BDL	BDL	0.20	BDL	0.093	2

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



The Colinas Group, Inc.
 509 N. Virginia Avenue
 Winter Park, Florida 32789

PROJ. NO.: P-431
DATE: SEPTEMBER 2010
SCALE: 1" = 200'

**GROUNDWATER CONTOUR MAP
 QUARTER 3 (AUGUST) 2010
 SUMTER COUNTY LANDFILL**

FIGURE 1



Advanced
Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc.
6601 Southpoint Parkway
Jacksonville, FL 32216
Phone: (904)363-9350
Fax: (904)363-9354

September 1, 2010

Rick Potts
The Colinas Group, Inc.
509 N. Virginia Avenue
Winter Park, FL 32789

RE: Workorder: A1004699 Sumter County Landfill

Dear Rick Potts:

Enclosed are the analytical results for sample(s) received by the laboratory on on Friday, August 13, 2010. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,



Sheila Wilcox

Digitally signed by
Sheila Wilcox
DN: cn=Sheila Wilcox,
o=Advanced
Environmental
Laboratories, Inc., c=US
Date: 2010.08.03
15:54:00 -0400

Sheila Wilcox for
Myrna Santiago
msantiago@aellab.com

Enclosures

Report ID: 135996 - 2917918

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Advanced Environmental Laboratories, Inc.
6601 Southpoint Parkway
Jacksonville, FL 32216
Phone: (904)363-9350
Fax: (904)363-9354

SAMPLE SUMMARY

Workorder: A1004699 Sumter County Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
A1004699001	EQ BLANK	Water	8/12/2010 10:10	8/13/2010 15:35
A1004699002	MW-2	Water	8/13/2010 10:40	8/13/2010 15:35
A1004699003	MW-4	Water	8/13/2010 12:30	8/13/2010 15:35
A1004699004	MW-4A	Water	8/13/2010 11:40	8/13/2010 15:35
A1004699005	MW-4B	Water	8/12/2010 16:00	8/13/2010 15:35
A1004699006	MW-6A	Water	8/13/2010 14:05	8/13/2010 15:35
A1004699007	MW-8	Water	8/12/2010 13:45	8/13/2010 15:35
A1004699008	MW-9A	Water	8/12/2010 12:20	8/13/2010 15:35
A1004699009	MW-10	Water	8/12/2010 14:55	8/13/2010 15:35
A1004699010	MW-11	Water	8/13/2010 09:50	8/13/2010 15:35

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Jacksonville, FL 32216
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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699001

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: EQ BLANK

Date Collected: 8/12/2010 10:10

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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	8/17/2010 15:36	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:36	J
Chromium	0.50	ug/L	U	1	4.0	0.50	8/17/2010 15:36	J
Iron	38	ug/L	U	1	200	38	8/17/2010 15:36	J
Manganese	0.66	ug/L	I	1	1.0	0.24	8/17/2010 15:36	J
Sodium	0.026	mg/L	U	1	0.20	0.026	8/17/2010 15:36	J
Analysis Desc: SW846 6020B	Preparation Method: SW-846 3010A							
Analysis,Total	Analytical Method: SW-846 6020							
Antimony	0.090	ug/L	I	1	0.60	0.073	8/19/2010 01:04	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/19/2010 01:04	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 01:04	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 01:04	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	8/20/2010 16:03	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water	Analytical Method: EPA 300.0							
Chloride	0.81	mg/L	U	1	10	0.81	8/13/2010 20:46	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 20:46	A
Nitrate	0.043	mg/L	U	1		0.043	8/13/2010 20:46	A
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
Analysis Desc: Gross Alpha, EPA 900, Aqueous	Analytical Method: EPA 900							
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous	Analytical Method: EPA 903.1							
See Attached Report								

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Advanced Environmental Laboratories, Inc.
6601 Southpoint Parkway
Jacksonville, FL 32216
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699001

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: EQ BLANK

Date Collected: 8/12/2010 10:10

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Radium 228, EPA Ra-05, Aqueous		Analytical Method: EPA Ra-05						
See Attached Report								
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	10	mg/L	U	1	10	10	8/18/2010 13:14	T

Lab ID: A1004699002

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-2

Date Collected: 8/13/2010 10:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	203	umhos/cm		1			8/13/2010 10:40	A
Dissolved Oxygen	6.23	mg/L		1			8/13/2010 10:40	A
Groundwater Elevation	44.34	feet		1			8/13/2010 10:40	A
Temperature	27.44	°C		1			8/13/2010 10:40	A
Turbidity	0.91	NTU		1			8/13/2010 10:40	A
pH	6.97	pH unit		1			8/13/2010 10:40	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	8/17/2010 14:49	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 14:49	J
Chromium	0.82	ug/L	I	1	4.0	0.50	8/17/2010 14:49	J
Iron	38	ug/L	U	1	200	38	8/17/2010 14:49	J
Manganese	2.1	ug/L		1	1.0	0.24	8/17/2010 14:49	J
Sodium	4.2	mg/L		1	0.20	0.026	8/17/2010 14:49	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	0.54	ug/L	I	1	0.60	0.073	8/19/2010 00:16	J
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Report ID: 135996 - 2917918

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699002

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-2

Date Collected: 8/13/2010 10:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Lead	0.076	ug/L	U	1	0.70	0.076	8/19/2010 00:16	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 00:16	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 00:16	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	8/20/2010 15:53	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	4.0	mg/L	I	1	10	0.81	8/13/2010 16:25	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 16:25	A
Nitrate	2.5	mg/L		1		0.043	8/13/2010 16:25	A
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
Analysis Desc: Gross Alpha, EPA 900, Aqueous		Analytical Method: EPA 900						
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous		Analytical Method: EPA 903.1						
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous		Analytical Method: EPA Ra-05						
See Attached Report								
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	130	mg/L		1	10	10	8/18/2010 13:14	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699003

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4

Date Collected: 8/13/2010 12:30

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	591	umhos/cm		1			8/13/2010 12:30	A
Dissolved Oxygen	0.96	mg/L		1			8/13/2010 12:30	A
Groundwater Elevation	44.1	feet		1			8/13/2010 12:30	A
Temperature	26.37	°C		1			8/13/2010 12:30	A
Turbidity	3.9	NTU		1			8/13/2010 12:30	A
pH	7.19	pH unit		1			8/13/2010 12:30	A
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	160	ug/L	J	1	200	61	8/17/2010 15:40	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:40	J
Chromium	7.2	ug/L		1	4.0	0.50	8/17/2010 15:40	J
Iron	43	ug/L	I	1	200	38	8/17/2010 15:40	J
Manganese	7.8	ug/L		1	1.0	0.24	8/17/2010 15:40	J
Sodium	45	mg/L		1	0.20	0.026	8/17/2010 15:40	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis,Total			Analytical Method: SW-846 6020					
Antimony	0.21	ug/L	I	1	0.60	0.073	8/19/2010 01:14	J
Lead	0.16	ug/L	I	1	0.70	0.076	8/19/2010 01:14	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 01:14	J
Thallium	0.11	ug/L	I	1	0.20	0.067	8/19/2010 01:14	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	8/20/2010 16:05	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	22	mg/L		1	10	0.81	8/13/2010 17:17	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 17:17	A
Nitrate	8.1	mg/L		1		0.043	8/13/2010 17:17	A
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699003

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4

Date Collected: 8/13/2010 12:30

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Gross Alpha, EPA 900, Aqueous	Analytical Method: EPA 900							
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous	Analytical Method: EPA 903.1							
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous	Analytical Method: EPA Ra-05							
See Attached Report								
Analysis Desc: Tot Dissolved Solids, SM2540C	Analytical Method: SM 2540C							
Total Dissolved Solids	390	mg/L		1	10	10	8/18/2010 13:14	T

Lab ID: A1004699004

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4A

Date Collected: 8/13/2010 11:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	650	umhos/cm		1			8/13/2010 11:40	A
Dissolved Oxygen	0.22	mg/L		1			8/13/2010 11:40	A
Groundwater Elevation	44.28	feet		1			8/13/2010 11:40	A
Temperature	26.71	°C		1			8/13/2010 11:40	A
Turbidity	2.52	NTU		1			8/13/2010 11:40	A
pH	7.04	pH unit		1			8/13/2010 11:40	A
METALS								
Analysis Desc: SW846 6010B Analysis, Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Aluminum	61	ug/L	U	1	200	61	8/17/2010 15:45	J

