

February 27, 2013

Rick Potts  
The Colinas Group, Inc.  
377 Maitland Avenue  
Suite 2012  
Altamonte Springs, FL 32701

RE: Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Dear Rick Potts:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 13, 2013. 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,



Myrna Santiago  
MSantiago@AELLab.com

Enclosures

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## SAMPLE SUMMARY

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID	Sample ID	Matrix	Date Collected	Date Received
A1301338001	MW-10	Water	2/12/2013 10:47	2/13/2013 13:57
A1301338002	MW-11	Water	2/12/2013 09:40	2/13/2013 13:57
A1301338003	MW-2	Water	2/12/2013 11:35	2/13/2013 13:57
A1301338004	MW-4	Water	2/12/2013 13:00	2/13/2013 13:57
A1301338005	MW-4A	Water	2/13/2013 09:11	2/13/2013 13:57
A1301338006	MW-4B	Water	2/13/2013 09:53	2/13/2013 13:57
A1301338007	MW-6A	Water	2/13/2013 12:03	2/13/2013 13:57
A1301338008	MW-8	Water	2/12/2013 10:10	2/13/2013 13:57
A1301338009	MW-9A	Water	2/13/2013 10:55	2/13/2013 13:57
A1301338010	EQ BLANK	Water	2/13/2013 08:40	2/13/2013 13:57

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338001**  
Sample ID: **MW-10**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/12/13 10:47

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	642	umhos/cm		1			2/12/2013 10:36	A^
Dissolved Oxygen	0.62	mg/L		1			2/12/2013 10:36	A^
Groundwater Elevation	43.99	feet		1			2/12/2013 10:36	A^
Temperature	25.04	°C		1			2/12/2013 10:36	A^
Turbidity	6.55	NTU		1			2/12/2013 10:36	A^
pH	6.88	pH unit		1			2/12/2013 10:36	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B Analysis, Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Aluminum	170	ug/L	I	1	200	61	2/20/2013 18:17	J
Barium	14	ug/L		1	2.0	0.28	2/20/2013 18:17	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:17	J
Cadmium	0.53	ug/L	I	1	0.60	0.32	2/20/2013 18:17	J
Chromium	0.74	ug/L	I	1	4.0	0.50	2/20/2013 18:17	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:17	J
Iron	430	ug/L		1	200	38	2/22/2013 18:22	J
Manganese	22	ug/L		1	1.0	0.24	2/20/2013 18:17	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:17	J
Sodium	8.1	mg/L	V	1	0.20	0.026	2/20/2013 18:17	J
Vanadium	11	ug/L		1	1.5	0.18	2/20/2013 18:17	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:17	J
Analysis Desc: SW846 6020B Analysis, Total			Preparation Method: SW-846 3010A Analytical Method: SW-846 6020					
Antimony	2.6	ug/L	V	1	0.60	0.073	2/26/2013 01:34	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 01:34	J
Copper	0.10	ug/L	U	1	7.0	0.10	2/26/2013 01:34	J
Lead	0.47	ug/L	I	1	0.70	0.076	2/26/2013 01:34	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 01:34	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 01:34	J
Thallium	0.27	ug/L		1	0.20	0.067	2/26/2013 01:34	J
Analysis Desc: SW846 7470A Analysis, Water			Preparation Method: SW-846 7470A Analytical Method: SW-846 7470A					
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:18	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338001**

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

Sample ID: **MW-10**

Date Collected: 02/12/13 10:47

Sample Description:

Location:

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

Lab ID: **A1301338002**

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

Sample ID: **MW-11**

Date Collected: 02/12/13 09:40

Sample Description:

Location:

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

## METALS

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

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

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338002**  
Sample ID: **MW-11**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/12/13 09:40

Sample Description:

Location:

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

Analysis Desc: SW846 6020B  
Analysis, Total

Preparation Method: SW-846 3010A  
Analytical Method: SW-846 6020

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

Analysis Desc: SW846 7470A  
Analysis, Water

Preparation Method: SW-846 7470A  
Analytical Method: SW-846 7470A

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

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

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

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.089	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
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Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	190	mg/L		1	10	10	2/15/2013 15:30	A
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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	259	umhos/cm		1			2/12/2013 11:18	A^
Dissolved Oxygen	6.42	mg/L		1			2/12/2013 11:18	A^
Groundwater Elevation	43.88	feet		1			2/12/2013 11:18	A^
Temperature	26.76	°C		1			2/12/2013 11:18	A^
Turbidity	3.33	NTU		1			2/12/2013 11:18	A^
pH	7.03	pH unit		1			2/12/2013 11:18	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B Analysis, Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 18:47	J
Barium	13	ug/L		1	2.0	0.28	2/20/2013 18:47	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:47	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 18:47	J
Chromium	0.63	ug/L	I	1	4.0	0.50	2/20/2013 18:47	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:47	J
Iron	38	ug/L	U	1	200	38	2/22/2013 18:41	J
Manganese	1.4	ug/L		1	1.0	0.24	2/20/2013 18:47	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:47	J
Sodium	3.0	mg/L	V	1	0.20	0.026	2/20/2013 18:47	J
Vanadium	1.1	ug/L	I	1	1.5	0.18	2/20/2013 18:47	J
Zinc	11	ug/L		1	10	2.0	2/20/2013 18:47	J
Analysis Desc: SW846 6020B Analysis, Total			Preparation Method: SW-846 3010A Analytical Method: SW-846 6020					
Antimony	2.3	ug/L	V	1	0.60	0.073	2/26/2013 20:43	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 20:43	J
Copper	0.48	ug/L	I	1	7.0	0.10	2/26/2013 20:43	J
Lead	0.13	ug/L	I	1	0.70	0.076	2/26/2013 20:43	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 20:43	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 20:43	J
Thallium	0.16	ug/L	I	1	0.20	0.067	2/26/2013 20:43	J
Analysis Desc: SW846 7470A Analysis, Water			Preparation Method: SW-846 7470A Analytical Method: SW-846 7470A					
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:39	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338003**