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699004

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4A

Date Collected: 8/13/2010 11:40

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:45	J
Chromium	1.4	ug/L	I	1	4.0	0.50	8/17/2010 15:45	J
Iron	38	ug/L	U	1	200	38	8/17/2010 15:45	J
Manganese	4.2	ug/L		1	1.0	0.24	8/17/2010 15:45	J
Sodium	26	mg/L		1	0.20	0.026	8/17/2010 15:45	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.078	ug/L	I	1	0.60	0.073	8/19/2010 01:23	J
Lead	0.076	ug/L	U	1	0.70	0.076	8/19/2010 01:23	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 01:23	J
Thallium	0.27	ug/L		1	0.20	0.067	8/19/2010 01:23	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	8/20/2010 16:10	J
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WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	25	mg/L		1	10	0.81	8/13/2010 17:35	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 17:35	A
Nitrate	11	mg/L		2		0.085	8/13/2010 20:29	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
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Analysis Desc: Gross Alpha, EPA 900,
Aqueous

Analytical Method: EPA 900

See Attached Report

Analysis Desc: Radium 226, EPA 903.1,
Aqueous

Analytical Method: EPA 903.1

See Attached Report

Analysis Desc: Radium 228, EPA Ra-05,
Aqueous

Analytical Method: EPA Ra-05

See Attached Report

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699004

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4A

Date Collected: 8/13/2010 11:40

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	440	mg/L		1	10	10	8/18/2010 13:14	T

Lab ID: A1004699005

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4B

Date Collected: 8/12/2010 16:00

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	130	umhos/cm		1			8/12/2010 16:00	A
Dissolved Oxygen	5.84	mg/L		1			8/12/2010 16:00	A
Groundwater Elevation	44.3	feet		1			8/12/2010 16:00	A
Temperature	27.32	°C		1			8/12/2010 16:00	A
Turbidity	3.38	NTU		1			8/12/2010 16:00	A
pH	8.63	pH unit		1			8/12/2010 16:00	A

METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Aluminum	450	ug/L		1	200	61	8/17/2010 15:50	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:50	J
Chromium	3.3	ug/L	I	1	4.0	0.50	8/17/2010 15:50	J
Iron	38	ug/L	U	1	200	38	8/17/2010 15:50	J
Manganese	0.36	ug/L	I	1	1.0	0.24	8/17/2010 15:50	J
Sodium	9.4	mg/L		1	0.20	0.026	8/17/2010 15:50	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.12	ug/L	I	1	0.60	0.073	8/19/2010 01:33	J
Lead	0.16	ug/L	I	1	0.70	0.076	8/19/2010 01:33	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 01:33	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 01:33	J

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699005

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-4B

Date Collected: 8/12/2010 16:00

Sample Description:

Location:

Sample Description:								
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	8/20/2010 16:12	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	2.0	mg/L	I	1	10	0.81	8/13/2010 17:52	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 17:52	A
Nitrate	3.4	mg/L		1		0.043	8/13/2010 17:52	A
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
Analysis Desc: Gross Alpha, EPA 900, Aqueous		Analytical Method: EPA 900						
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous		Analytical Method: EPA 903.1						
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous		Analytical Method: EPA Ra-05						
See Attached Report								
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	88	mg/L		1	10	10	8/18/2010 13:14	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699006

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-6A

Date Collected: 8/13/2010 14:05

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	250	umhos/cm		1			8/13/2010 14:05	A
Dissolved Oxygen	7.99	mg/L		1			8/13/2010 14:05	A
Groundwater Elevation	44.54	feet		1			8/13/2010 14:05	A
Temperature	25.37	°C		1			8/13/2010 14:05	A
Turbidity	7.84	NTU		1			8/13/2010 14:05	A
pH	7.63	pH unit		1			8/13/2010 14:05	A
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Aluminum	130	ug/L	I	1	200	61	8/17/2010 15:55	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:55	J
Chromium	8.0	ug/L		1	4.0	0.50	8/17/2010 15:55	J
Iron	38	ug/L	U	1	200	38	8/17/2010 15:55	J
Manganese	0.96	ug/L	I	1	1.0	0.24	8/17/2010 15:55	J
Sodium	3.2	mg/L		1	0.20	0.026	8/17/2010 15:55	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.073	ug/L	U	1	0.60	0.073	8/19/2010 01:42	J
Lead	0.097	ug/L	I	1	0.70	0.076	8/19/2010 01:42	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 01:42	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 01:42	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	8/20/2010 16:14	J
WET CHEMISTRY								
Analysis Desc: IC, E300.0, Water			Analytical Method: EPA 300.0					
Chloride	6.7	mg/L	I	1	10	0.81	8/13/2010 18:10	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 18:10	A
Nitrate	6.5	mg/L		1		0.043	8/13/2010 18:10	A
Analysis Desc: Ammonia, E350.1, Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699006

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-6A

Date Collected: 8/13/2010 14:05

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Gross Alpha, EPA 900, Aqueous		Analytical Method: EPA 900						
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous		Analytical Method: EPA 903.1						
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous		Analytical Method: EPA Ra-05						
See Attached Report								
Analysis Desc: Tot Dissolved Solids, SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	200	mg/L		1	10	10	8/18/2010 13:14	T

Lab ID: A1004699007

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-8

Date Collected: 8/12/2010 13:45

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	389	umhos/cm		1			8/12/2010 13:45	A
Dissolved Oxygen	3.7	mg/L		1			8/12/2010 13:45	A
Groundwater Elevation	45.52	feet		1			8/12/2010 13:45	A
Temperature	24.8	°C		1			8/12/2010 13:45	A
Turbidity	4.99	NTU		1			8/12/2010 13:45	A
pH	7.24	pH unit		1			8/12/2010 13:45	A
METALS								
Analysis Desc: SW846 6010B Analysis, Water		Preparation Method: SW-846 3010A						
		Analytical Method: SW-846 6010						
Aluminum	190	ug/L	J	1	200	61	8/17/2010 15:59	J

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699007

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-8

Date Collected: 8/12/2010 13:45

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 15:59	J
Chromium	4.2	ug/L		1	4.0	0.50	8/17/2010 15:59	J
Iron	220	ug/L		1	200	38	8/17/2010 15:59	J
Manganese	7.1	ug/L		1	1.0	0.24	8/17/2010 15:59	J
Sodium	6.2	mg/L		1	0.20	0.026	8/17/2010 15:59	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	0.39	ug/L	I	1	0.60	0.073	8/19/2010 02:11	J
Lead	0.15	ug/L	I	1	0.70	0.076	8/19/2010 02:11	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 02:11	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 02:11	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	8/20/2010 16:15	J
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WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	8.3	mg/L	I	1	10	0.81	8/13/2010 18:27	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 18:27	A
Nitrate	2.4	mg/L		1		0.043	8/13/2010 18:27	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
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Analysis Desc: Gross Alpha, EPA 900,
Aqueous

Analytical Method: EPA 900

See Attached Report

Analysis Desc: Radium 226, EPA 903.1,
Aqueous

Analytical Method: EPA 903.1

See Attached Report

Analysis Desc: Radium 228, EPA Ra-05,
Aqueous

Analytical Method: EPA Ra-05

See Attached Report

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699007

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-8

Date Collected: 8/12/2010 13:45

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	240	mg/L		1	10	10	8/18/2010 13:14	T