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

Sample ID: **MW-2**

Date Collected: 02/12/13 11:35

Sample Description:

Location:

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

Lab ID: **A1301338004**

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

Sample ID: **MW-4**

Date Collected: 02/12/13 13:00

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	526	umhos/cm		1			2/12/2013 12:39	A^
Dissolved Oxygen	1.21	mg/L		1			2/12/2013 12:39	A^
Groundwater Elevation	43.68	feet		1			2/12/2013 12:39	A^
Temperature	26.23	°C		1			2/12/2013 12:39	A^
Turbidity	0.29	NTU		1			2/12/2013 12:39	A^
pH	7.24	pH unit		1			2/12/2013 12:39	A^

### METALS

Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 18:52	J
Barium	7.2	ug/L		1	2.0	0.28	2/20/2013 18:52	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 18:52	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 18:52	J
Chromium	1.1	ug/L	I	1	4.0	0.50	2/20/2013 18:52	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338004**  
Sample ID: **MW-4**

Date Received: 02/13/13 13:57 Matrix: Water  
Date Collected: 02/12/13 13:00

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 18:52	J
Iron	57	ug/L	I	1	200	38	2/22/2013 18:46	J
Manganese	5.8	ug/L		1	1.0	0.24	2/20/2013 18:52	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 18:52	J
Sodium	32	mg/L	V	1	0.20	0.026	2/20/2013 18:52	J
Vanadium	12	ug/L		1	1.5	0.18	2/20/2013 18:52	J
Zinc	12	ug/L		1	10	2.0	2/20/2013 18:52	J

Analysis Desc: SW846 6020B  
Analysis, Total

Preparation Method: SW-846 3010A  
Analytical Method: SW-846 6020

Antimony	1.9	ug/L	V	1	0.60	0.073	2/26/2013 20:52	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 20:52	J
Copper	1.2	ug/L	I	1	7.0	0.10	2/26/2013 20:52	J
Lead	0.12	ug/L	I	1	0.70	0.076	2/26/2013 20:52	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 20:52	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 20:52	J
Thallium	0.19	ug/L	I	1	0.20	0.067	2/26/2013 20:52	J

Analysis Desc: SW846 7470A  
Analysis, Water

Preparation Method: SW-846 7470A  
Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:41	J
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### WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	13	mg/L		1	7.5	0.78	2/13/2013 19:39	A
Fluoride	0.16	mg/L	I	1	0.50	0.075	2/13/2013 19:39	A
Nitrate	5.2	mg/L		1	0.50	0.051	2/13/2013 19:39	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.084	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
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Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	270	mg/L		1	10	10	2/15/2013 15:30	A
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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338005**

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

Sample ID: **MW-4A**

Date Collected: 02/13/13 09:11

Sample Description:

Location:

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

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

Sample Description:

Location:

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

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

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

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	119	umhos/cm		1			2/13/2013 09:40	A^
Dissolved Oxygen	6	mg/L		1			2/13/2013 09:40	A^
Groundwater Elevation	43.86	feet		1			2/13/2013 09:40	A^
Temperature	25.62	°C		1			2/13/2013 09:40	A^
Turbidity	4.7	NTU		1			2/13/2013 09:40	A^
pH	8.93	pH unit		1			2/13/2013 09:40	A^

### METALS

Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	260	ug/L		1	200	61	2/20/2013 19:23	J
Barium	3.4	ug/L		1	2.0	0.28	2/20/2013 19:23	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:23	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:23	J
Chromium	2.5	ug/L	I	1	4.0	0.50	2/20/2013 19:23	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338006**

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

Sample ID: **MW-4B**

Date Collected: 02/13/13 09:53

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:23	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:15	J
Manganese	0.24	ug/L	U	1	1.0	0.24	2/20/2013 19:23	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:23	J
Sodium	8.5	mg/L	V	1	0.20	0.026	2/20/2013 19:23	J
Vanadium	15	ug/L		1	1.5	0.18	2/20/2013 19:23	J
Zinc	10	ug/L		1	10	2.0	2/20/2013 19:23	J

Analysis Desc: SW846 6020B

Preparation Method: SW-846 3010A

Analysis, Total

Analytical Method: SW-846 6020

Antimony	1.6	ug/L	V	1	0.60	0.073	2/26/2013 21:11	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:11	J
Copper	0.25	ug/L	I	1	7.0	0.10	2/26/2013 21:11	J
Lead	0.19	ug/L	I	1	0.70	0.076	2/26/2013 21:11	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:11	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:11	J
Thallium	0.10	ug/L	I	1	0.20	0.067	2/26/2013 21:11	J

Analysis Desc: SW846 7470A

Preparation Method: SW-846 7470A

Analysis, Water

Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:46	J
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### WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	4.1	mg/L	I	1	7.5	0.78	2/13/2013 20:55	A
Fluoride	0.13	mg/L	I	1	0.50	0.075	2/13/2013 20:55	A
Nitrate	2.0	mg/L		1	0.50	0.051	2/13/2013 20:55	A