Lab ID: A1004699008

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-9A

Date Collected: 8/12/2010 12:20

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	883	umhos/cm		1			8/12/2010 12:20	A
Dissolved Oxygen	0.1	mg/L		1			8/12/2010 12:20	A
Groundwater Elevation	43.39	feet		1			8/12/2010 12:20	A
Temperature	25.39	°C		1			8/12/2010 12:20	A
Turbidity	8.05	NTU		1			8/12/2010 12:20	A
pH	6.75	pH unit		1			8/12/2010 12:20	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	8/17/2010 16:04	J
Cadmium	1.6	ug/L		1	0.60	0.32	8/17/2010 16:04	J
Chromium	3.5	ug/L	I	1	4.0	0.50	8/17/2010 16:04	J
Iron	620	ug/L		1	200	38	8/17/2010 16:04	J
Manganese	75	ug/L		1	1.0	0.24	8/17/2010 16:04	J
Sodium	20	mg/L		1	0.20	0.026	8/17/2010 16:04	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	8/19/2010 02:21	J
Lead	0.37	ug/L	I	1	0.70	0.076	8/19/2010 02:21	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 02:21	J
Thallium	0.20	ug/L	I	1	0.20	0.067	8/19/2010 02:21	J

Report ID: 135996 - 2917918

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699008

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-9A

Date Collected: 8/12/2010 12:20

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	0.55	ug/L		1	0.10	0.014	8/20/2010 16:17	J
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	19	mg/L		1	10	0.81	8/13/2010 18:44	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 18:44	A
Nitrate	0.11	mg/L		1		0.043	8/13/2010 18:44	A
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.38	mg/L		1	0.040	0.010	8/20/2010 12:57	T
Analysis Desc: Gross Alpha, EPA 900, Aqueous		Analytical Method: EPA 900						
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous		Analytical Method: EPA 903.1						
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous		Analytical Method: EPA Ra-05						
See Attached Report								
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540C						
Total Dissolved Solids	520	mg/L		1	10	10	8/18/2010 13:14	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699009

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-10

Date Collected: 8/12/2010 14:55

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	562	umhos/cm		1			8/12/2010 14:55	A
Dissolved Oxygen	1.23	mg/L		1			8/12/2010 14:55	A
Groundwater Elevation	44.42	feet		1			8/12/2010 14:55	A
Temperature	25.35	°C		1			8/12/2010 14:55	A
Turbidity	9.29	NTU		1			8/12/2010 14:55	A
pH	7.15	pH unit		1			8/12/2010 14:55	A
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Aluminum	540	ug/L		1	200	61	8/17/2010 16:09	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	8/17/2010 16:09	J
Chromium	16	ug/L		1	4.0	0.50	8/17/2010 16:09	J
Iron	630	ug/L		1	200	38	8/17/2010 16:09	J
Manganese	25	ug/L		1	1.0	0.24	8/17/2010 16:09	J
Sodium	7.3	mg/L		1	0.20	0.026	8/17/2010 16:09	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.26	ug/L	I	1	0.60	0.073	8/19/2010 02:30	J
Lead	0.35	ug/L	I	1	0.70	0.076	8/19/2010 02:30	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 02:30	J
Thallium	0.067	ug/L	U	1	0.20	0.067	8/19/2010 02:30	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	8/20/2010 16:19	J
WET CHEMISTRY								
Analysis Desc: IC, E300.0, Water			Analytical Method: EPA 300.0					
Chloride	5.8	mg/L	I	1	10	0.81	8/13/2010 19:02	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 19:02	A
Nitrate	1.5	mg/L		1		0.043	8/13/2010 19:02	A
Analysis Desc: Ammonia, E350.1, Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.011	mg/L	I	1	0.040	0.010	8/20/2010 12:57	T

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699009

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-10

Date Collected: 8/12/2010 14:55

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: Gross Alpha, EPA 900, Aqueous	Analytical Method: EPA 900							
See Attached Report								
Analysis Desc: Radium 226, EPA 903.1, Aqueous	Analytical Method: EPA 903.1							
See Attached Report								
Analysis Desc: Radium 228, EPA Ra-05, Aqueous	Analytical Method: EPA Ra-05							
See Attached Report								
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540C							
Total Dissolved Solids	330	mg/L		1	10	10	8/18/2010 13:14	T

Lab ID: A1004699010

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-11

Date Collected: 8/13/2010 09:50

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: FIELD - Conductance		Analytical Method: DISRES						
Conductance	502	umhos/cm		1			8/13/2010 09:50	A
Dissolved Oxygen	1.92	mg/L		1			8/13/2010 09:50	A
Groundwater Elevation	44.19	feet		1			8/13/2010 09:50	A
Temperature	25.53	°C		1			8/13/2010 09:50	A
Turbidity	8.81	NTU		1			8/13/2010 09:50	A
pH	6.69	pH unit		1			8/13/2010 09:50	A
METALS								
Analysis Desc: SW846 6010B Analysis, Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Aluminum	840	ug/L		1	200	61	8/17/2010 16:14	J

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699010

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-11

Date Collected: 8/13/2010 09:50

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cadmium	2.3	ug/L		1	0.60	0.32	8/17/2010 16:14	J
Chromium	9.6	ug/L		1	4.0	0.50	8/17/2010 16:14	J
Iron	150	ug/L	I	1	200	38	8/17/2010 16:14	J
Manganese	4.0	ug/L		1	1.0	0.24	8/17/2010 16:14	J
Sodium	9.6	mg/L		1	0.20	0.026	8/17/2010 16:14	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	0.13	ug/L	I	1	0.60	0.073	8/19/2010 02:40	J
Lead	0.68	ug/L	I	1	0.70	0.076	8/19/2010 02:40	J
Silver	0.059	ug/L	U	1	0.30	0.059	8/19/2010 02:40	J
Thallium	0.093	ug/L	I	1	0.20	0.067	8/19/2010 02:40	J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis, Water

Analytical Method: SW-846 7470A

Mercury	0.040	ug/L	I	1	0.10	0.014	8/20/2010 16:21	J
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WET CHEMISTRY

Analysis Desc: IC, E300.0, Water

Analytical Method: EPA 300.0

Chloride	1.7	mg/L	I	1	10	0.81	8/13/2010 19:19	A
Fluoride	0.15	mg/L	U	1	0.20	0.15	8/13/2010 19:19	A
Nitrate	3.4	mg/L		1		0.043	8/13/2010 19:19	A

Analysis Desc: Ammonia, E350.1, Water

Analytical Method: EPA 350.1

Ammonia (N)	0.010	mg/L	U	1	0.040	0.010	8/20/2010 12:57	T
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Analysis Desc: Gross Alpha, EPA 900,
Aqueous

Analytical Method: EPA 900

See Attached Report

Analysis Desc: Radium 226, EPA 903.1,
Aqueous

Analytical Method: EPA 903.1

See Attached Report

Analysis Desc: Radium 228, EPA Ra-05,
Aqueous

Analytical Method: EPA Ra-05

See Attached Report

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ANALYTICAL RESULTS

Workorder: A1004699 Sumter County Landfill

Lab ID: A1004699010

Date Received: 8/13/2010 15:35 Matrix: Water

Sample ID: MW-11

Date Collected: 8/13/2010 09:50

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	300	mg/L		1	10	10	8/18/2010 13:14	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: A1004699 Sumter County Landfill

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.

LAB QUALIFIERS

- A DOH Certification #E53076(AEL-A)(FL NELAC Certification)
- T DOH Certification #E84589(AEL-T)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

QC Batch: WCAa/17861 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,

METHOD BLANK: 584867

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Fluoride	mg/L	0.15	0.15 U
Chloride	mg/L	0.81	0.81 U
Nitrate	mg/L	0.043	0.043 U

METHOD BLANK: 584873

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Fluoride	mg/L	0.15	0.15 U
Chloride	mg/L	0.81	0.81 U
Nitrate	mg/L	0.043	0.043 U

LABORATORY CONTROL SAMPLE: 584868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Fluoride	mg/L	3	2.8	93	90-110
Chloride	mg/L	30	28	92	90-110
Nitrate	mg/L	3	2.7	91	90-110

LABORATORY CONTROL SAMPLE: 584874

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Fluoride	mg/L	3	2.8	92	90-110
Chloride	mg/L	30	27	91	90-110
Nitrate	mg/L	3	2.7	91	90-110

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QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 584869 584870 Original: A1004699002

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	0.034	3	2.9	2.9	96	96	90-110	1	10	
Chloride	mg/L			0.81	0.81U				0	10	
Nitrate	mg/L	2.5	3	5.5	5.5	98	99	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 584871 584872 Original: A1004699004

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			0.15	0.15U				0	10	
Chloride	mg/L	25	10	35	35	100	99	90-110	0	10	
Nitrate	mg/L			0.043	0.043U				0	10	

QC Batch: DGMj/21535

Analysis Method: SW-846 6010

QC Batch Method: SW-846 3010A

Prepared: 08/17/2010 05:30

Associated Lab Samples: A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,

METHOD BLANK: 585499

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Aluminum	ug/L	61	61 U	
Cadmium	ug/L	0.32	0.32 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	

LABORATORY CONTROL SAMPLE & LCSD: 585500 585501

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Aluminum	ug/L	25000	25000	25000	99	98	80-120	0	20	
Cadmium	ug/L	400	410	410	101	102	80-120	1	20	
Chromium	ug/L	400	390	400	99	99	80-120	0	20	
Iron	ug/L	25000	26000	26000	101	102	80-120	0	20	

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QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

LABORATORY CONTROL SAMPLE & LCSD: 585500 585501

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Manganese	ug/L	400	380	380	94	94	80-120	0	20	
Sodium	mg/L	50	50	51	99	101	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 585502 585503 Original: A1004699002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
METALS										
Aluminum	ug/L	17	25000	25000	25000	100	98	75-125	2	20
Cadmium	ug/L	0.045	400	420	420	105	104	75-125	1	20
Chromium	ug/L	0.82	400	400	400	100	100	75-125	0	20
Iron	ug/L	4.3	25000	27000	27000	106	105	75-125	1	20
Manganese	ug/L	2.1	400	390	390	96	96	75-125	1	20
Sodium	mg/L	4.2	50	55	54	100	99	75-125	1	20

QC Batch: DGMj/21536

Analysis Method: SW-846 6020

QC Batch Method: SW-846 3010A

Prepared: 08/17/2010 05:30

Associated Lab Samples: A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,

METHOD BLANK: 585504

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
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: 585505 585506

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Silver	ug/L	100	130	130	127	130	85-115	2	20	
Antimony	ug/L	100	100	110	103	106	85-115	2	20	
Thallium	ug/L		99	100				2	20	

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QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

LABORATORY CONTROL SAMPLE & LCSD: 585505 585506

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Lead	ug/L	100	100	100	101	104	85-115	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 585507 585508 Original: A1004699002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Silver	ug/L	0.024	100	130	130	128	126	70-130	2	20	
Antimony	ug/L	0.54	100	110	100	106	104	70-130	2	20	
Thallium	ug/L			100	100				1	20	
Lead	ug/L	0.053	100	100	100	104	103	70-130	1	20	

QC Batch: WCAI/32120

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Prepared:

Associated Lab Samples: A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,

METHOD BLANK: 586584

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

LABORATORY CONTROL SAMPLE: 586585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	650	98		

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QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

SAMPLE DUPLICATE: 586586

Original: A1004699001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	10U	10	0	
QC Batch:	DGMj/21554		Analysis Method:	SW-846 7470A	
QC Batch Method:	SW-846 7470A		Prepared:	08/20/2010 09:30	
Associated Lab Samples:	A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,				

METHOD BLANK: 587763

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

LABORATORY CONTROL SAMPLE & LCSD: 587764 587765

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
METALS									
Mercury	ug/L	2	2.2	2.2	109	109	80-120	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 587766 587767 Original: A1004699002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
METALS										
Mercury	ug/L	-0.0019	2	2.2	2.2	112	109	80-120	2	20

QC Batch: WCAI/32159

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Prepared:

Associated Lab Samples: A1004699001, A1004699002, A1004699003, A1004699004, A1004699005, A1004699006, A1004699007,

METHOD BLANK: 588211

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			

Report ID: 135996 - 2917918

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Advanced
Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc.

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Jacksonville, FL 32216

Phone: (904)363-9350

Fax: (904)363-9354

QUALITY CONTROL DATA

Workorder: A1004699 Sumter County Landfill

METHOD BLANK: 588211

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Ammonia (N)	mg/L	0.010	0.010 U

LABORATORY CONTROL SAMPLE: 588212

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY Ammonia (N)	mg/L	1	1.1	107	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 588213 588214 Original: A1004699010

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
WET CHEMISTRY Ammonia (N)	mg/L	0	1	0.99	1.0	99	101	90-110	2 10	

QUALITY CONTROL DATA QUALIFIERS

Workorder: A1004699 Sumter County 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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1004699 Sumter County Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1004699001	EQ BLANK			EPA 300.0	WCAa/17861
A1004699002	MW-2			EPA 300.0	WCAa/17861
A1004699003	MW-4			EPA 300.0	WCAa/17861
A1004699004	MW-4A			EPA 300.0	WCAa/17861
A1004699005	MW-4B			EPA 300.0	WCAa/17861
A1004699006	MW-6A			EPA 300.0	WCAa/17861
A1004699007	MW-8			EPA 300.0	WCAa/17861
A1004699008	MW-9A			EPA 300.0	WCAa/17861
A1004699009	MW-10			EPA 300.0	WCAa/17861
A1004699010	MW-11			EPA 300.0	WCAa/17861
A1004699001	EQ BLANK	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699002	MW-2	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699003	MW-4	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699004	MW-4A	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699005	MW-4B	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699006	MW-6A	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699007	MW-8	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699008	MW-9A	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699009	MW-10	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699010	MW-11	SW-846 3010A	DGMj/21535	SW-846 6010	ICPj/20826
A1004699001	EQ BLANK	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699002	MW-2	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699003	MW-4	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699004	MW-4A	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699005	MW-4B	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699006	MW-6A	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699007	MW-8	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699008	MW-9A	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699009	MW-10	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699010	MW-11	SW-846 3010A	DGMj/21536	SW-846 6020	ICMj/17128
A1004699001	EQ BLANK			SM 2540C	WCAI/32120

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1004699 Sumter County Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1004699002	MW-2			SM 2540C	WCAI/32120
A1004699003	MW-4			SM 2540C	WCAI/32120
A1004699004	MW-4A			SM 2540C	WCAI/32120
A1004699005	MW-4B			SM 2540C	WCAI/32120
A1004699006	MW-6A			SM 2540C	WCAI/32120
A1004699007	MW-8			SM 2540C	WCAI/32120
A1004699008	MW-9A			SM 2540C	WCAI/32120
A1004699009	MW-10			SM 2540C	WCAI/32120
A1004699010	MW-11			SM 2540C	WCAI/32120
A1004699001	EQ BLANK	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699002	MW-2	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699003	MW-4	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699004	MW-4A	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699005	MW-4B	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699006	MW-6A	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699007	MW-8	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699008	MW-9A	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699009	MW-10	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699010	MW-11	SW-846 7470A	DGMj/21554	SW-846 7470A	CVAj/16792
A1004699001	EQ BLANK			EPA 350.1	WCAI/32159
A1004699002	MW-2			EPA 350.1	WCAI/32159
A1004699003	MW-4			EPA 350.1	WCAI/32159
A1004699004	MW-4A			EPA 350.1	WCAI/32159
A1004699005	MW-4B			EPA 350.1	WCAI/32159
A1004699006	MW-6A			EPA 350.1	WCAI/32159
A1004699007	MW-8			EPA 350.1	WCAI/32159
A1004699008	MW-9A			EPA 350.1	WCAI/32159
A1004699009	MW-10			EPA 350.1	WCAI/32159
A1004699010	MW-11			EPA 350.1	WCAI/32159
A1004699001	EQ BLANK	EPA 900	SUB/	EPA 900	SUB/
A1004699001	EQ BLANK	EPA 903.1	SUB/	EPA 903.1	SUB/