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.072	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
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Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	70	mg/L		1	10	10	2/15/2013 15:30	A
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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	255	umhos/cm		1			2/13/2013 11:50	A^
Dissolved Oxygen	7.32	mg/L		1			2/13/2013 11:50	A^
Groundwater Elevation	44.09	feet		1			2/13/2013 11:50	A^
Temperature	24.7	°C		1			2/13/2013 11:50	A^
Turbidity	10.6	NTU		1			2/13/2013 11:50	A^
pH	7.73	pH unit		1			2/13/2013 11:50	A^
<b>METALS</b>								
Analysis Desc: SW846 6010B Analysis, Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 19:28	J
Barium	2.2	ug/L		1	2.0	0.28	2/20/2013 19:28	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:28	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:28	J
Chromium	3.3	ug/L	I	1	4.0	0.50	2/20/2013 19:28	J
Cobalt	0.60	ug/L	U	1	4.0	0.60	2/20/2013 19:28	J
Iron	38	ug/L	U	1	200	38	2/22/2013 19:19	J
Manganese	0.24	ug/L	U	1	1.0	0.24	2/20/2013 19:28	J
Nickel	1.1	ug/L	U	1	6.5	1.1	2/20/2013 19:28	J
Sodium	3.1	mg/L	V	1	0.20	0.026	2/20/2013 19:28	J
Vanadium	7.6	ug/L		1	1.5	0.18	2/20/2013 19:28	J
Zinc	10	ug/L		1	10	2.0	2/20/2013 19:28	J
Analysis Desc: SW846 6020B Analysis, Total			Preparation Method: SW-846 3010A Analytical Method: SW-846 6020					
Antimony	1.5	ug/L	V	1	0.60	0.073	2/26/2013 21:20	J
Arsenic	0.36	ug/L	U	1	1.0	0.36	2/26/2013 21:20	J
Copper	0.16	ug/L	I	1	7.0	0.10	2/26/2013 21:20	J
Lead	0.12	ug/L	I	1	0.70	0.076	2/26/2013 21:20	J
Selenium	2.2	ug/L	U	1	5.0	2.2	2/26/2013 21:20	J
Silver	0.059	ug/L	U	1	0.30	0.059	2/26/2013 21:20	J
Thallium	0.14	ug/L	I	1	0.20	0.067	2/26/2013 21:20	J
Analysis Desc: SW846 7470A Analysis, Water			Preparation Method: SW-846 7470A Analytical Method: SW-846 7470A					
Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:48	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338007**

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

Sample ID: **MW-6A**

Date Collected: 02/13/13 12:03

Sample Description:

Location:

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

Lab ID: **A1301338008**

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

Sample ID: **MW-8**

Date Collected: 02/12/13 10:10

Sample Description:

Location:

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: FIELD - Conductance			Analytical Method: DISRES					
Conductance	342	umhos/cm		1			2/12/2013 09:53	A^
Dissolved Oxygen	4.55	mg/L		1			2/12/2013 09:53	A^
Groundwater Elevation	45.14	feet		1			2/12/2013 09:53	A^
Temperature	24.01	°C		1			2/12/2013 09:53	A^
Turbidity	0.24	NTU		1			2/12/2013 09:53	A^
pH	7.28	pH unit		1			2/12/2013 09:53	A^

### METALS

Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Aluminum	61	ug/L	U	1	200	61	2/20/2013 19:33	J
Barium	3.6	ug/L		1	2.0	0.28	2/20/2013 19:33	J
Beryllium	0.13	ug/L	U	1	0.30	0.13	2/20/2013 19:33	J
Cadmium	0.32	ug/L	U	1	0.60	0.32	2/20/2013 19:33	J
Chromium	3.1	ug/L	I	1	4.0	0.50	2/20/2013 19:33	J

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

Sample Description:

Location:

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

Analysis Desc: SW846 6020B  
Analysis, Total

Preparation Method: SW-846 3010A  
Analytical Method: SW-846 6020

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

Analysis Desc: SW846 7470A  
Analysis, Water

Preparation Method: SW-846 7470A  
Analytical Method: SW-846 7470A

Mercury	0.014	ug/L	U	1	0.10	0.014	2/22/2013 11:50	J
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### WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

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

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.067	mg/L	I	1	0.10	0.025	2/19/2013 15:29	T
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Analysis Desc: Tot Dissolved  
Solids,SM2540C

Analytical Method: SM 2540C

Total Dissolved Solids	190	mg/L		1	10	10	2/15/2013 15:30	A
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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

Sample Description:

Location:

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

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338009**

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

Sample ID: **MW-9A**

Date Collected: 02/13/13 10:55

Sample Description:

Location:

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

Lab ID: **A1301338010**

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

Sample ID: **EQ BLANK**

Date Collected: 02/13/13 08:40

Sample Description:

Location:

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

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## ANALYTICAL RESULTS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

Lab ID: **A1301338010**

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

Sample ID: **EQ BLANK**

Date Collected: 02/13/13 08:40

Sample Description:

Location:

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

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## ANALYTICAL RESULTS QUALIFIERS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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### PARAMETER QUALIFIERS

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

### LAB QUALIFIERS

- A DOH Certification #E53076(AEL-A)(FL NELAC Certification)
- A^ Not Certified
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)
- T DOH Certification #E84589(AEL-T)(FL NELAC Certification)

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### QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

METHOD BLANK: 1159157

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

LABORATORY CONTROL SAMPLE: 1159158

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

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

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

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

METHOD BLANK: 1160012

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

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## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

METHOD BLANK: 1160012

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

LABORATORY CONTROL SAMPLE & LCSD: 1160013 1160014

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

LABORATORY CONTROL SAMPLE & LCSD: 1160013 1160014

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

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

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

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## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

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

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

QC Batch: WCAa/1155

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Prepared:

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

METHOD BLANK: 1161114

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

LABORATORY CONTROL SAMPLE: 1161115

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

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## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

SAMPLE DUPLICATE: 1161116

Original: A1301338002

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

METHOD BLANK: 1161330

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

LABORATORY CONTROL SAMPLE & LCSD: 1161331

1161332

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1161333

1161334

Original: A1301338001

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

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## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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

QC Batch: DGMj/1197

Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A

Prepared: 02/22/2013 07:15

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

METHOD BLANK: 1162241

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

LABORATORY CONTROL SAMPLE & LCSD: 1162242 1162243

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

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

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

QC Batch: WCAa/1178

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Prepared:

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

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## QUALITY CONTROL DATA

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

METHOD BLANK: 1163435

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

LABORATORY CONTROL SAMPLE: 1163436

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

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

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

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

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

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## QUALITY CONTROL DATA QUALIFIERS

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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### QUALITY CONTROL PARAMETER QUALIFIERS

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1301338 Sumter Co Landfill 1st QTR MW

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

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Sumter Co. Landfill - GW Sampling

CLIENT NAME:	The Colinas Group, Inc.
ADDRESS:	377 Maitland Ave Suite 2012
	Altamonte Springs, Florida 32701
PHONE:	407-622-8176
FAX:	407-622-8196
CONTACT:	Date Clayton
SAMPLED BY:	Date Clayton
TURN AROUND TIME:	STANDARD <input checked="" type="checkbox"/> RUSH <input type="checkbox"/>

P.O. NUMBER/PROJECT NUMBER:	P-468
PROJECT LOCATION:	Sumterville, FL
REMARKS/SPECIAL INSTRUCTIONS:	Trip blank 1 - Voc's only

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	ANALYSIS REQUIRED		PRESERVATION	Gross Alpha	Ra 226 + Ra 228	Zn, Se, V, Zn	TDS	Ammonia	F, Cl, NO3	3-40 ml Vials	3-40 ml Vials	LABORATORY I.D. NUMBER
			DATE	TIME			SIZE & TYPE	DATE										
MW-10			2/27/13	1047	W	12				X	X	X	X	X	X	X	X	01
MW-11			2/27/13	0940	W	12				X	X	X	X	X	X	X	X	02
MW-2			2/27/13	1135	W	12				X	X	X	X	X	X	X	X	03
MW-4			2/27/13	1300	W	12				X	X	X	X	X	X	X	X	04
MW-4A			2/27/13	0911	W	12				X	X	X	X	X	X	X	X	05
MW-4B			2/27/13	0953	W	12				X	X	X	X	X	X	X	X	06
MW-6A			2/27/13	1203	W	12				X	X	X	X	X	X	X	X	07
MW-8			2/27/13	1010	W	12				X	X	X	X	X	X	X	X	08
MW-9A			2/27/13	1055	W	12				X	X	X	X	X	X	X	X	09
EQUIPMENT BLANK			2/27/13	0840	W	12				X	X	X	X	X	X	X	X	10
TRIP-BLANK-1	2/13		2/27/13	-	DI	1										X	X	
TRIP-BLANK-2	610		2/27/13	-	DI	1										X	X	

Received on Ice	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temp taken from sample	<input type="checkbox"/> Temp from temp blank	Where required, pH checked	Device used for measuring Temp by unique identifier (circle IR temp gun used)	Temperature when received	4	(in degrees celcius)
Form revised	2/8/08							
Requisitioned by:	Date	Time	Received by:	Date	Time	FOR DRINKING WATER USE: (When PWS information not otherwise supplied)		
1	2/27/13	1:57	Brandor Otter	2/27/13	1:57			
2								

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): <b>24.89</b>	PURGE PUMP TYPE OR BAILER: <b>ESPA PP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= ( <b>45.35'</b> feet - <b>24.89'</b> feet ) X <b>0.0026</b> gallons/foot = <b>0.054</b> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = <b>0.054</b> gallons + ( <b>0.0026</b> gallons/foot X <b>45'</b> feet ) + <b>.125</b> gallons = <b>0.242</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	PURGING INITIATED AT: <b>1034</b>	PURGING ENDED AT: <b>1036</b>	TOTAL VOLUME PURGED (gallons): <b>1.20</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1032	.80	.80	.1	24.83	6.89	24.98	6.52	0.77	6.47	Clear	Sulfur
1034	.2	1.00	.1	24.83	6.89	25.03	6.47	0.71	7.28	Clear	Same
1036	.2	1.20	.1	24.83	6.88	25.04	6.42	0.62	6.55	Clear	Same
No Screen											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>				SAMPLER SIGNATURES: 				SAMPLING INITIATED AT: <b>1037</b>		SAMPLING ENDED AT: <b>1047</b>	
PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>				SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>				TUBING		MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(Y) N</b>				FIELD-FILTERED: <b>Y (N)</b>				FILTER SIZE: <b>µm</b>		DUPLICATE: <b>Y (N)</b>	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				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-10	2	PE	1 Ltr	HN03	None	---	Gross Alpha, RA226RA228		APP - ESPA		
"	1	PE	250 mL	H2S04	None	---	Total Ammonia		APP - ESPA		
"	1	PE	250 mL	HN03	None	---	Metals		APP - ESPA		
"	1	PE	500 mL	None	None	---	Chloride, Fluoride, Nitrate, TDS		APP - ESPA		