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1004699 Sumter County Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1004699001	EQ BLANK	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699002	MW-2	DISRES	FLDa/	DISRES	FLDa/
A1004699002	MW-2	EPA 900	SUBf/	EPA 900	SUBf/
A1004699002	MW-2	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699002	MW-2	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699003	MW-4	DISRES	FLDa/	DISRES	FLDa/
A1004699003	MW-4	EPA 900	SUBf/	EPA 900	SUBf/
A1004699003	MW-4	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699003	MW-4	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699004	MW-4A	DISRES	FLDa/	DISRES	FLDa/
A1004699004	MW-4A	EPA 900	SUBf/	EPA 900	SUBf/
A1004699004	MW-4A	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699004	MW-4A	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699005	MW-4B	DISRES	FLDa/	DISRES	FLDa/
A1004699005	MW-4B	EPA 900	SUBf/	EPA 900	SUBf/
A1004699005	MW-4B	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699005	MW-4B	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699006	MW-6A	DISRES	FLDa/	DISRES	FLDa/
A1004699006	MW-6A	EPA 900	SUBf/	EPA 900	SUBf/
A1004699006	MW-6A	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699006	MW-6A	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699007	MW-8	DISRES	FLDa/	DISRES	FLDa/
A1004699007	MW-8	EPA 900	SUBf/	EPA 900	SUBf/
A1004699007	MW-8	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699007	MW-8	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699008	MW-9A	DISRES	FLDa/	DISRES	FLDa/
A1004699008	MW-9A	EPA 900	SUBf/	EPA 900	SUBf/
A1004699008	MW-9A	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699008	MW-9A	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699009	MW-10	DISRES	FLDa/	DISRES	FLDa/
A1004699009	MW-10	EPA 900	SUBf/	EPA 900	SUBf/
A1004699009	MW-10	EPA 903.1	SUBf/	EPA 903.1	SUBf/
A1004699009	MW-10	EPA Ra-05	SUBf/	EPA Ra-05	SUBf/
A1004699010	MW-11	DISRES	FLDa/	DISRES	FLDa/

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1004699 Sumter County Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1004699010	MW-11	EPA 900	SUB//	EPA 900	SUB//
A1004699010	MW-11	EPA 903.1	SUB//	EPA 903.1	SUB//
A1004699010	MW-11	EPA Ra-05	SUB//	EPA Ra-05	SUB//

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Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

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

Certification I. D. # E83033

Work Order #: 1008145

Report Date: 08/30/10

Report to:

Advanced Environmental Laboratories, Inc.

528 S. North Lake Blvd., Ste. 1016

Altamonte Springs, FL 32701

Attention: Myrna Santiago

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

Signed 
Michael J. Naumann - President

Date 8/30/10

* Shawn Naumann signed for
Michael J. Naumann.

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Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1008145-01	1008145-02	1008145-03	1008145-04	1008145-05
Client I.D.	A1004699001	A1004699002	A1004699003	A1004699004	A1004699005
Gross Alpha	0.8U	1.4U	6.6	2.4U	1.6
Error +/-	0.4	1.0	1.9	1.6	1.0
MDL	0.8	1.4	1.9	2.4	1.1
EPA Method	900.0	900.0	900.0	900.0	900.0
Prep Date	08/23/10	08/23/10	08/23/10	08/23/10	08/23/10
Prep Time	06:36	06:36	06:36	06:36	06:36
Analysis Date	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10
Analysis Time	06:52	07:20	15:29	16:31	07:20
Analyst	MJN	MJN	MJN	MJN	MJN
Radium 226	0.3	0.4	1.2	1.4	0.3
Error +/-	0.1	0.2	0.3	0.3	0.2
MDL	0.1	0.1	0.1	0.1	0.2
EPA Method	903.1	903.1	903.1	903.1	903.1
Prep Date	08/19/10	08/19/10	08/19/10	08/19/10	08/19/10
Prep Time	10:12	10:12	10:12	10:12	10:12
Analysis Date	08/30/10	08/30/10	08/30/10	08/30/10	08/30/10
Analysis Time	12:38	12:38	12:38	12:38	12:38
Analyst	MJN	MJN	MJN	MJN	MJN
Radium 226	0.8U	0.8	0.8U	0.7U	0.7U
Error +/-	0.5	0.5	0.5	0.6	0.5
MDL	0.8	0.8	0.8	0.7	0.7
EPA Method	Ra-05	Ra-05	Ra-05	Ra-05	Ra-05
Prep Date	08/19/10	08/19/10	08/19/10	08/19/10	08/19/10
Prep Time	10:12	10:12	10:12	10:12	10:12
Analysis Date	08/27/10	08/27/10	08/27/10	08/27/10	08/27/10
Analysis Time	13:30	13:30	13:30	13:30	13:30
Analyst	PJ	PJ	PJ	PJ	PJ
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D. 1008145-06 1008145-07 1008145-08 1008145-09 1008145-10

Client I.D. A1004639006 A1004639007 A1004639008 A1004639009 A1004639010

Gross Alpha	1.3U	2.1U	8.4	11.0	15.4
Error +/-	1.0	1.5	2.1	2.1	2.3
MDL	1.3	2.1	2.3	1.7	1.4
EPA Method	900.0	900.0	900.0	900.0	900.0
Prep Date	08/23/10	08/23/10	08/23/10	08/23/10	08/23/10
Prep Time	06:36	06:36	08:36	06:36	06:36
Analysis Date	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10
Analysis Time	07:20	07:20	13:21	15:29	15:29
Analyst	MJN	MJN	MJN	MJN	MJN
Radium 226	0.4	0.7	2.7	1.7	3.0
Error +/-	0.2	0.2	0.4	0.3	0.4
MDL	0.1	0.1	0.1	0.1	0.2
EPA Method	903.1	903.1	903.1	903.1	903.1
Prep Date	08/19/10	08/19/10	08/19/10	08/19/10	08/19/10
Prep Time	10:12	10:12	10:12	10:12	10:12
Analysis Date	08/30/10	08/30/10	08/30/10	08/30/10	08/30/10
Analysis Time	13:40	13:40	13:40	13:40	13:40
Analyst	MJN	MJN	MJN	MJN	MJN
Radium 226	0.7U	0.7U	1.1	0.2U	0.9
Error +/-	0.4	0.5	0.5	0.5	0.5
MDL	0.7	0.7	0.7	0.7	0.7
EPA Method	Ra-06	Ra-06	Ra-06	Ra-06	Ra-06
Prep Date	08/19/10	08/19/10	08/19/10	08/19/10	08/19/10
Prep Time	10:12	10:12	10:12	10:12	10:12
Analysis Date	08/27/10	08/27/10	08/27/10	08/27/10	08/27/10
Analysis Time	13:30	13:30	14:40	14:40	14:40
Analyst	PJ	PJ	PJ	PJ	PJ
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l



Florida Radiochemistry Services, Inc.

Sample Login

Client:	Advanced Environmental Laboratories, Inc.	Date / Time Received	Work order #
Client Contact:	Myrna Santiago	08/18/10 12:21	1008145
Client P.O.			
Project I.D.	A1004699		

Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
1008145-01	A1004699001	08/12/10 10:10	Ga, Ra226, Ra228
1008145-02	A1004699002	08/13/10 10:40	Ga, Ra226, Ra228
1008145-03	A1004699003	08/13/10 12:30	Ga, Ra226, Ra228
1008145-04	A1004699004	08/13/10 11:40	Ga, Ra226, Ra228
1008145-05	A1004699005	08/12/10 16:00	Ga, Ra226, Ra228
1008145-06	A1004699006	08/13/10 14:00	Ga, Ra226, Ra228
1008145-07	A1004699007	08/12/10 13:45	Ga, Ra226, Ra228
1008145-08	A1004699008	08/12/10 12:20	Ga, Ra226, Ra228
1008145-09	A1004699009	08/12/10 14:55	Ga, Ra226, Ra228
1008145-10	A1004699010	08/13/10 09:50	Ga, Ra226, Ra228



Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Gross Alpha	1808145-02	08/24/10	<1.4	10.2	11.3	11.1	111	1.8
Radium 226	1808145-10	08/30/10	3.0	25.2	27.9	26.9	99	7.4
Radium 228	1808145-10	08/27/10	0.9	4.6	6.0	6.3	111	4.9

Quality Control Limits

% RPD

% Rec.

Gross Alpha	25.0	88-125
Radium 226	23.4	78-125
Radium 228	23.9	67-125

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO: MW-2	SAMPLE ID: MW-2	DATE: 8/13/10	

[illegible]

SAMPLED BY (PRINT) / AFFILIATION: H. L. Claytor, Colinas Group, Inc.				SAMPLED SIGNATURES: 			SAMPLING ESTIMATED AT: 10:31		SAMPLING ENDED AT: 10:40		
PUMP OR TUBING DEPTH IN WELL (feet): 26'				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: _____ mm		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					
MW-2	2	PE	1 Ltr	HNB3	None	—	Gross Alpha, RA228RA232		APP		
"	1	PE	250 ml.	H2S04	None	—	Total Ammonia Nitrate		APP		
"	1	PE	250 ml.	HNB3	None	—	Total Ammonia Nitrate		APP		
"	12	PE	500 ml. 2500	None	None	—	Chloride, Fluoride, Nitrate TDS		APP		

1014: Set dedicated 114" PE tub: 13 @ ~ 26' btoe and began purging @ ~ 1 gpm with a PP.
1018: WL 24.89' @ 1 gpm, GW is clear. DR is high @ 5.35 mgl. This well historically has high DO, will use optional stabilization criteria below if necessary.
1023: WL @ 24.89' @ 1 gpm, draw down is stable, GW is clear.
1025: WL 24.89' @ 1 gpm,

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: $\pm 5\%$; 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 ≤ 50 NTU, optionally ≤ 5 NTU or $\pm 50\%$ (whichever is greater).

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO: MW-4	SAMPLE ID: MW-4	DATE: 8/13/10	

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 26.2	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)											
= (36.35' feet - 26.2 feet) X 36 gallons/foot = 361.8 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 36 feet) + .125 gallons = .375 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~31'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~31'	PURGING INITIATED AT: 1207	PURGING ENDED AT: 1219	TOTAL VOLUME PURGED (gallons): 6							
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1215	4	4	.5	26.70	7.22	26.43	.587	.95	6.81	clear	none
1217	1	5	.5	26.70	7.19	26.41	.590	.95	4.34	clear	none
1219	1	6	.5	26.70	7.19	26.37	.591	.96	3.90	clear	none
no screen											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.10, 3" = 0.17, 4" = 0.25, 6" = 0.40, 8" = 0.64, 10" = 1.00, 12" = 1.44, 14" = 1.96, 16" = 2.56, 18" = 3.24, 20" = 4.00, 22" = 4.84, 24" = 5.76, 26" = 6.76, 28" = 7.84, 30" = 9.00											
TUBING INSIDE DIA. CAPACITY (Gal/FT): 1/8" = 0.0003, 3/16" = 0.0014, 1/4" = 0.0028, 5/16" = 0.0044, 3/8" = 0.0066, 1/2" = 0.0110, 5/8" = 0.0166											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: H. L. Claytor, Collins Group, Inc.		SAMPLING INITIATED AT: 1220		SAMPLING ENDED AT: 1230	
PUMP OR TUBING DEPTH IN WELL (feet): ~31'		SAMPLE PUMP FLOW RATE (ml per minute): < 250 ml		TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: (Y) N		FIELD FILTERED: (Y) N		FILTER SIZE: µm	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)
MW-4	2	PE	1 Ltr	HMB3	None
"	1	PE	250 mL	H2SO4	None
"	1	PE	250 mL	HMB3	None
"	2	PE	250 mL	None	None
				FINAL pH	
				—	
				Gross Alpha, RA226RA228	
				Ammonia	
				Metals	
				Chloride, Fluoride, Nitrate, TDS	
				ESP	

REMARKS:

1207: Inserted SS ESP and dedicated 3/8" tubing to ~31' BTOC and began purging @ 1.5 GPM.
 1211: WL 26.74' @ 1.5 GPM, Groundwater is clear
 1213: WL 26.70' @ 1.5 GPM, draw down is stable, groundwater is clear

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 = Sump Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

Notes: 1. The above do not constitute all the information required by Chapter 62-100, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3M):
 Temperature: ± 0.2 units; Conductance: $\pm 5\%$; Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2280-2), 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)

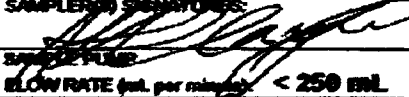
GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO: MW-4A	SAMPLE ID: MW-4A	DATE: 8/13/10	

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: foot to foot	STATIC DEPTH TO WATER (feet): 31.45	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' foot - 31.45' foot) X 0.0006 gallons/foot = 0.011 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME X 3 = 1.245 (only fill out if applicable)											
1 Equip Vol = .02 gallons + (.0006 gallons/foot X 45 foot) + .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: 1107	PURGING ENDED AT: 1129	TOTAL VOLUME PURGED (gallons): 11							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTU)	COLOR (describe)	ODOR (describe)
1125	9	9	.5	31.57	7.04	26.66	.648	.26	3.88	clear	none
1127	1	10	.5	31.57	7.04	26.66	.649	.24	3.25	clear	none
1129	1	11	.5	31.57	7.04	26.71	.650	.22	2.52	clear	none
no screen											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: H. L. Claytor, Colinas Group, Inc.				SAMPLER SIGNATURES: 				SAMPLING INITIATED AT: 1130		SAMPLING ENDED AT: 1140	
PUMP OR TUBING DEPTH IN WELL (feet): ~40'				SAMPLING PUMP FLOW RATE (gal. per minute): < 250 BRL				TUBING MATERIAL CODE: PE			
FIELD DECONTAMINATION: Y N				FIELD-FILTERED: Y N				FILTER SIZE: µm		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					
MW-4A	2	PE	1 Ltr	HNH3	None	—	Gross Alpha, RA226RA228		ESP		
"	1	PE	250 mL	HNH3	None	—	Total Ammonia		ESP		
"	1	PE	250 mL	HNH3	None	—	Metals		ESP		
"	+ 2	PE	250 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS		ESP		

REMARKS:

1107 Inserted SS ESP and dedicated 3/8" PE tubing to ~40' BTDC and began purging @ .5 GPM.

1122 WL @ 31.57' @ .5 GPM, WL is clear.

1124 WL @ 31.57' @ .5 GPM, draw down is stable.

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

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

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Draw); 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: ± 9%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

PURGING DATA

SAMPLING DATA

REMARKS:

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

Notes: 1. The above do not constitute all the information required by Chapter 62-100, F.A.C.

Wednesday, September 01, 2010 2:30:00 PM

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO.: MW-8A		SAMPLE ID: MW-8A	
		DATE: 8/13/10	

PURGING DATA

WELL 2" PVC		TUBING 3/8"		WELL SCREEN INTERVAL		STATIC DEPTH		PURGE PUMP TYPE			
DIAMETER (inches):		DIAMETER (inches):		DEPTH: feet to feet		TO WATER (feet): 33.0'		OR BAKER: 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 - 33.0' feet) X 0.006 gallons/foot = 0.103 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 = 0.02 gallons + (0.006 gallons/foot X 38' feet) + 0.125 gallons = 0.375 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~45'		FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~45'		PURGING INITIATED AT: 1315		PURGING ENDED AT: 1353		TOTAL VOLUME PURGED (gallons): 11.0			
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)
1315	10.5	10.5	1.25	33.03	7.65	25.10	248	7.79	14.6	Clear	None
1335	0.25	10.75	1.25	33.03	7.64	25.18	249	7.96	10.82	Clear	None
1353	0.25	11.0	1.25	33.04	7.63	25.37	250	7.99	7.84	Clear	None
no screen											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.68; 6" = 1.02; 8" = 1.47; 12" = 5.68											
TUBING INSIDE DIA. CAPACITY (Gal/ft): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0028; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: H. L. Claytor, Colinas Group, Inc.				SAMPLED BY SIGNATURE: 				SAMPLING INITIATED AT: 1354		SAMPLING ENDED AT: 1405	
PUMP OR TUBING DEPTH IN WELL (feet): ~45'				SAMPLING PUMP FLOW RATE (ml per minute): < 250 ml				TUBING MATERIAL CODE: PE			
FIELD DECONTAMINATION: Y ☒ N ☐				FIELD FILTERED: Y ☒ N ☐ FILTER SIZE: 0.45 µm				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					
MW-8A	2	PE	1 Ltr	HMB3	None	—	Gross Alpha, RAZORRA228		ESP		
"	1	PE	200 ml	H2SO4	None	—	Total Arsenic		ESP		
"	1	PE	200 ml	HMB3	None	—	Metals		ESP		
"	1	PE	600 ml	None	None	—	Chloride, Fluoride, Nitrate, TDS		ESP		

REMARKS:

1315: inserted SS ESP and 3/8" dedicated PE tubing to ~45' BTDC & began purging @ .75 GPM. This well historically is turbid @ beginning of purge, will over-purge to clean it up.