### REMARKS:

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

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

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

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

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

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

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

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL 2" PVC	TUBING 3/8"	WELL SCREEN INTERVAL	STATIC DEPTH	PURGE PUMP TYPE
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet): <b>26.45</b>	OR BAILER: <b>ESP</b>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				

only fill out if applicable)

= ( **40.15'** feet - **26.45'** feet ) X **0.0026** gallons/foot = **0.35** 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 = **0.35** gallons + ( **0.0026** gallons/foot X **40'** ) + **0.125** gallons = **0.23** gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>	PURGING INITIATED AT: <b>0902</b>	PURGING ENDED AT: <b>0917</b>	TOTAL VOLUME PURGED (gallons): <b>1.05</b>
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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)
0913	.77	.77	.07	26.50	6.21	24.95	326	1.32	11.8	Clear	None
0915	.14	.91	.07	26.50	6.22	24.95	331	1.20	7.29	Clear	None
0917	.14	1.05	.07	26.50	6.22	25.00	334	1.15	5.42	Clear	None
									No slow		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>0918</b>	SAMPLING ENDED AT: <b>0940</b>
PUMP OR TUBING DEPTH IN WELL (feet): <b>~35'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(N) N probe only</b>		FIELD-FILTERED: <b>(N) N</b>		FILTER SIZE: <b>µm</b>	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: <b>Y (N)</b>	

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-11	2	PE	1 Ltr	HN03	None	---	Gross Alpha, RA226, RA228	APP ESP
"	1	PE	250 mL	H2S04	None	---	Total Ammonia	APP ESP
"	1	PE	250 mL	HN03	None	---	Metals	APP ESP
"	1	PE	500 mL	None	None	---	Chloride, Fluoride, Nitrate, TDS	APP ESP

REMARKS:

0902: Set dedicated 1/4" PE tubing at ~35' bto c and started pump at 0902pm.

0906: WL 26.50' at .07 gpm, turbidity is high at 28 NTUs, but is typical for this well. Will over purge to clear it up.

0912: Turbidity is at 17 NTUs, all other parameters are stable or in range. WL is stable at 26.50' at .07 gpm.

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

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

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

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

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH 25.25 TO WATER (feet):	PURGE PUMP TYPE OR BAILER: PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
$1 \text{ Well Vol} = (31.92' \text{ feet} - 25.25' \text{ feet}) \times 1.6 \text{ gallons/foot} = 10.672 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
$1 \text{ Equip Vol} = 0.506 \text{ gallons} + (0.0082 \text{ gallons/foot} \times 31' \text{ feet}) + .125 \text{ gallons} = 2.566 \text{ gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32'	PURGING INITIATED AT: 1059	PURGING ENDED AT: 1118	TOTAL VOLUME PURGED (gallons): 1.90							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1114	1.50	1.50	1	25.43	7.05	26.63	239	6.45	0.68	Clear	None
1116	1.2	1.70	1	25.42	7.01	26.62	246	6.40	2.52	Clear	None
1118	1.2	1.90	1	25.43	7.03	26.76	259	6.42	3.33	Clear	None
				25.44							
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: 1120	SAMPLING ENDED AT: 1135		
PUMP OR TUBING DEPTH IN WELL (feet): 27'		SAMPLE PUMP FLOW RATE (mL per minute): < 250 mL		TUBING MATERIAL CODE: PE			
FIELD DECONTAMINATION: (Y) N Probe only		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-2	2	PE	1 Ltr	HN03	None	—	GrossAlpha, RA226RA228
"	1	PE	250 mL	H2S04	None	—	Total Ammonia
"	1	PE	250 mL	HN03	None	—	Metals
"	1	PE	500 mL	None	None	—	Chloride,Fluoride, Nitrate, TDS

### REMARKS:

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

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

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

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

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

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



DEP-SOP-001/01  
Form FD 9000-24  
**GROUNDWATER SAMPLING LOG**

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

**PURGING DATA**

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

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Clayton, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>1240</b>	SAMPLING ENDED AT: <b>1300</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~28.5'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y (N)</b>		FILTER SIZE: <b>µm</b>				
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: <b>Y (N)</b>				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
<b>MW-4</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>GrossAlpha, RA226RA228</b>	<b>APP-ESP-a</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>---</b>	<b>Ammonia</b>	<b>APP-ESP-a</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>Metals</b>	<b>APP-ESP-a</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>---</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>APP-ESP-a</b>