1335: WL 33.10' @ .75 GPM, ground water is clear

1340: WL 33.10' @ .75 GPM, ground water is clear, draw down is stable. Turbidity @ 15 NTUs.

1343: DO is high @ 7.96 mg/L, reduced flow to 1.25 GPM. This well historically has high DO, will use optional stabilization criteria below.

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 = Baker; BP = Bladder Pump; ESP = Electric Submersible Pump; TP = Peristaltic Pump
EQUIPMENT CODES: RFPF = Reverse Flow Peristaltic Pump; SM = Silt 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): pH: ± 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)

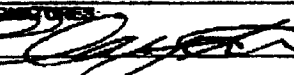
GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO: MW-8		SAMPLE ID: MW-8	
		DATE: 8/12/10	

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH 23.74 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)											
= (43.24' feet - 23.74' feet) X 0.0006 gallons/foot = 0.02 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME X 3 = 1.289 gallons (only fill out if applicable)											
1 Equip Vol = 0.02 gallons + (0.006 gallons/foot X 43' feet) + 0.125 gallons = 0.28 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~38'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~38'	PURGING INITIATED AT: 1318	PURGING ENDED AT: 1334	TOTAL VOLUME PURGED (gallons): 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 (NTU)	COLOR (describe)	ODOR (describe)
1330	6	6	0.5	23.78	7.24	24.81	392	3.84	9.25	Clear	None
1332	1	7	0.5	23.78	7.24	24.79	391	3.86	6.86	Clear	None
1334	1	8	0.5	23.78	7.24	24.80	389	3.90	4.99	Clear	None
No stream											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal/ft): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0028; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: H. L. Claytor, Collins Group, Inc.				SAMPLER SIGNATURES: 				SAMPLING INITIATED AT: 1335		SAMPLING ENDED AT: 1345	
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				FIELD FILTERED: Y ☒ N ☐ Filteration Equipment Type: _____				FILTER SIZE: _____ µm		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					
MW-8	2	PE	1 Ltr	HNDS	None	—	Gross Alpha, RA228RA228		ESP		
"	1	PE	250 mL	HNDS	None	—	Total Ammonia		ESP		
"	1	PE	140 mL	HNDS	None	—	Metals		ESP		
"	2	PE	880 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS		ESP		

REMARKS:

1318: Inserted 25 ESP and dedicated 3/8" P2 tubing to ~38' GOC and began purging @ 0.5 gpm

1323: WL 23.78' @ 0.5 gpm, GW is clear.

1326: WL 23.78' @ 0.5 gpm, DO is high @ 3.97 mg/L. This well historically has high DO. Will use optional stabilization water below.

1329: DO is still high @ 3.85 mg/L. WL 23.78' @ 0.5 gpm, drawdown is stable.

Notes: 1) Used a graduated 5-gallon bucket and tried to measure purge volumes
2) Packed samples as soon as 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 = Bubbler Pump; ESP = Electric Submersible Pump; FP = Peristaltic Pump
EQUIPMENT CODES: RPPP = Reverse Flow Peristaltic Pump; SM = Shave Method (Tubing Gently Drains); 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 2.1): pH: ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2203-2), optionally, ± 0.2 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: 8/12/10	

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH 30.87 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											
= (50.17' feet - 30.87' feet) X 0.0006 gallons/foot = 0.125 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME X 1.335 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: 10:10	PURGING ENDED AT: 12:09	TOTAL VOLUME PURGED (gallons): 4.3							
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:04	10.25	40.25	.75	33.67	6.74	25.52	.882	.21	10.46	Clear	None
12:06	1.5	41.75	.75	33.67	6.74	25.13	.885	.13	8.60	Clear	None
12:08	1.5	43	.75	33.67	6.75	25.39	.883	.10	8.05	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" = 0.68; 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" = 0.0028; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: H. L. Clayton, Collins Group, Inc.				SAMPLED FOR: USEPA				SAMPLING INITIATED AT: 12:09		SAMPLING ENDED AT: 12:20	
PUMP OR TUBING DEPTH IN WELL (feet): ~45'				SAMPLE PUMP FLOW RATE (g/L per minute):				TUBING MATERIAL CODE: PE			
FIELD DECONTAMINATION: (Y) N				FIELD FILTERED: Y (N) FILTER SIZE: µm				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					
MW-9A	2	PE	1 Lit	HNH3	None	---	Gross Alpha, RA220RA222		ESP		
"	1	PE	250 mL	HNH3	None	---	Total Ammonia		ESP		
"	1	PE	112.5 mL	HNH3	None	---	Metals		ESP		
"	2	PE	500 mL	None	None	---	Chloride, Fluoride, Nitrate, TDS		ESP		

REMARKS:

10:40: Inserted 55 ESP and dedicated 3/8" PE tubing to ~45' GTC and began purging @ .5 gpm. This well historically is extremely turbid at beginning of purge requiring our purging to clean it up.

11:05: Turbidity is @ 32 NTUs and slowly dropping. Continuing to purge.

11:15: Turbidity is up to 45 NTUs, continuing to purge. Increased flow to .75 gpm.

11:25: Gw is extremely turbid again, reduced flow to .1 gpm.

11:30: Turbidity is @ 142 NTUs, increased flow to .75 gpm.

11:45: Turbidity is slowly dropping, is @ 66 NTUs. Continuing to purge @ .75 gpm. (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 EQUIPMENT CODES:	APP = After Peristaltic Pump; B = Bailer; BP = Booster Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SSM = Squeeze 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 3M): ± 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)

11-25

GROUNDWATER SAMPLING LOG

SITE NAME: Sumter County Landfill		SITE LOCATION: Sumterville, FL	
WELL NO: MW-10	SAMPLE ID: MW-10	DATE: 8/12/10	

PURGING DATA

WELL 2" PVC	TUBING 3/8"	WELL SCREEN INTERVAL	STATIC DEPTH 23.86	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: ESP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
(only fill out if applicable)											
= (45.35' feet - 23.86' feet) X 4.15 gallons/foot = 92.5 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 = .425 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~40	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~40	PURGING INITIATED AT: 1439	PURGING ENDED AT: 1443	TOTAL VOLUME PURGED (gallons): 19.25							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (mc/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTU)	COLOR (describe)	ODOR (describe)
1439	17.25	17.25	.5	25.04	7.14	25.26	.562	1.41	9.34	Clear	None
1441	1.0	18.25	.5	25.04	7.16	25.31	.562	1.20	11.06	Clear	None
1443	1.0	19.25	.5	25.04	7.15	25.35	.562	1.23	9.29	Clear	None
									No Screen		
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.68											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 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: H. L. Claytor, Collins Group, Inc.		SAMPLER(S) IDENTIFIER(S): [Signature]		SAMPLING INITIATED AT: 1444	SAMPLING ENDED AT: 1455
PUMP OR TUBING DEPTH IN WELL (feet): ~40		FLOW RATE (ml per minute): < 250 ml		MATERIAL CODE: PE	
FIELD DECONTAMINATION: Y ☒ N ☐		FIELD FILTERED: Y ☒ N ☐ FILTER SIZE: 1µm		DUPLICATE: Y ☒ N ☐	
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)
MW-10	2	PE	1 Ltr	HNO3	None
"	1	PE	250 ml	H2SO4	None
"	1	PE	14.540 ml	HNO3	None
"	2	PE	500 ml	None	None
INTENDED ANALYSIS AND/OR METHOD			SAMPLING EQUIPMENT CODE		
Gross Alpha, RA228RA228			ESP		
Total Ammonia			ESP		
Metals			ESP		
Chloride, Fluoride, Nitrate, TDS			ESP		

REMARKS:
 1412: Inserted 55 ESP and dedicated 3/8" PE tubing to ~40' bpx and began purging @ .75 gpm. This well is historically turbid @ beginning of purge requiring over purging to clean it up.
 1415: GW is extremely turbid, continuing to purge.
 1424: Turbidity is @ 46 NTUs, continuing purge.
 1427: Turbidity @ 37 NTUs, reduced flow to 15 gpm.
 1434: Turbidity @ 14 NTUs, WL 25.04' and is stable.