**REMARKS:**

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

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

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

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

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

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

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

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL DEPTH: <b>31.91</b>	STATIC DEPTH TO WATER (feet): <b>31.91</b>	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
= ( <b>45.23'</b> feet - <b>31.91'</b> feet ) X <b>1415</b> gallons/foot = <b>1895</b> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>415'</b> ) + <b>.125</b> gallons = <b>2.57</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>	PURGING INITIATED AT: <b>0844</b>	PURGING ENDED AT: <b>0858</b>	TOTAL VOLUME PURGED (gallons): <b>3.50</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>0854</b>	<b>2.50</b>	<b>2.50</b>	<b>.25</b>	<b>32.12</b>	<b>6.85</b>	<b>26.30</b>	<b>624</b>	<b>0.51</b>	<b>5.04</b>	<b>Clear</b>	<b>Slight</b>
<b>0856</b>	<b>.5</b>	<b>3.00</b>	<b>.25</b>	<b>32.12</b>	<b>6.82</b>	<b>26.30</b>	<b>624</b>	<b>0.50</b>	<b>3.36</b>	<b>Clear</b>	<b>Same</b>
<b>0858</b>	<b>.5</b>	<b>3.50</b>	<b>.25</b>	<b>32.12</b>	<b>6.93</b>	<b>26.31</b>	<b>624</b>	<b>0.49</b>	<b>2.30</b>	<b>Clear</b>	<b>Same</b>
<b>No stream</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0008; 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: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>0859</b>	SAMPLING ENDED AT: <b>0911</b>
PUMP OR TUBING DEPTH IN WELL (feet): <b>~40'</b>		FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>Y</b> <input checked="" type="checkbox"/> <b>N</b> <input type="checkbox"/>		FIELD-FILTERED: <b>Y</b> <input type="checkbox"/> <b>N</b> <input checked="" type="checkbox"/>		DUPLICATE: <b>Y</b> <input type="checkbox"/> <b>N</b> <input checked="" type="checkbox"/>	
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)
<b>MW-4A</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>
"	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>
REMARKS:		FINAL pH			
<b>0844: Set up Inserted SS ESP and dedicated 3/8" PE tubing to ~40' b/c and started pump at .25 gpm.</b>		<b>Gross Alpha, RA226RA228</b>			
<b>0848: GW is turbid at 70 NTUs, but is typical for this well. Will over purge to clear it up. Typically requires high flow rate to clean up. WL 32.12' at .25 gpm.</b>		<b>Total Ammonia</b>			
<b>0852: Turbidity has dropped to 13 NTUs. WL is stable at 32.12' at .25 gpm. All other parameters are stable or in range.</b>		<b>Metals</b>			
		<b>Chloride, Fluoride, Nitrate, TDS</b>			

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

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

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH <b>39.97</b> TO WATER (feet):	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable											
= ( <b>38.49'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME X (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = .02 gallons + ( .006 gallons/foot X <b>38'</b> feet ) + .125 gallons = <b>.373</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>	PURGING INITIATED AT: <b>0926</b>	PURGING ENDED AT: <b>0940</b>	TOTAL VOLUME PURGED (gallons): <b>3.50</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. Def(S/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>0936</b>	<b>2.50</b>	<b>2.50</b>	<b>.25</b>	<b>30.22</b>	<b>8.92</b>	<b>25.61</b>	<b>118</b>	<b>6.16</b>	<b>5.84</b>	<b>Clear</b>	<b>None</b>
<b>0938</b>	<b>.5</b>	<b>3.00</b>	<b>.25</b>	<b>30.22</b>	<b>8.93</b>	<b>25.63</b>	<b>119</b>	<b>6.05</b>	<b>4.83</b>	<b>Clear</b>	<b>None</b>
<b>0940</b>	<b>.5</b>	<b>3.50</b>	<b>.25</b>	<b>30.23</b>	<b>8.93</b>	<b>25.62</b>	<b>119</b>	<b>6.00</b>	<b>4.70</b>	<b>Clear</b>	<b>None</b>
<b>No stream</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal/Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>0941</b>	SAMPLING ENDED AT: <b>0953</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~32'</b>		SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(N)</b> N		FIELD-FILTERED: <b>(N)</b> N Filtration Equipment Type: _____		FILTER SIZE: _____ µm				
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: <b>(N)</b> N				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
<b>MW-4B</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>GrossAlpha, RA226RA228</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>---</b>	<b>Total Ammonia</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>---</b>	<b>Metals</b>	<b>ESP</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>---</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>ESP</b>

### REMARKS:

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

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

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

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

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

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

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

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



# GROUNDWATER SAMPLING LOG

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

## PURGING DATA

WELL 2" PVC DIAMETER (inches):	TUBING 3/8" DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH 33.45' TO WATER (feet):	PURGE PUMP TYPE OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)											
= ( <b>50.84'</b> feet - <b>33.45'</b> feet) X <b>0.0006</b> gallons/foot = <b>0.011</b> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
1 Equip Vol = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>50'</b> feet) + <b>.125</b> gallons = <b>0.445</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	PURGING INITIATED AT: <b>1120</b>	PURGING ENDED AT: <b>1150</b>	TOTAL VOLUME PURGED (gallons): <b>7.50</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1146	6.50	6.50	.25	33.50	7.72	24.72	255	7.32	15.2	Clear	None
1148	.5	7.00	.25	33.50	7.72	24.71	255	7.34	12.5	Clear	None
1150	.5	7.50	.25	33.50	7.73	24.70	255	7.32	10.6	Clear	None
No sludge											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>1151</b>	SAMPLING ENDED AT: <b>1203</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>		SAMPLE PUMP FLOW RATE (ml per minute): <b>&lt; 250 mL</b>		TUBING MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>Y N</b> Filtration Equipment Type: <b>N</b>		FILTER SIZE: <b>µm</b> DUPLICATE: <b>Y (N)</b>				
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-6A	2	PE	1 Ltr	HN03	None	—	Gross Alpha, RA226RA228	ESP
"	1	PE	250 mL	H2S04	None	—	Total Ammonia	ESP
"	1	PE	250 mL	HN03	None	—	Metals	ESP
"	1	PE	500 mL	None	None	—	Chloride, Fluoride, Nitrate, TDS	ESP

### REMARKS:

1120: Inserted SS ESP and dedicated 3/8" PE tubing to ~45' bto and started pump at .25 gpm.

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

1136: Turbidity is at 44 NTUs. DO is high at 7.50 mg/L, but is typical for this well. Continuing purge. Will use optional stabilization criteria for DO if necessary.

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

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

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

2. STABILIZATION CRITERIA FOR RANGE VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3): 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: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-8</b>	SAMPLE ID: <b>MW-8</b>	DATE: <b>2/12/13</b>	

## PURGING DATA

WELL 2" PVC	TUBING 3/8"	WELL SCREEN INTERVAL	STATIC DEPTH <b>24.12</b>	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: <b>ESP &amp; PP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= ( <b>43.24'</b> feet - <b>24.12'</b> feet ) X <b>0.0026</b> gallons/foot = <b>0.051</b> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
1 Equip Vol = <b>0.027</b> gallons + ( <b>0.0026</b> gallons/foot X <b>43'</b> feet ) + <b>.125</b> gallons = <b>0.2367</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~38'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~38'</b>	PURGING INITIATED AT: <b>0942</b>	PURGING ENDED AT: <b>0953</b>	TOTAL VOLUME PURGED (gallons): <b>1.10</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>0949</b>	<b>1.20</b>	<b>1.20</b>	<b>1</b>	<b>24.15</b>	<b>7.23</b>	<b>23.96</b>	<b>341</b>	<b>4.60</b>	<b>0.108</b>	<b>clear</b>	<b>None</b>
<b>0951</b>	<b>1.2</b>	<b>2.40</b>	<b>1</b>	<b>24.15</b>	<b>7.27</b>	<b>23.96</b>	<b>341</b>	<b>4.57</b>	<b>0.22</b>	<b>clear</b>	<b>None</b>
<b>0953</b>	<b>1.2</b>	<b>3.60</b>	<b>1</b>	<b>24.15</b>	<b>7.28</b>	<b>24.01</b>	<b>342</b>	<b>4.55</b>	<b>0.29</b>	<b>clear</b>	<b>None</b>
<b>No Slime</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.002; 1" = 0.004; 1.25" = 0.006; 2" = 0.016; 3" = 0.037; 4" = 0.065; 5" = 0.102; 6" = 0.147; 8" = 0.236											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: <b>0954</b>		SAMPLING ENDED AT: <b>1010</b>	
PUMP OR TUBING DEPTH IN WELL (feet): <b>~38'</b>		SAMPLE PUMP		TUBING		MATERIAL CODE: <b>PE</b>	
FIELD DECONTAMINATION: <b>(Y) N</b>		FLOW RATE (mL per minute): <b>&lt; 250 mL</b>		FIELD-FILTERED: <b>Y (N)</b>		FILTER SIZE: <b>μm</b>	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION				DUPLICATE: <b>Y (N)</b>	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD
<b>MW-8</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>GrossAlpha, RA226RA228</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2SO4</b>	<b>None</b>	<b>—</b>	<b>Total Ammonia</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Metals</b>
<b>"</b>	<b>1</b>	<b>PE</b>	<b>600 mL</b>	<b>None</b>	<b>None</b>	<b>—</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>

## REMARKS:

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

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

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

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

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

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

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

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



# GROUNDWATER SAMPLING LOG

SITE NAME: <b>Sumter County Landfill</b>		SITE LOCATION: <b>Sumterville, FL</b>	
WELL NO: <b>MW-9A</b>	SAMPLE ID: <b>MW-9A</b>	DATE: <b>2/13/12</b>	

## PURGING DATA

WELL <b>2" PVC</b>	TUBING <b>3/8"</b>	WELL SCREEN INTERVAL	STATIC DEPTH <b>31.35</b>	PURGE PUMP TYPE							
DIAMETER (inches):	DIAMETER (inches):	DEPTH: feet to feet	TO WATER (feet):	OR BAILER: <b>ESP</b>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= ( <b>50.17'</b> feet - feet ) X gallons/foot = gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
1 Equip Vol = <b>.02</b> gallons + ( <b>.006</b> gallons/foot X <b>50'</b> ) + <b>.125</b> gallons = <b>1.445</b> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>	PURGING INITIATED AT: <b>1010</b>	PURGING ENDED AT: <b>1042</b>	TOTAL VOLUME PURGED (gallons): <b>11.50</b>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (uS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<b>1038</b>	<b>10.50</b>	<b>10.50</b>	<b>.25</b>	<b>34.08</b>	<b>6.47</b>	<b>25.48</b>	<b>930</b>	<b>0.52</b>	<b>17.6</b>	<b>Clear</b>	<b>Sulfur</b>
<b>1040</b>	<b>.5</b>	<b>11.00</b>	<b>.25</b>	<b>34.09</b>	<b>6.48</b>	<b>25.49</b>	<b>927</b>	<b>0.46</b>	<b>14.6</b>	<b>Clear</b>	<b>Same</b>
<b>1042</b>	<b>.5</b>	<b>11.50</b>	<b>.25</b>	<b>34.09</b>	<b>6.48</b>	<b>25.49</b>	<b>927</b>	<b>0.41</b>	<b>13.0</b>	<b>Clear</b>	<b>Same</b>
<b>No Screen</b>											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: <b>1043</b>	SAMPLING ENDED AT: <b>1055</b>			
PUMP OR TUBING DEPTH IN WELL (feet): <b>~45'</b>		SAMPLE PUMP FLOW RATE (gal per minute):		MATERIAL CODE: <b>PE</b>				
FIELD DECONTAMINATION: <b>(Y) N</b>		FIELD-FILTERED: <b>(Y) N</b>		FILTER SIZE: <b>μm</b>				
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: <b>(Y) N</b>				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
<b>MW-9A</b>	<b>2</b>	<b>PE</b>	<b>1 Ltr</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>GrossAlpha, RA226RA228</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>H2S04</b>	<b>None</b>	<b>—</b>	<b>Total Ammonia</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>250 mL</b>	<b>HN03</b>	<b>None</b>	<b>—</b>	<b>Metals</b>	<b>ESP</b>
"	<b>1</b>	<b>PE</b>	<b>500 mL</b>	<b>None</b>	<b>None</b>	<b>—</b>	<b>Chloride, Fluoride, Nitrate, TDS</b>	<b>ESP</b>

### REMARKS:

**1010:** Inserted SS ESP and dedicated 3/8" PE tubing to ~45' btec and started pump at .5 gpm. This well typically requires purging at a high flow rate to clean up turbidity.