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

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

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

Notes: 1. The above do not constitute all the information required by Chapter 62-108, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3H): ± 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: 8/13/10	

PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 26.02	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) $= (40.15' \text{ feet} - 26.02' \text{ feet}) \times \text{gallons/foot} = \text{gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME X 3 = 1.75 (only fill out if applicable) $1 \text{ Equip Vol} = .02 \text{ gallons} + (.006 \text{ gallons/foot} \times 40' \text{ feet}) + .125 \text{ gallons} = .405 \text{ gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): ~35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): ~35'	PURGING INITIATED AT: 0904	PURGING ENDED AT: 0937	TOTAL VOLUME PURGED (gallons): 15.4							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0933	14.6	14.6	.2	26.14	6.66	25.68	.493	1.97	12.8	clear	none
0935	.4	15	.2	26.15	6.69	25.49	.501	1.99	10.55	clear	none
0937	.4	15.4	.2	26.14	6.69	25.53	.502	1.92	8.81	clear	none
NO SCREEN											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.10; 3" = 0.37; 4" = 0.68; 6" = 1.02; 8" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal/ft): 1/8" = 0.0008; 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: H. L. Claytor, Collins Group, Inc.		SAMPLER SIGNATURE: 		SAMPLING INITIATED AT: 0938	SAMPLING ENDED AT: 0950
PUMP OR TUBING DEPTH IN WELL (feet): ~35'		FLOW RATE (ml per minute): < 250 mL		TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: (Y) N		FIELD FILTERED: (Y) N Filter Equipment Type: N		FILTER SIZE: µm	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)
MW-11	2	PE	1 Ltr	HN03	None
"	1	PE	500 mL	HN03	None
"	1	PE	500 mL	HN03	None
"	12	PE	500 mL	None	None
INTENDED ANALYSIS AND/OR METHOD				SAMPLING EQUIPMENT CODE	
Gross Alpha, RA226, RA228				ESP	
Total Ammonia				ESP	
Metals				ESP	
Chloride, Fluoride, Nitrate, TDS				ESP	

REMARKS:

0904: Inserted SS ESP and probe to ~35' BTAC and began purging at .75 gpm. This well historically is turbid @ beginning of purge requiring over purging to clean up.
0910: Flow is extremely turbid, continuing to purge.
0914: turbidity has dropped to 18 NTUs. WL 26.22' @ .75 gpm.
0920: DO is high @ 2.2 mg/L, reducing flow to .2 gpm.
0926: DO slightly high @ 1.76 mg/L, continuing to purge.
0930: DO @ 1.90 mg/L and stable. 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 = Silica; T = Teflon; O = Other (Specify)
SAMPLING/PURGING EQUIPMENT CODES:	APP = After Purge Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; FP = Peristaltic Pump; RFP = Reverse Flow Peristaltic Pump; SM = Steam Method (Testing 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 3H): ± 0.2 units; Temperature: ± 0.2 degrees C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± .02 mg/L or ± 10% (whichever is greater); Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater).

PURGING DATA

SAMPLING DATA

REMARKS:

Field decont. SS ESP, WL probe and 3 gallon PE bucket 2AW
DEP SOP 001/01, RL 1000. Placed SS ESP and WL probe in PE
bucket and poured 1 gallon of DI water over ESP and WL
probe. Started pump and pumped DI water through pump
and over WL probe for ~ 2 minutes then collected EGB samples

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

Notes: 1. The above do not constitute all the information required by Chapter 62-100, F.A.C.

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

Chain of Custody

Circle if Applicable:

H&N

SHORT HOLD



Approved
for circulation

Document 150824 - HBN 25104

Project Reference Number : A1004699

Results Requested By 8/28/2010

Myrna Santiago
Advanced Environmental Laboratories, Inc
528 S. North Lake Blvd, Suite 1018
Altamonte Springs, FL 32701
Phone (407)937-1594
Fax (407)937-1597

Sample ID		Time	Unit	Notes	SCM	Y/B	Y/B	Y/B	LAB USE ONLY
1	A1004-898001	8/12/2010 10:10	ms	Water	2	X	X	X	
2	A1004-898002	8/13/2010 10:40	ms	Water	2	X	X	X	
3	A1004-898003	8/13/2010 12:30	ms	Water	2	X	X	X	
4	A1004-898004	8/13/2010 11:40	ms	Water	2	X	X	X	
5	A1004-898005	8/12/2010 15:00	ms	Water	2	X	X	X	
6	A1004-898006	8/13/2010 14:05	ms	Water	2	X	X	X	
7	A1004-898007	8/12/2010 13:45	ms	Water	2	X	X	X	
8	A1004-898008	8/12/2010 12:20	ms	Water	2	X	X	X	

Comments:

Preservative Codes	Transfers	Released By	Date/Time	Received By	Date/Time
HMO3 = HMO3	1	<i>[Signature]</i>	8/16/10 11:55	<i>[Signature]</i>	
	2			S. H. H. H. H.	8/16/10 12:12
	3				
	4				
	5				

Chain of Custody

Circle if Applicable:

ISUR

SHORT HOLD



സംഗ്രഹം
സംഗ്രഹം

Document 150624 - HBN 25104

Project Reference Number : A1004699

Results Requested By 8/28/2010

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Sub 201

Orlando, FL 32812-2517

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[illegible]

Comments:

Transfers	Released By	Date/Time	Received By	Date/Time
1			Shannon FRS	8/24/10 12:26
2				
3				
4				
5				

Friday, August 13, 2010 4:08:37 PM

Page 2 of 2

Aug. 30. 2010 5:06PM

Florida Radiochemistry Services,

No. 0826 P. 1/1

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS	
8/12/10	0950	A	4.01	4.01		Yes	IC	IC	pH
		B	7.00	7.00					pH
		C	1.500	1.500					Cond
		-	-	2.91					DO
		-	-	27.43					Temp
		D	1	1.00					Turb
		E	10	10.00					Turb
8/12/10	1010	A	4.01	3.99		Yes	ICV	IC	pH
		B	7.00	7.02					pH
		C	1.500	1.48					Cond
		-	-	7.88					DO
		-	-	27.63					Temp
		D	1	1.00					Turb
		E	10	10.02					Turb
8/12/10	1615	A	4.01	3.96		Yes	CC	IC	pH
		B	7.00	-					pH
		C	1.500	1.486					Cond
		-	-	7.61					DO
		-	-	29.56					Temp
		D	1	-					Turb
		E	10	9.92					Turb

Field Instrument Calibration Records

INSTRUMENT (MAKE/MODEL#) YSI 556/Lamotte 2020e INSTRUMENT # _____

PARAMETERS:

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

STANDARDS: [Bracket calibrated meters pH 4 – 7 and Turbidity 1 – 10 NTU's]

Standard A Oakton pH Standard 4.01 Units Exp: 10/2011

Standard B Oakton pH Standard 7.00 Units Exp: 4/2012

Standard C Oakton Conductivity Standard 1.500 mS/cm Exp: 9/2010

Standard D Lamotte 1 NTU Standard Exp: 3/2011

Standard E Lamotte 10 NTU Standard Exp: 3/2011

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS	
8/13/10	0820	A	4.01	4.01		Yes	IC	JPC	pH
		B	7.00	7.00					pH
		C	1.500	1.500					Cond
		-	-	8.06					DO
		-	-	26.40					Temp
		D	1	.99					Turb
8/13/10	0836	E	10	10.05				JPC	Turb
		A	4.01	3.99		Yes	ICV		pH
		B	7.00	6.99					pH
		C	1.500	1.494					Cond
		-	-	8.05					DO
		-	-	26.86					Temp
8/13/10	1415	D	1	1.07				JPC	Turb
		E	10	10.01					Turb
		A	4.01	-		Yes	CC		pH
		B	7.00	6.92					pH
		C	1.500	1.492					Cond
		-	-	7.67					DO
		-	-	28.96					Temp
		D	1	-					Turb
		E	10	9.95					Turb