**1015:** GW is still extremely turbid, continuing purge.

**1024:** Turbidity is at 66 NTUs, reduced flow to .25 gpm.

**1034:** WL 34.07' at .25 gpm, turbidity is at 21 NTUs, continuing purge.

**1036:** Turbidity is at 19 NTUs, WL 34.08' at .25 gpm and is stable.

All other parameters are stable or in range.

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

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

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

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

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




## GROUNDWATER SAMPLING LOG

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

## PURGING DATA

[illegible]

### SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Dale Claytor, Colinas Group, Inc.</b>				SAMPLER / SIGNATURE:  SAMPLE PUMP FLOW RATE (mL per minute): <b>&lt; 250 mL</b>			SAMPLING INITIATED AT: <b>0830</b> TUBING MATERIAL CODE: <b>PE</b>		SAMPLING ENDED AT: <b>0840</b>		
PUMP OR TUBING DEPTH IN WELL (feet):				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>			FIELD FILTER SIZE: _____ µm		DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				Filtration Equipment Type: _____							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EQB	2	PE	1 Ltr	HN03	None	---	Gross Alpha, RA228RA228		ESP		
"	1	PE	250 mL	H2S04	None	---	Total Ammonia		ESP		
"	1	PE	250 mL	HN03	None	---	Metals		ESP		
"	1	PE	500 mL	None	None	---	Chloride, Fluoride, Nitrate, TDS		ESP		
		Various	Various	Various	None	---	Appendix I Parameters		ESP		

REMARKS:

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

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

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

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

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



LABORATORY SERVICES

2742 N. Florida Ave.  
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(813) 229-2879  
Fax (813) 229-0002

Report Date: February 25, 2013

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

Alpha Standard: Th-230

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

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

James W. Hayes  
Laboratory Manager

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

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

Alpha Standard: Th-230

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Laboratory Manager

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

Alpha Standard: Th-230

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

Alpha Standard: Th-230

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Laboratory Manager

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

Attn: Myrna Santiago

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

**CERTIFICATE OF ANALYSIS**

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

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Laboratory Manager

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

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Laboratory Manager

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Altamonte Springs, FL 32701

Attn: Myrna Santiago

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

**CERTIFICATE OF ANALYSIS**

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

Alpha Standard: Th-230

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

Attn: Myrna Santiago

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

**CERTIFICATE OF ANALYSIS**

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

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Laboratory Manager

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

Attn: Myrna Santiago

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

CERTIFICATE OF ANALYSIS

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

Alpha Standard: Th-230

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Laboratory Manager

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

Attn: Myrna Santiago

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

**CERTIFICATE OF ANALYSIS**

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

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# Chain of Custody

Document 5985 - HBN 4898

Workorder

Sunier Co Landfill 1st

Results Requested By 2/24/2013

Myrna Santiago  
Advanced Environmental Laboratories, Inc.  
528 S. North Lake Blvd, Suite 1016  
Altamonte Springs, FL 32701  
Phone (407)937-1594  
Fax (407)937-1597

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

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers	EPA 903.1	EPA 905	EPA 900	Requested Analysis	LAB USE ONLY
1	MM-10	2/12/2013 10:47	A1301338001	Water	2	X	X	X		
2	MM-11	2/12/2013 09:40	A1301338002	Water	2	X	X	X		
3	MM-12	2/12/2013 11:35	A1301338003	Water	2	X	X	X		
4	MM-4	2/12/2013 13:00	A1301338004	Water	2	X	X	X		
5	MM-4A	2/13/2013 09:11	A1301338005	Water	2	X	X	X		
6	MM-4B	2/13/2013 09:53	A1301338006	Water	2	X	X	X		
7	MM-6A	2/13/2013 12:03	A1301338007	Water	2	X	X	X		
8	MM-8	2/12/2013 10:10	A1301338008	Water	2	X	X	X		
9	MM-9A	2/13/2013 10:55	A1301338009	Water	2	X	X	X		
10	EQ BLANK	2/13/2013 08:40	A1301338010	Water	2	X	X	X		

R454  
3-1-12

13-1038-47

# Chain of Custody

Document 5985 - HBN 4898

Workorder

Sumter Co Landfill 1st

Results Requested By 2/24/2013

Report To

Subcontract To

Requested Analysis

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

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

Preserved Containers

EPA 903.1  
EPA Ra-05  
EPA 900

*Handwritten:* RUSK  
3-1-12

LAB USE ONLY

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	HNO3	Comments
11						
12						
13						
14						

Report

Electronic Data Deliverables

Comments

- ☐ Standard (Results only)  
☐ Standard with Batch QC  
☐ CLP  
☐ Other

- ☐ SEDD Stage 2A  
☐ SEDD Stage 2B  
☐ SEDD Stage 3  
☐ Other

*Handwritten:* 13-108-55  
13.1038-47

Preservative  
HNO3 = HNO3

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>Handwritten:</i> [Signature]	<i>Handwritten:</i> 2/19/2010	<i>Handwritten:</i> BS	
2			<i>Handwritten:</i> Stanley	<i>Handwritten:</i> 2-19-13/2/10
3				
4				
5				